PFEIFFER VACUUM

VACUUM 24 / 7

ANNUAL REPORT 2016

VACUUM

24 / 7

Vacuum technology accompanies us every day from getting up in the morning to going to sleep in the evening – although we are often not aware of it. Many products and amenities of our daily lives can only be produced with the aid of vacuum. Thus, vacuum technology affects our modern life significantly – 24 hours a day, 7 days a week. In this year's annual report from page 10 onwards, Pfeiffer Vacuum takes you on a day trip which would not exist in this way without vacuum.

Key Figures

		2016	2015	Change
Sales and profit				
Total sales	K€	474,244	451,521	5.0 %
Germany	K€	78,254	75,846	3.2 %
Other countries	K€	395,990	375,675	5.4 %
Operating profit	K€	67,976	60,759	11.9 %
Net income	K€	47,032	41,916	12.2 %
Return on sales	%	9.9	9.3	0.6 Pp
Operating cash flow	K€	63,616	59,653	6.6 %
Balance sheet				
Total shareholders' equity and liabilities	K€	459,322	453,527	1.3 %
Cash and cash equivalents	K€	110,032	115,397	– 4.6 %
Shareholders' equity	K€	315,574	305,024	3.5 %
Equity ratio	%	68.7	67.3	1.4 Pp
Return on equity	%	14.9	13.7	1.2 Pp
Capital expenditures	K€	18,018	11,655	54.6 %
Workforce				
Workforce (average)		2,385	2,324	2.6 %
Germany		892	872	2.3 %
Other countries		1,493	1,452	2.8 %
Personnel costs	K€	157,618	151,996	3.7 %
Per employee	K€	66	65	1.5 %
Sales per employee	K€	199	194	2.6 %
Per share				
Earnings	€	4.77	4.25	12.2 %
Dividend	€	3.60 [1]	3.20	12.5 %

[1] Subject to the consent of the Annual General Meeting

All percentages in this Annual Report were derived on the basis of amounts in thousands of euros. Rounding differences might result from their presentation in millions of euros.

Corporate Profile

Pfeiffer Vacuum – a name that stands for innovative solutions, high technology and dependable products, along with first-class service. For more than 125 years we have been setting standards in vacuum technology with these attributes. One very special milestone was the invention of the turbopump at our Company more than 50 years ago. Thanks to our know-how, we continue to be the technology and world market leader in this field. To no small degree, this also manifests itself in our strong profitability. Our extensive line of solutions, products and services ranges from vacuum pumps, measurement and analysis equipment right through to complex vacuum systems. And quality always plays a key role in this connection: Products from Pfeiffer Vacuum are constantly being optimized through close collaboration with customers from a wide variety of industries, through ongoing development work and through the exceptional enthusiasm and commitment of our people. These are virtues that we will continue to embrace!

- **Headquarters:** Asslar, Germany
- **Established:** 1890
- **Purpose of the Company:** To develop, manufacture and market components and systems for vacuum generation, measurement and analysis as well as helium leak detectors
- **Manufacturing sites:** Asslar, Germany; Göttingen, Germany; Annecy, France; Asan, Republic of Korea; Cluj, Romania
- **Workforce worldwide:** 2,415 people

Content

Letter from the Chief Executive Officer

Dear shareholders,

Following a very successful 2015, the year 2016 got off to a somewhat restrained start. It was not until the third quarter that the demand for our products began to recover. A spectacular final spurt in the closing months of the year finally managed to get us on track for growth. The reason for this positive development was the fact that in addition to the many small and new customers that kept our business at a relatively stable level during the first 9 months, our major customers in the semiconductor industry also increasingly began investing towards the end of the year. We even ended up outstripping our ambitious sales target of € 470 million, coming in at sales of € 474.2 million. This resulted in a significant 12 % increase to the tune of € 68 million in our operating profit.

Net income of € 47 million finally resulted in earnings per share of € 4.77. This is the highest earnings per share ever achieved by the Company. In keeping with a long tradition, we expect to distribute some 75 percent again to our shareholders. You will then receive a dividend of € 3.60 per share. This is the most that Pfeiffer Vacuum has ever distributed before. This dividend payment is subject, of course, to your approval at our Annual General Meeting.

Besides the positive course of business, we also focused our attention on various projects that are of strategic importance to our Company. The first of these projects is GaP – Growth and Profitability – that consists of numerous subprojects aimed at preparing Pfeiffer Vacuum for further growth. We are laying the foundation for continuing to participate in the outstanding growth opportunities of our industry in future. Digitalization is marching onwards and ensures growth potential in the process. But other markets, too, such as Analytics, also promise growth. We are currently creating the foundation for this growth. Our activity is also reflected in our increased capital expenditure. At € 18 million, the volume of investments in 2016 was considerably higher than in previous years. In 2017, we will once more increase capital expenditure. We will be refurbishing and expanding our location in the USA and increasing the production capacity at various locations with new up-to-date machining centers.

Furthermore, we strengthened our position with two acquisitions. We increased our stake in the service company Dreebit GmbH to 100 percent. This means we are well-positioned in the German semiconductor stronghold of Dresden.

The second acquisition, the company Advanced Test Concepts in Indianapolis, will strengthen our position in the area of leak testing.

As you can see, we believe in the future of our Company and are investing in it.

In line with the slogan of our Annual Report, vacuum is ever-present 24 hours a day, 7 days a week, in your daily life.

We very much hope that you, our valued shareholders, will continue to accompany us on our successful corporate path.

Yours,
Manfred Bender

Manfred Bender
Chairman of the Executive Board

Manfred Bender, Chief Executive Officer
Dr. Matthias Wiemer,
Member of the Management Board

Dr. Wolfgang Lust
Filippo Th. Beck
Helmut Bernhardt
Dr. Michael Oltmanns (Chairman)
Manfred Gath
Götz Timmerbeil
(from left to right)

Report of the Supervisory Board

Dear Shareholders,

The 2016 fiscal year was marked by great political and macroeconomic upheaval. Despite this challenging environment, Pfeiffer Vacuum experienced one of its best business years. After a good start, followed by a period of restrained performance in the middle of the year, the year ended with an exceptional final spurt. The semiconductor industry (Semiconductor & Coating business unit) in particular, which was subject to fluctuation in recent years, again showed its enormous potential. At the same time, the GaP (Growth and Profitability) program of optimization was systematically advanced, and its positive effects were reflected in improved earning power.

During 2016, the Supervisory Board was informed about the current position of the Company and the Corporate Group in eight meetings and discussed this in detail with the Management Board. The Supervisory Board meetings took place in Asslar on February 2, February 18, March 14, May 2, May 24, July 20 and December 6, and in Eschborn on October 31. In addition to the information provided at its meetings, all members of the Supervisory Board received detailed monthly and quarterly reports on the Company's position, with the Chairman of the Supervisory Board also being provided with the minutes of all Management Board meetings. Besides the meetings of the Supervisory Board, its Chairman was constantly kept abreast of all major business matters through discussions with the Management Board. All members of the Supervisory Board attended every meeting (with the exception of one meeting which one member of the Supervisory Board was excused from attending).

The Supervisory Board has a Management Board Committee, an Administration Committee, a Nomination Committee, and an Audit Committee. Meetings of the Audit Committee took place on March 14, October 31 and December 19. Moreover, the Audit Committee maintained regular contact with the independent auditor, discussing and deciding the course of the audit, its main focuses, and particular questions relating to the audit with him. For the first time, the Audit Committee consulted, questioned and vetted several auditors to ascertain their suitability for auditing the 2017 Annual Financial Statements, in accordance with the now legally prescribed selection process.

In addition to the general development of business and the Company's strategic alignment, the Supervisory Board meetings focused particularly on measures to boost the profitability and efficiency of the entire Company within the framework of the GaP project, including deliberations on concentrating the manufacture of specific product families in particular locations. Further key areas were the new construction and local concentration of the American subsidiary in Nashua, New Hampshire, the acquisition of the American corporation ATC (Advanced Tests Concepts), whose low-cost, non-destructive leak detection technology complements the high-priced Pfeiffer Vacuum helium leak detection portfolio, and the acquisition of the remaining shares in Dreebit GmbH in Dresden (75.1 %) which plays a leading role in service business in the attractive, semiconductor-dominated market in the Dresden area; both transactions were completed successfully in the first quarter of 2017.

Finally, the Supervisory Board discussed the definition of targets for the proportion of women in the Management and Supervisory Board and – on the recommendation of the nomination committee – the proposals of candidates to the Annual Shareholders Meeting on May 24, 2016 for election to the Supervisory Board. Mr. Wilfried Glaum did not stand for reelection. He had maintained ties with Pfeiffer Vacuum since 1972, initially as an employee, then as Chief Financial Officer and, in the last ten years, as a valued member of the Supervisory Board. The Supervisory Board would like to thank Mr. Glaum sincerely for his always valuable advice. Mr. Filippo Beck from Zürich was newly elected to the Supervisory Board.

The Supervisory Board fulfilled all the duties vested in it by law, the Articles of Association, and the German Corporate Governance Code ("DCGK") and diligently and fully supervised the management of the Company.

The requirements with respect to risk management were discussed extensively together with the Management Board. The Supervisory Board repeatedly satisfied itself that sufficient insurance coverage is in force for insurable risks and that operating, financial, and contractual risks are monitored through organizational processes and approval procedures. A detailed reporting system exists for the Company and the Corporate Group and is subject to ongoing review, update, and development. All employees in the operating units are sensitized to potential risks and are instructed to conduct appropriate reporting. Current issues in connection with risk management were explained to the Audit Committee as well as to the entire Supervisory Board.

The Supervisory Board deliberated in detail on the German Corporate Governance Code ("DCGK"). The Management and Supervisory Board recognize the German Corporate Governance Code – with one exception – as definitive for the Company and its management. The statement of compliance pursuant to § 161 of the German Stock Corporation Act ("AktG") was submitted by the Management and Supervisory Boards sufficiently in advance of the close of the fiscal year. In connection with good corporate governance, the Supervisory Board also dealt in detail with its own efficiency, coming up with positive overall results.

At the meetings of the Supervisory Board and in individual discussions, the Supervisory and Management Boards deliberated at length regarding the Company's strategic alignment and planning. The Supervisory Board then discussed the budget for the 2017 fiscal year with the Management Board and adopted it.

In accordance with the resolution of the Annual General Meeting on May 24, 2016, Ernst & Young GmbH, Wirtschaftsprüfungsgesellschaft, Eschborn, Germany, was commissioned to audit the Annual Financial Statements of the Company and the Company's Consolidated Financial Statements, with the latter being prepared in accordance with International Financial Reporting Standards ("IFRS"), as well as the financial statements of the Company's subsidiaries where prescribed by law. Pursuant to § 315 a of the German Commercial Code ("HGB"), consolidated financial statements presented in accordance with the rules of the German Commercial Code were not prepared.

The focuses of the audit defined by the Audit Committee with the independent auditor included:

- Certain items of the Annual Financial Statements, in particular
  - recognition and valuation of accounts receivable and inventories
  - the completeness and valuation of provisions (in particular warranty provisions and pensions)
  - revenue recognition; periodic accruals for net sales
  - recoverability of goodwill
  - recoverability of shareholdings and loans receivable in the individual Financial Statements
  - capitalization of development costs in accordance with IAS 38
  - recognition and valuation of deferred taxes
- Consolidation entries
- Reconciliation to IFRS, the Notes to the Financial Statements and the Management's Discussion & Analysis
- Implementation of the Accounting Directive Implementation Act (BilRuG) in the individual Financial Statements

The Annual Financial Statements together with the Management's Discussion & Analysis as well as the Consolidated Financial Statements presented in accordance with IFRS together with the Management's Discussion & Analysis, all for the 2016 fiscal year and all of which prepared by the Management Board, were audited by the independent auditor and received his unqualified endorsement.

The Annual Financial Statements, Management's Discussion & Analysis for the Company and the Corporate Group, as well as the audit reports from the independent auditor were submitted to all members of the Supervisory Board in a timely fashion. They were discussed in detail at the Audit Committee meeting and the Supervisory Board meeting relating to the financial statements on March 22, 2017. The independent auditor attended both meetings, reported on the major findings of his audit, in particular relating to the internal controlling and risk management system, and was available to answer additional questions from the Supervisory Board. On the basis of its own thorough review, the Supervisory Board concurred with the results of the audit conducted by the independent auditor. Given the concluding results of its review, the Supervisory Board raised no objections to the Annual and Consolidated Financial Statements. It has approved the Annual and Consolidated Financial Statements, with the Financial Statements thus being formally adopted. The Supervisory Board discussed in detail with the Management Board its proposal regarding the distribution of a dividend and then concurred with the Management Board's proposal regarding appropriation of the Company's retained earnings.

The Supervisory Board would like to sincerely thank the Management Board, the Employee Council and the entire staff of the Group for their dedication and commitment in the successful 2016 fiscal year.

Asslar, March 22, 2017

Michael Oltmanns

Dr. Michael Oltmanns
Chairman of the Supervisory Board

24/7

VACUUM TECHNOLOGY – INDISPENSABLE FOR OUR DAILY LIFE

AT THE START OF THE DAY

06:30 am

AT WORK

09:30 am

AT LUNCHTIME

12:30 pm

WHILE DRIVING

05:30 pm

WHEN EXERCISING

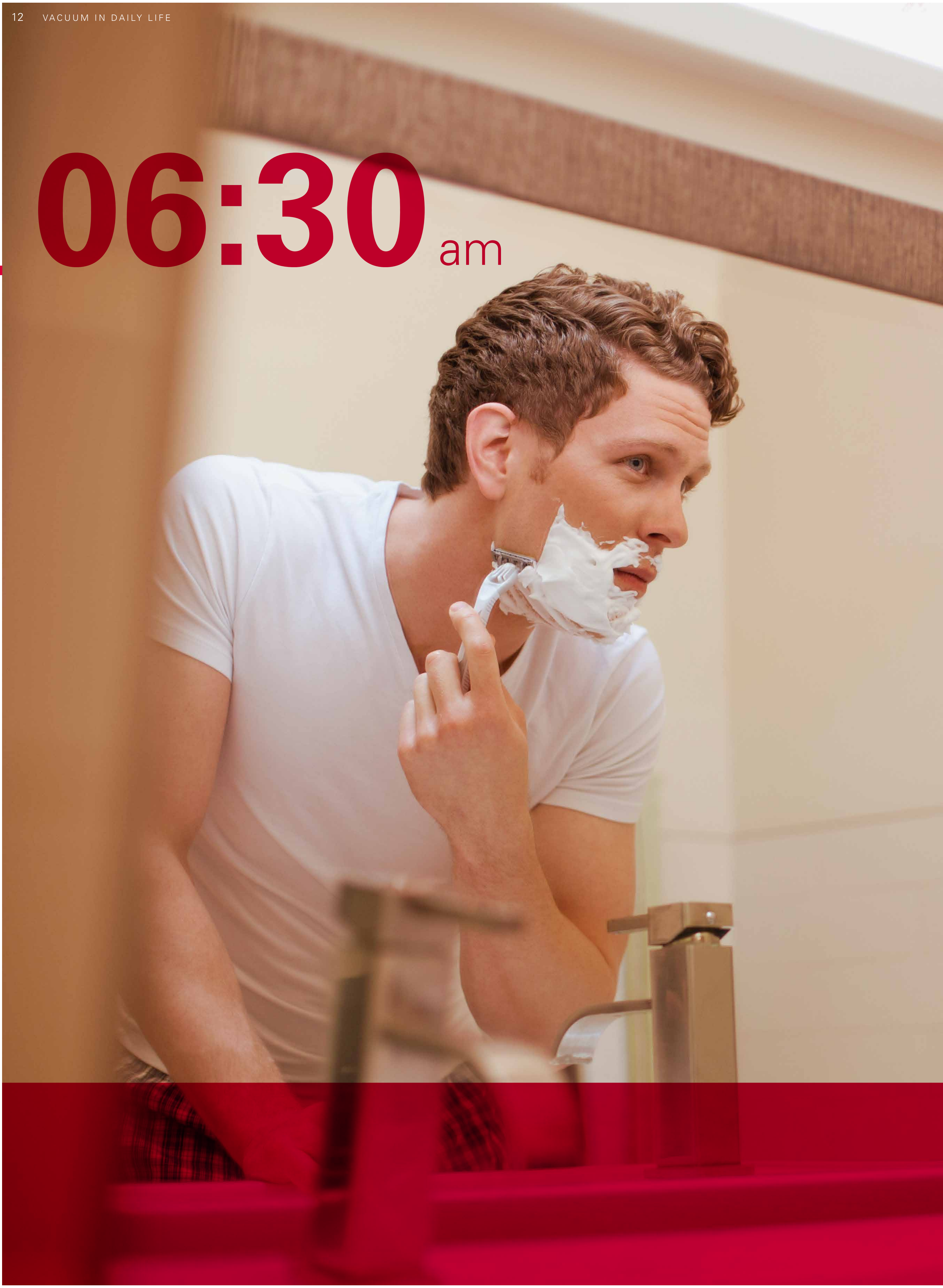
06:00 pm

WHILE COOKING

07:30 pm

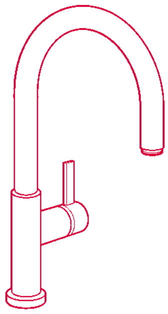
AT THE END OF THE DAY

09:00 pm


06:30 am

Mirrors and bathroom fittings are coated under vacuum

When we get ready for the day in the morning, vacuum technology surrounds us everywhere – without it, our bathrooms would not look as we know them. We are able to see ourselves in the mirror, thanks to its reflective coating applied under vacuum. Also the scratch and refinement coatings of our bathroom fittings are deposited under vacuum. Even razor blades can only be used securely and comfortably due to their vacuum coating.

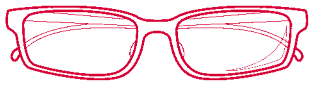


AT THE START OF THE DAY

09:30 am

Vacuum technology is used for the anti-reflection coating of glasses and for the production of laptops and PCs

Without vacuum technology, our daily work routine would not exist in the way we know it. Vacuum is needed for the manufacture of many major and minor tools we use on the job. Our laptops, tablets and PCs work with memory chips and microprocessors that are produced in a cleanroom under vacuum conditions. Vacuum technology also enables us to see better: The scratch, anti-reflective and color coatings of our glasses are deposited under vacuum.

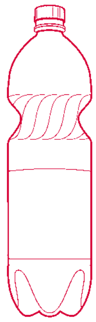


AT WORK

12:30 pm

Food is packed under vacuum

Quality and freshness are vital when it comes to food. Especially in our stressful daily life, however, there is often not enough time for an extensive lunch break. With vacuum technology, we are able to comfortably carry our drinks in PET bottles and thermos flasks or easily transport small snacks such as chips. Food packaging like chip cans is vacuum coated with flexible barriers that prevent moisture and oxygen from getting into the package. PET bottles, too, are vacuum deposited with barrier coatings to prevent carbon dioxide, for example, from escaping through the bottle material. Also the insulation effect of thermos flasks only exists because of vacuum.

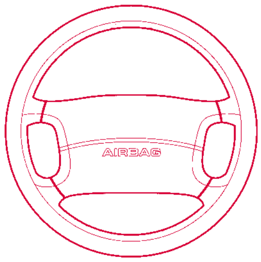


AT LUNCHTIME

05:30 pm

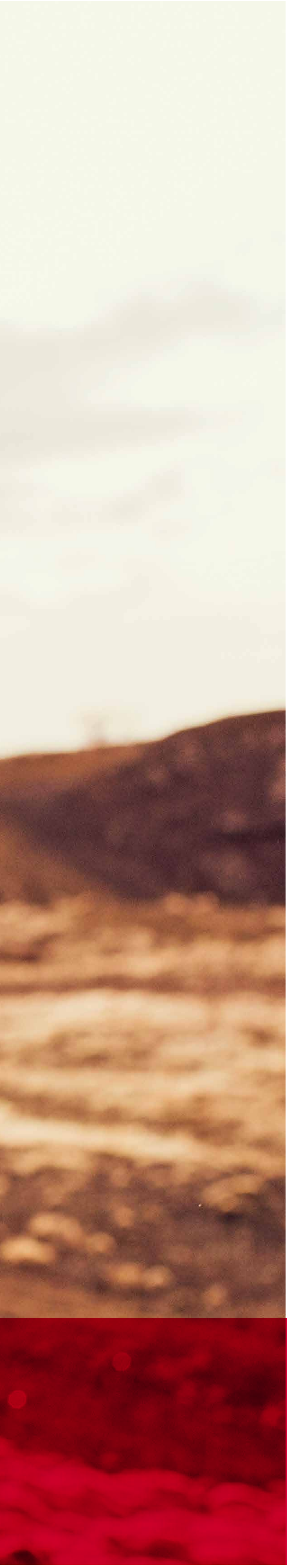
The leak tightness of numerous car parts is tested with helium leak detectors

Our cars provide us with flexibility and mobility – amenities which we could not enjoy without vacuum technology. As soon as we drive home after work, we are surrounded by a variety of car parts that were tested with helium leak detectors. Fuel and coolant tanks, airbags, air conditioning lines, oil tanks or injection systems are meticulously tested to make sure that we arrive safely at our destination.



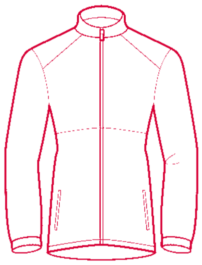
WHILE DRIVING


06:00 pm



The surface finishing of functional clothes requires vacuum

Exercising and burning off energy, for many people, is an important part of their daily routine as an offset to their job. To make sure that we do not have to skip our evening run or bike ride in bad weather, water-repellent and airtight functional wear is available. The surface finishing of modern textiles takes place under vacuum conditions that equips the clothes with their functional properties. Even the popular activity trackers and fitness watches would not exist without vacuum technology – they contain electronic parts which are manufactured under vacuum.

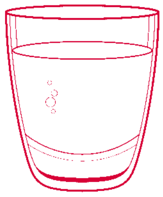


WHEN EXERCISING


07:30 pm

The analysis of drinking water requires vacuum technology. Helium leak detectors test the tightness of refrigerators

For many people, a dinner with their family is the best way to end the day. Vacuum technology ensures that we can rely on the quality of our food and all ingredients when cooking. The quality and purity of our drinking water is tested with mass spectrometers. These analyzing devices conduct the measurements under vacuum conditions. Moreover, the tightness of the cooling circuit of our refrigerators is tested with helium leak detectors. This enables us to store our food in cool conditions and thus increase their shelf life.

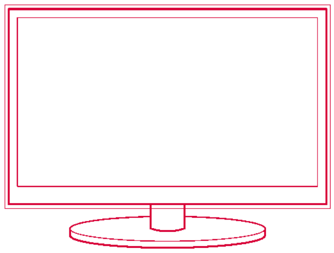


WHILE COOKING


09:00 pm

Vacuum enables modern communication technologies

After a hard day´s work, we look forward to a cozy evening at home. For most of us, this naturally includes modern communication devices such as TV, DVD player, smartphones or games consoles. We owe these digital free time activities to vacuum technology since all of these devices include semiconductor parts which are manufactured in a cleanroom under vacuum conditions. Also, the displays of smartphones are coated under vacuum conditions and equipped with their touch function.



AT THE END OF THE DAY

A vacuum solution is created by combining our strengths

What is the perfect vacuum solution? Our customers' needs are as diverse as our product portfolio. The complex demands on vacuum significantly differ from case to case. For some clients, it is important to continuously maintain a certain pressure. For others, it is important to evacuate a vacuum chamber particularly quickly

Up to 5,000 backing pumps and 1,000 turbopumps are required to manufacture some 100,000 wafers per month in a modern semiconductor factory. In contrast, a research laboratory may be sufficiently equipped with a single backing pump. Other applications involve quality assurance in manufacturing processes, where the purpose is often to test the tightness of vessels and components or to analyze the composition of process gases.

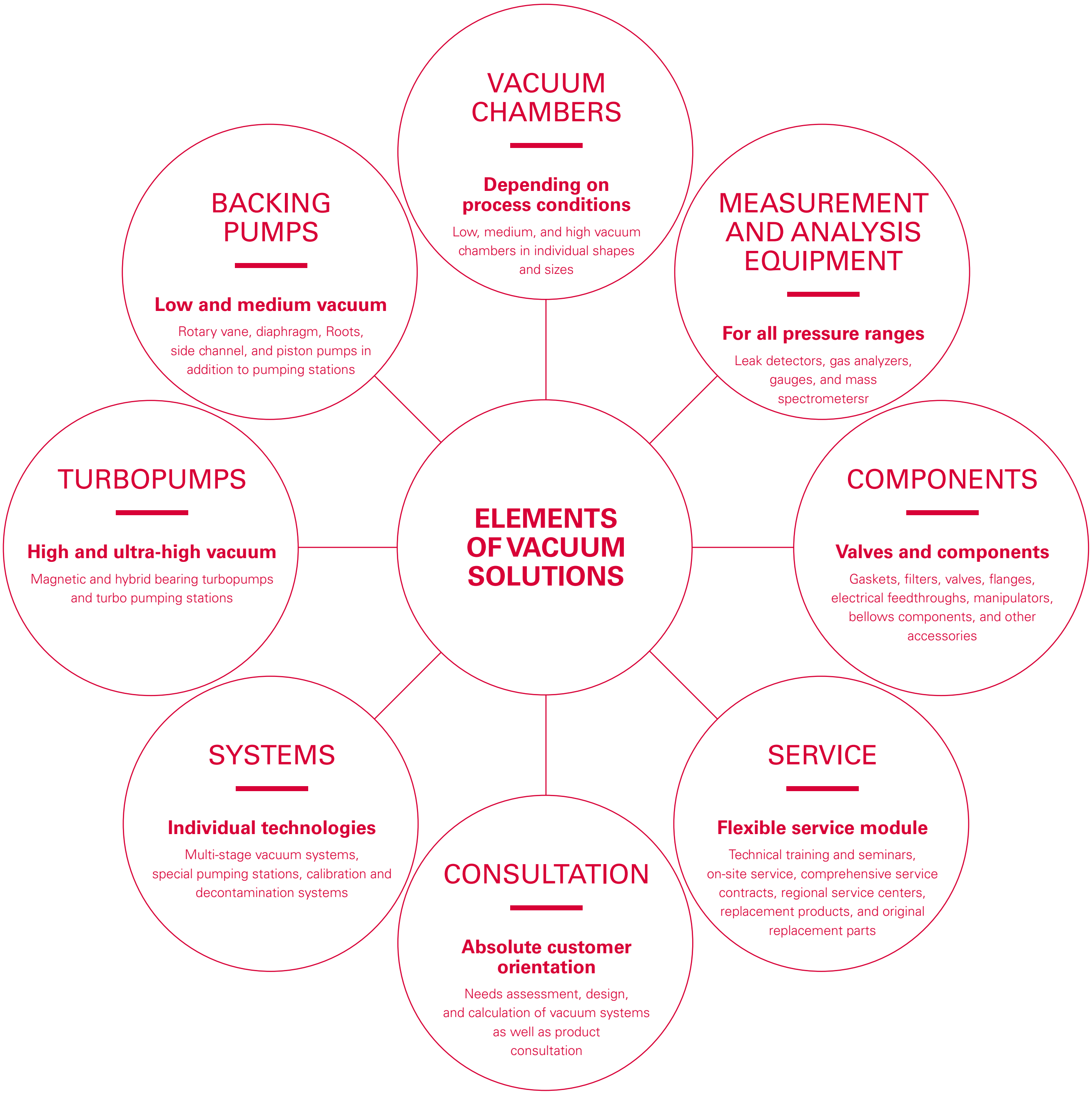
With every vacuum solution we design, our objective is to focus on delivering products of the highest quality which meet our customers' specific requirements. From the development stage right through to commissioning, our solutions for evacuating, measuring, and analyzing vacuum stand for technological excellence matched with the highest standards of quality. Consultation and service are not forgotten. Our qualified employees are always on hand to provide reliable support for our customers with science-based expertise and many years of experience.

Key factors for compiling a vacuum solution:

- Number and types of gases in one container
- Pressure and flow velocity
- Intended final pressure and base pressure
- Pumping speed and throughput

Application examples for vacuum solutions:

- Analysis technology
- Chemical industry
- Coating of glasses, architectural glass, tools, flat screens, Blu-ray discs
- Drying processes
- Food and beverage industry
- Leak detection for the automotive industry
- Manufacturing solar cells
- Paper manufacturing
- Pharmaceutical industry
- Semiconductor production
- Solar thermal plants
- Space simulation
- Steel degassing


ELEMENTS OF VACUUM SOLUTIONS
VACUUM CHAMBERS
Depending on process conditions
Low, medium, and high vacuum chambers in individual shapes and sizes
MEASUREMENT AND ANALYSIS EQUIPMENT
For all pressure ranges
Leak detectors, gas analyzers, gauges, and mass spectrometersr
COMPONENTS
Valves and components
Gaskets, filters, valves, flanges, electrical feedthroughs, manipulators, bellows components, and other accessories
SERVICE
Flexible service module
Technical training and seminars, on-site service, comprehensive service contracts, regional service centers, replacement products, and original replacement parts
CONSULTATION
Absolute customer orientation
Needs assessment, design, and calculation of vacuum systems as well as product consultation
SYSTEMS
Individual technologies
Multi-stage vacuum systems, special pumping stations, calibration and decontamination systems
TURBOPUMPS
High and ultra-high vacuum
Magnetic and hybrid bearing turbopumps and turbo pumping stations
BACKING PUMPS
Low and medium vacuum
Rotary vane, diaphragm, Roots, side channel, and piston pumps in addition to pumping stations

Product Portfolio

Manufacturing many high-tech products and items for daily life is only possible in special vacuum chambers under pressure conditions comparable to those in outer space.

Hybrid bearing turbopumps

Magnetically levitated turbopumps

Turbo pumping stations

SplitFlow turbopumps

VACUUM GENERATION – TURBOPUMPS

Rotary vane pumps

Multi-stage Roots pumps

Dry process pumps

Roots pumping stations

VACUUM GENERATION – BACKING PUMPS

Leak detectors

Mass spectrometers

Gauge heads

Gas analysis equipment

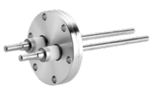
LEAK DETECTION, VACUUM MEASUREMENT AND ANALYSIS

We cover the full spectrum with our product range and are therefore able to offer the perfect vacuum solution from one source for each customer and for each application. The Pfeiffer Vacuum product portfolio is divided into the areas of vacuum generation, leak detection, vacuum measurement and analysis, installation elements, vacuum chambers, and vacuum systems. It includes a complete range of hybrid and magnetically levitated turbopumps, oil-lubricated and dry-compressing low and medium vacuum pumps, leak detectors, mass spectrometers, and gauge heads. We manufacture vacuum chambers in cubical, cylindrical, and bell-shaped designs. Our chamber program covers low, medium, and high vacuum applications.

In order to connect the different vacuum components with each other or to shut them off, we offer a wide range of installation elements such as flanges, fittings, seals, and valves.

In addition, Pfeiffer Vacuum develops and manufactures complete vacuum systems for customer specific processes, such as testing components for the automotive and electronics industries, testing pressure vessels or packaging in the food industry. This range includes systems for leak detection and contamination management as well as multi-stage vacuum systems and systems for testing pharmaceutical blister packs.

Feedthroughs



Valves

Components

Manipulators

INSTALLATION-ELEMENTS

Cylindrical, horizontal, and vertical

Cubical

Modular

VACUUM CHAMBERS

Integrity testing

Contamination management solutions

Multi-stage vacuum systems

VACUUM SYSTEMS

Share Performance

The Pfeiffer Vacuum shares were listed on the New York Stock Exchange in 1996, initially in the form of an ADR program, and have been traded on the German Stock Exchange in Frankfurt since April 15, 1998. The ADR program was discontinued in 2007 in order to concentrate the focus on the German listing.

Pfeiffer Vacuum satisfies the high transparency requirements of the Prime Standard and since its introduction has been included without interruption in the TecDAX – the index of the 30 most prominent technology companies measured by free-float market capitalization and liquidity – traded on the stock exchange in Frankfurt. All trading prices indicated in this Annual Report are Xetra trading prices.

Basic Information about Pfeiffer Vacuum Shares

Deutsche Börse Symbol	PFV
ISIN	DE0006916604
Bloomberg Symbol	PFV.GY
Reuters Symbol	PV.DE
Further indices	HDAX, Mid Cap Market, CDAX, Prime Industrial, Prime All Share, Technology All Share

The stock market in 2016

In 2016, the prominent German stock indices essentially recorded a neutral to moderately positive development. The TecDAX achieved below-average performance compared to other German indices, but its volatility was also lower.

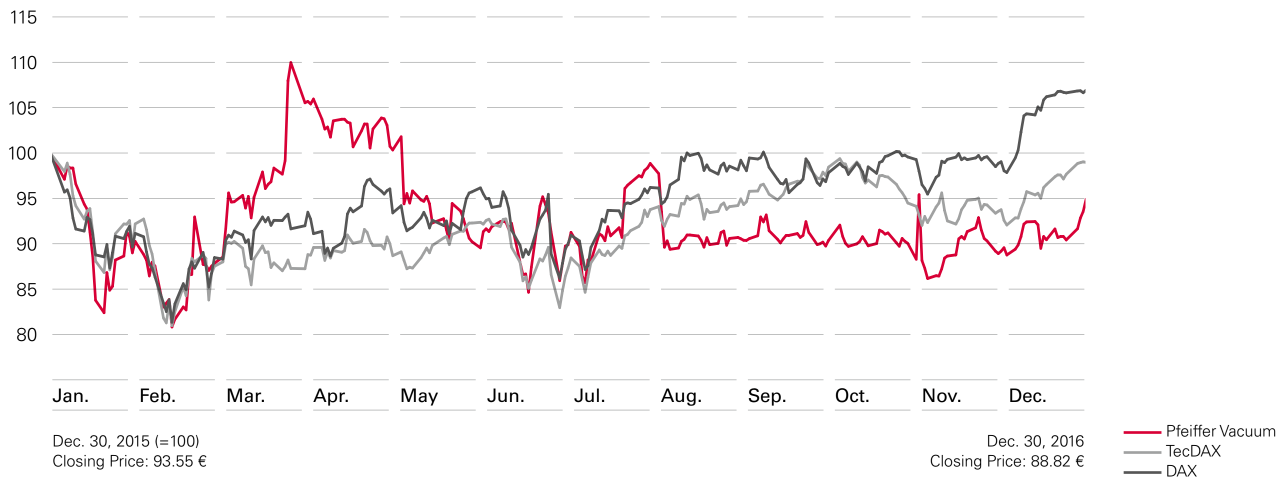
The German stock index (DAX) – the performance index of the 30 largest listed German companies, according to free-float market capitalization and liquidity – got off to a cautious start to the year and reached its annual low of 8,699.29 points in the course of trading on February 11. This initially adverse trend stemmed on the one hand from the low oil price and on the other hand from heavily burdened bank stocks which had come under pressure due to the interest rate policy pursued by the European Central Bank. In addition, China recorded its lowest export levels since 2009 during this period. The second quarter brought a positive turnaround, largely driven by an increase in the oil price to over USD 50 and the lowest unemployment level in the USA since 1973. Following a short-lived shock due to the British vote to leave the European Union (the so-called "Brexit") at the end of the second quarter, the DAX then went on to rise during the second half of the year. Buoyed up by the election of Donald Trump as the new U.S. president, it reached its record closing level of the year at 11,481.06 points on the final day of trading of 2016. An annual high of 11,481.66 points had been attained during the same day.

Overall, the DAX rose by 7 % in 2016, compared to the 2015 year-end level of 10,743.01 points. The TecDAX progressed through 2016 with more restraint and less volatility. Over the course of the year, the index decreased by 1 % to 1,811.72 points. The TecDAX recorded its annual high of 1,873.66 points at the time of closing on December 30, the final day of trading of the year.

Pfeiffer Vacuum share performance in 2016

Over the year, Pfeiffer Vacuum fell by 5 % to € 88.82. This performance was slightly behind that of the TecDAX. The share price was 4 percentage points behind the TecDAX and 12 percentage points behind the DAX. The Pfeiffer Vacuum share soon bounced back from its annual low of € 75.28 during trading on February 11 and went on to record its annual high of € 103.45 during trading on March 24. In the following weeks, the share price declined and closed at a price of € 88.82 during trading on December 30. In 2016, the trading volume was an average of 29,891 shares per day (2015: 47,161 shares).

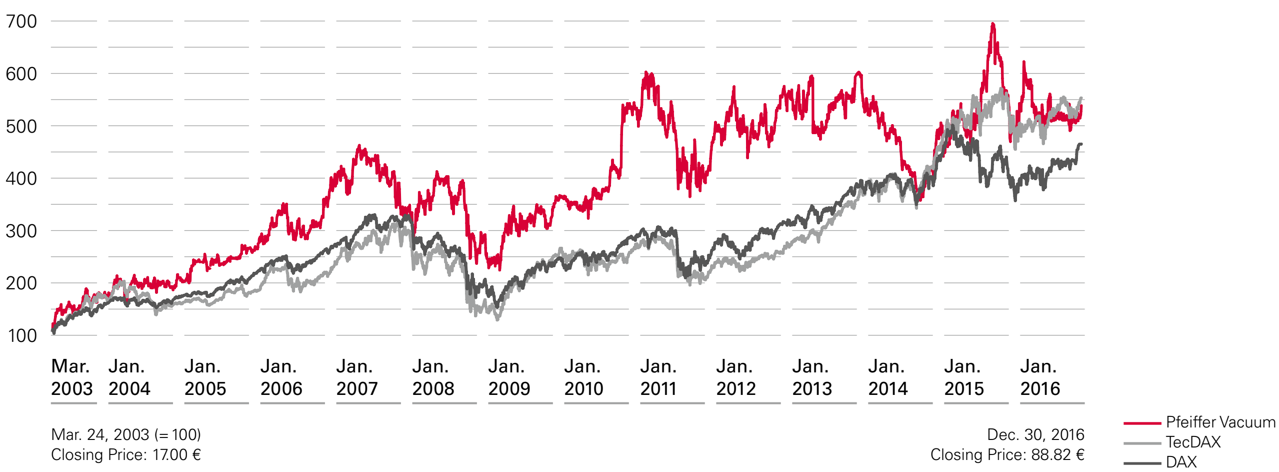
Relative Share Price Development of Pfeiffer Vacuum, TecDAX and DAX in 2016
in %



Dec. 30, 2015 (=100)
Closing Price: 93.55 €

Dec. 30, 2016
Closing Price: 88.82 €

Relative Share Price Development of Pfeiffer Vacuum, TecDAX and DAX between 2003 and 2016
in %



Mar. 24, 2003 (= 100)
Closing Price: 17.00 €

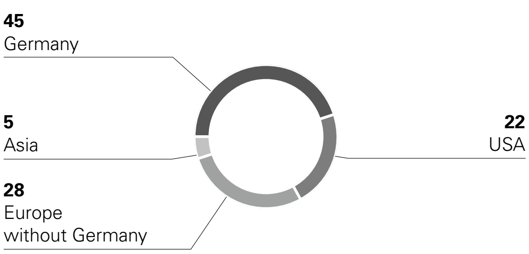
Dec. 30, 2016
Closing Price: 88.82 €

Shareholder structure

The largest equity share of 27.19 % is still held by Pangea GmbH / Busch Holding GmbH, who continue to declare this as a strategic investment.

The remaining shareholder structure was subject to only the usual minor changes in the past year. Based on voting rights notifications, talks with investors, and internal analyses, we estimate that North American mutual investment and pension funds hold approximately 22 % of outstanding shares. We estimate that European funds, first and foremost in Great Britain, as well as in Switzerland, France, and Scandinavia, account for around 28 % of outstanding shares. Allianz Global Investors, based in Frankfurt, are among the largest shareholders here. Approximately 45 % of the outstanding shares are held by German investment funds. At least 5 % of Pfeiffer Vacuum shares are held by Asian investors. A good 3 percentage points of these shares are attributed to our long-term Japanese trading agency Hakuto.

Estimated Regional Distribution of the Pfeiffer Vacuum Shareholder Structure
in %



Overview of Holdings according to Voting Rights Notification

in %	Dec. 31, 2016
Pangea GmbH / Busch-Holding GmbH, Maulburg	27.19
Hakuto, Tokyo	3.48
The state of Norway	3.33
Allianz Global Investors, Frankfurt	3.08

Earnings per share

Pfeiffer Vacuum's annual earnings of € 47.0 million represented an increase of 12.2 % over the previous year's figure of € 41.9 million. The earnings per share therefore amounted to € 4.77. This also represents an increase of 12.2 % compared to the figure of € 4.25 for the previous year. Based on the year-end closing price of € 88.82 on December 30, 2016, this results in a price/earnings ratio of 18.6 (December 30, 2015: 22.0).

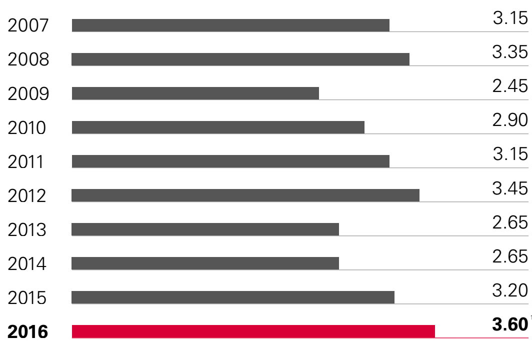
Earnings per Share

		2016
Net income	in K €	47,032
Number of shares (weighted average)	in units	9,867,659
Earnings per share	in €	4.77

Dividend

For over ten years, the Company has been enabling its shareholders to participate in its business success by paying a dividend. The annual dividend development is typically based upon the development of profitability. The Management and Supervisory Boards will propose to the Annual General Meeting on May 23, 2017 that a dividend be distributed for fiscal 2016 in the amount of € 3.60 per share of no-par stock entitled to receive dividends. This represents a total payout ratio of around 75 % of consolidated net income and a total payout amount of € 35.5 million. Subject to the consent of the Annual General Meeting, and on the basis of the year-end closing price on December 30, 2016, this represents a dividend yield of 4.1 % (previous year: 3.4 %).

Dividend development per Share for the last 10 financial Years
in €



[1] Subject to approval at the Annual General Meeting

Investor Relations

Consistently competent, professional, and reliable communication on all financial and corporate matters has always been of utmost importance to us in our dealings with our investors, private investors, and analysts. This is a contributing factor for ensuring that Pfeiffer Vacuum continues to be regarded as an attractive investment. With this, we would like to strengthen the confidence in our share and obtain a realistic and fair assessment.

At 11 roadshows (previous year: 12) in all major financial centers in both Europe and the United States, the members of the Management Board presented our business model, explained our Company's strategy, and answered questions. Moreover, we showcased our Company at a total of 10 investor conferences (previous year: 12). We also frequently conducted these conferences with two people in parallel one-on-one meetings to meet the high interest in personal interaction. Further activities included tradeshow visits and regular interaction with private shareholders. Numerous institutional investors and analysts from around the world paid frequent visits to our corporate headquarters. A press and analyst conference on our financial figures, four conference calls relating to announcements of our financial results, as well as ongoing exchanges with analysts, institutional investors, and private shareholders have characterized the work of investor relations. At least 13 analysts regularly follow our Company. According to Bloomberg, there were 5 "Buy" recommendations, 7 "Hold" recommendations and 1 "Sell" recommendation at year-end 2016.

Last year's Annual General Meeting was attended by around 390 shareholders and guests. Shareholder presence was 61.33 % compared with 55 % the year before. The shareholders adopted all items on the agenda with sweeping majorities.

Ahead of the AGM, the shareholders were able to download all relevant documents, as well as the ballot sheet, from the broad information offerings on the Internet at group.pfeiffer-vacuum.com/agm

Pfeiffer Vacuum Share Data

		2016	2015	2014	2013	2012
Share capital	in € millions	25.3	25.3	25.3	25.3	25.3
Number of shares issued	in units	9,867,659	9,867,659	9,867,659	9,867,659	9,867,659
Highest trading price	in €	103.45	115.60	102.05	99.55	95.00
Lowest trading price	in €	75.28	65.69	56.21	76.50	66.31
Trading price at year-end	in €	88.82	93.55	68.60	98.93	91.57
Market capitalization at year-end	in € millions	876	923	677	976	903
Dividend per share	in €	3.60[1]	3.20	2.65	2.65	3.45
Dividend yield	in %	4.1[1]	3.4	3.9	2.7	3.8
Earnings per share	in €	4.77	4.25	3.29	3.53	4.64
Price/earnings ratio		18.6	22.0	20.9	28.1	19.7
Free float	in %	72.81	72.81	100.0	100.0	100.0

[1] Subject to consent of the Annual General Meeting

2016

FINANCIAL REPORTING

Management's Discussion and Analysis

2016 Course of Business

Profitability

- Net sales rose noticeably by € 22.7 million or 5.0 % to € 474.2 million
- Operating profit at € 68.0 million again noticeably higher than in the previous year; + 11.9 %
- Operating profit margin also rose noticeably from 13.5 % to 14.3 %
- Net income and earnings per share both at a record level: € 47.0 million, resulting in earnings per share at € 4.77
- Sales and earnings forecasts therefore clearly fulfilled
- Management and Supervisory Board wish to let shareholders participate in the positive development and propose a record dividend of € 3.60 per share

After € 451.5 million in the previous year, sales in the past fiscal year were € 474.2 million. This corresponds to an increase of € 22.7 million or 5.0 %. This very positive development was characterized, in particular, by the stronger demand from our semiconductor customers and better momentum in the coating market. As a result, the noticeable increase in sales, formulated as a goal in last year's outlook, was achieved. The substantiation of this forecast at the last Annual General Meeting with an expected sales volume of € 470 million was, in fact, slightly surpassed due to the excellent sales development in almost all market segments in the fourth quarter of 2016.

In absolute terms, the gross profit increased from € 175.5 million in the previous year to € 180.5 million in the past fiscal year. In 2016, negative effects from the composition of the products sold – the product mix – offset the positive economies of scale associated with the increase in sales and had a slightly negative overall effect on the gross margin. The gross margin therefore declined slightly from 38.9 % to 38.1 %.

With a € 4.6 million decrease in selling and administrative expenses, research & development expenses at € 0.8 million lay slightly higher than the previous year's level (€ 25.5 million). Due to the development of international currency markets, the foreign exchange result declined and therefore reduced the positive balance of the other operating income and expenses by € 1.6 million to € 4.8 million (previous year: € 6.4 million). As a result, the operating profit rose to € 68.0 million. This corresponds to an increase of € 7.2 million or 11.9 %. In fiscal 2016, the EBIT margin, the ratio between operating profit and sales, increased significantly from 13.5 % to 14.3 %. In 2016, the noticeable improvement in the margin situation formulated in the outlook in fiscal 2015 was therefore again achieved.

Essentially as a result of the drop in interest rates for financial investments, the financial result changed slightly from € – 0.3 million to € – 0.4 million. In view of the operating profit, income before income taxes therefore reached € 67.6 million. The previous year's forecast of a noticeable increase in income before income taxes was also achieved with this growth of € 7.1 million or 11.9 %. Taking a slightly lower tax rate into account (30.4 % after 30.7 % in the previous year) and thereby arriving at tax expenses of € 20.6 million (previous year: € 18.5 million), net income also rose significantly to € 47.0 million (previous year: € 41.9 million). This corresponds to a renewed increase of € 5.1 million and is the highest net income achieved so far in the long history of the Company. In line with the net income, earnings per share also rose significantly from € 4.25 to € 4.77 – again a previously unrivaled figure.

Liquidity and financial position

As at December 31, 2016, the balance sheet total rose by € 5.8 million to € 459.3 million (previous year: € 453.5 million). Due to renewed expansion in the volume of business, both inventories and trade accounts receivable increased to € 81.7 million (€ + 4.0 million) and € 69.4 million, respectively

(€ + 10.8 million). Further significant changes on the asset side of the balance sheet were, in particular, the decline in intangible assets (€ – 5.8 million, mainly due to scheduled amortization of € 7.3 million), and the reduction in cash and cash equivalents of € 5.4 million to € 110.0 million. On the liabilities side of the Consolidated Balance Sheet, besides the increase in equity, it was the virtually complete repayment of financial liabilities of € 20.5 million that had the biggest influence in particular on the development of the balance sheet total. Unchanged compared to prior years, the Company showed no net-indebtedness as at December 31, 2016. As in previous years, equity also rose again in 2016. After € 305.0 million as at December 31, 2015, this amounted to € 315.6 million at the end of fiscal 2016. This is an increase by € 10.6 million and a further improvement in the equity ratio from 67.3 % to 68.7 %. The pension provisions increased by € 7.7 million, largely due to the reduced discount rates, to a total of € 51.2 million.

As in the previous year, the development of cash and cash equivalents was largely due to the operating cash flow, which was significantly higher at € 63.6 million, as well as the dividend payment of € 31.6 million and the repayment of financial liabilities amounting to € 20.5 million. At € 18.0 million, capital expenditures exactly corresponded to the forecast formulated in last year's outlook (€ 18.0 – € 20.0 million). The increase compared to the previous year resulted, in particular, from more extensive replacement investments, but also from expansion measures in connection with the current and continuing scheduled business development. Cash holdings amount to € 110.0 million, and the financial liabilities of € 20.7 million in the previous year were virtually completely repaid. The course for further profitable growth has been set with a respectable improvement in earnings after two years, and Pfeiffer Vacuum has placed the right focus, both in terms of sales strategy and costs, with the projects initiated. As a Company with globally unique experience in the vacuum industry, we are able to look ahead to the future with great confidence.

Pfeiffer Vacuum concludes 2016 with a record profit. In line with our established procedure in the past, shareholders should again participate disproportionately in the Company's success. The Management and the Supervisory Board therefore propose a dividend payout of € 3.60 per share. This would also be a payout figure that has never been achieved before in the Company's history.

Economic Conditions 2016

Overall economic development

World economy

Global economic momentum remained at a modest level in 2016. As in the previous years, the expectations relating to economic development were correspondingly cautious. Consequently, during the course of the year it was only seldom necessary to adjust macroeconomic or industry-specific forecasts downwards. According to the latest estimates by the International Monetary Fund (IMF), nominal global growth is again expected to have risen by 3.1 %. In the emerging and developing countries, growth increased to prospectively 4.2 % (previous year: 4.0 %). In the industrialized countries, on the other hand, gross domestic product growth slowed to an average of 1.6 % (previous year: 1.9 %).

Europe

In the course of 2016, economic growth within the eurozone was similarly weak to that of the previous year. The gross national product rose by 1.6 % (previous year: 1.5 %). Due to the low oil price, the economy benefited from an increase in private consumption expenditures. Despite historically low interest rates and a slight improvement in business confidence, investments remained restrained. Particularly in the fourth quarter, the export business experienced a certain tailwind as a result of the decline in the euro/dollar exchange rate following the presidential elections in the United States.The macroeconomic recovery process continued to progress, particularly, in Ireland and Spain. A new worsening of the crisis in the eurozone was threatened in 2016 by the imbalance of certain Italian banks suffering from bad loans. A solution from the government and the EU, however, emerged by the end of the year. The Greek economy succeeded in stagnating after a slight recession in the previous year. The German economy grew slowly and steadily in 2016 as in the preceding years. The GDP grew by an average of 1.9 % in total (previous year: 1.7 %). The strongest impetus once again came from consumption in 2016. Private households increased their spending by an anticipated 2.0 % approximately, whereas the second half of the year showed considerably stronger growth than the first. Public spending was even 4.2 % up on the previous year. As a result of immigration and the lowest rate of unemployment since German reunification (6.1 %), the number of persons in employment rose again, reaching another record high with an annual average of more than 43 million (+ 0.5 %).

USA

Given the prospect of rising interest rates and the uncertainty in connection with the presidential elections, the U.S. economy in 2016 developed somewhat less soundly than in the previous year. The growth in economic performance of 1.6 % in real terms was largely driven by private consumption (previous year: 2.5 %). The unemployment rate fell to 4.9 % (previous year: 5.0 %). Towards the end of the year, the U.S. Federal Reserve Bank once again raised the base interest rate slightly and held out the prospect of further measures. The election of Donald Trump as the 45th President of the United States led to a further uncertainty factor at the end of 2016, as many aspects of the coming economic policy were not yet known in detail at this time.

Asia

Despite an expansionary fiscal policy, Japan again increased its economic performance only slightly by 0.5 % (previous year: 0.6 %). Private consumption remained weak and exports also failed to stimulate the overall economic situation. The weakening economy in China also remained a cause for concern. According to official figures, the Chinese economy grew by 6.6 % (previous year: 6.9 %). This is still distinctly higher than the global average, but far below earlier growth rates. This development reflects the continuing shallower rise in industrial production. India, on the other hand, maintained its growth momentum and increased its growth to 7.6 % (previous year: 7.3 %).

Mechanical engineering and the vacuum industry

In the first eleven months of 2016, production in the German mechanical and plant engineering sector only barely surpassed the previous year's level with a real gain of 0.1 %. Until recently, the VDMA's (Association of German Machinery and Plant Manufacturers) economists were optimistic that the stagnation forecast in the fall of 2015 would set in during 2016. According to a current estimate, the nominal production value for 2016 amounted to some € 203 billion.

The full-year results for exports of machinery and plant were not yet available for 2016. In the first ten months, they were down 1.8 % in real terms compared to the previous year. Based on the entire year, however, the shortfall will more likely than not turn out slightly smaller, as some further upward corrections were expected in the fourth quarter.

The number of people employed in the German mechanical and plant engineering sector in October 2016 amounted to about 1,017,000. This corresponds to an increase of 0.3 %, or growth of about 3,000 employees, compared to October 2015. Incoming orders in the first eleven months of 2016 fell 1 % short of the previous year's level.

Vacuum technology is used in many industries. Accordingly, the vacuum industry is also to be considered against the backdrop of global economic development. During the reporting period, this again led to a slight decline in overall development. However, within the market segments important for the vacuum industry, there were considerable differences: Following a downward trend in 2012 and 2013 as well as the first tentative positive indications in 2014, the cyclical semiconductor industry recorded an increasing willingness to again invest in the years 2015 and 2016. A similar positive development was recorded in the coating and research & development sectors in 2016. The analytics and industry sectors were virtually consistent in confirming the positive leads of the previous year.

The Pfeiffer Vacuum Group

Operations

Pfeiffer Vacuum is a leading supplier of vacuum solutions. The product portfolio is marketed under the Pfeiffer Vacuum and adixen product brands and includes all components and systems for vacuum generation, measurement, analysis and leak detection. The products of both brands complement each other perfectly so that we can offer clients customized vacuum solutions that are tailored to their individual requirements.

The name Pfeiffer Vacuum stands globally for innovative and customized vacuum solutions as well as superior engineering, expert consultancy, and reliable service. With our technologically advanced turbopumps and backing pumps, we set the standards in our industry. This claim to leadership will continue to be our driving force in the future.

Our products cover a wide range of pumps including vacuum generation pumps, vacuum chambers, vacuum measurement and analysis equipment, installation components as well as complete vacuum systems. With the help of our products, vacuum pressure conditions similar to those in outer space are created which are essential for research, various industrial processes, and for manufacturing many everyday objects.

We are a machine engineering company that designs high-tech products of the highest quality and manufactures them predominantly for export markets. Besides the two main design and production sites in Asslar, Germany, and in Annecy, France, the Pfeiffer Vacuum Group has an extensive network of its own sales and service companies. The Company's primary markets are in Europe, Asia and the USA.

Corporate Group structure and organization

As at December 31, 2016, the total number of companies in the Pfeiffer Vacuum Group remains unchanged at 21 compared to the previous year.

Pfeiffer Vacuum GmbH, Asslar, and Pfeiffer Vacuum SAS, Annecy, France, play a central role in the Corporate Group.

Pfeiffer Vacuum GmbH organizes the development and manufacture of all Pfeiffer Vacuum products, is the distributor for Germany and also manages central equity investments for the Corporate Group. As at December 31, 2016, the Company employed a total of 737 employees. Pfeiffer Vacuum SAS is, in a sense, the French equivalent of Pfeiffer Vacuum GmbH. The Company employed 641 employees at year end, is the main development and production facility for adixen products, and is responsible for sales in France. A total of 1,378 employees works in these two companies. This represents more than half of all workers employed in the entire Corporate Group (2,415 at the end of 2016).

The other Corporate Group companies are legally independent corporations that are primarily active in sales and service tasks. In addition, Trinos Vakuum-Systeme GmbH (from January 1, 2017 operating under the name Pfeiffer Vacuum Components & Solutions GmbH), Pfeiffer Vacuum Semi Korea, Ltd. (renamed in the reporting year, formerly adixen Vacuum Technology Korea Ltd.), and Pfeiffer Vacuum Romania S.r.l. are entrusted with the manufacture and assembly of various types of products. Essentially all companies are legally organized in a form that can be compared to a German limited liability company (GmbH).

Information pursuant to § 315 Sub-Para. 4 HGB

The subscribed capital of Pfeiffer Vacuum Technology AG as at Dezember 31, 2016 is unchanged at K€ 25,261 and consists of a total of 9,867,659 no-par value shares. There are no different classes of shares currently or previously existent, so all shares have the same rights, in particular the same voting and dividend entitlement rights. Accordingly, the calculated share of the subscribed capital amounts to € 2.56.

As at December 31, 2016, a total of 27.19 % of the shares of the Company continued to be held by Dr. Karl Busch, Ms. Ayhan Busch, Ms. Ayla Busch, Mr. Sami Busch and Mr. Kaya Busch. The shares are held indirectly through Pangea GmbH, Maulburg, Germany, and further independent legal entities belonging to the family-run Busch Group and are deemed to be held by the persons named. In addition, please refer to the comments in section "Subsequent Events". To our knowledge, there were no further

The overall corporate structure as at December 31, 2016, was as follows:

Corporate Group Structure as at December 31, 2016

	Home state	Share (in %)	
Pfeiffer Vacuum Technology AG	Germany	100.0	
Pfeiffer Vacuum GmbH	Germany	100.0	
Pfeiffer Vacuum Austria GmbH	Austria	100.0	
Pfeiffer Vacuum (Schweiz) AG	Switzerland	99.4	
Pfeiffer Vacuum (Shanghai) Co., Ltd.	China	100.0	
Pfeiffer Vacuum Ltd.	Great Britain	100.0	
Pfeiffer Vacuum Scandinavia AB	Sweden	100.0	
Pfeiffer Vacuum Inc.	USA	100.0	
Pfeiffer Vacuum Singapore Ltd.	Singapore	100.0	
Pfeiffer Vacuum Taiwan Corporation Ltd.	Taiwan	100.0	
Pfeiffer Vacuum Benelux B.V.	The Netherlands	100.0	
Pfeiffer Vacuum (Xi'an) Co., Ltd.	China	100.0	
Pfeiffer Vacuum Holding B.V.	The Netherlands	100.0	
Pfeiffer Vacuum Italia S.p.A.	Italy	100.0	
Pfeiffer Vacuum (India) Private Ltd.	India	73.0	27.0
Pfeiffer Vacuum Korea Ltd.	Republic of Korea	75.5	24.5
Trinos Vakuum-Systeme GmbH[1]	Germany	100.0	
Pfeiffer Vacuum SAS	France	100.0	
adixen Vacuum Technology (Shanghai) Co., Ltd.	China	100.0	
Pfeiffer Vacuum Romania S.r.l.	Romania	100.0	
Pfeiffer Vacuum Semi Korea, Ltd.[2]	Republic of Korea	100.0	

[1] Renamed in January 2017 to Pfeiffer Vacuum Components & Solutions GmbH
[2] Renamed, formerly adixen Vacuum Technology Korea Co.Ltd.

shareholders with a holding of more than 10 % as at December 31, 2016 and also as at December 31, 2015.

Amendments to the Articles of Association can be decided at the Annual General Meeting by a simple majority of voters present at the meeting unless the law mandates a larger majority. To our knowledge, there are no restrictions with regard to voting rights or with regard to the transfer of shares.

Management Board members, according to the Articles of Association and §§ 84, 85 German Stock Corporation Act ("AktG"), are appointed by the Supervisory Board for a maximum term of five years. Reappointments or extensions to the tenure period are permitted for a maximum of five years in each case.

Through a resolution of the Annual General Meeting on May 24, 2016, the Management Board was authorized to increase the subscribed capital once or repeatedly by € 12,630,602.24 or 4,933,829 shares, in exchange for cash or contributions in kind (authorized capital). This authorization is valid until May 23, 2021 and requires the consent of the Supervisory Board.

According to the resolution of the Annual General Meeting on May 22, 2014, the Management Board is authorized to issue fractional bonds with option or conversion rights or conversion obligations, profit participation rights or participating bonds (or combinations of these instruments) with an aggregate nominal value of up to € 200,000,000.00 and to grant the holders conversion rights for up to 2,466,914 no-par bearer shares of the Company having a prorata amount of up to € 6,315,299.84 of the share capital. This authorization is valid until May 21, 2019, and requires the consent of the Supervisory Board.

At the Annual General Meeting on May 21, 2015, the shareholders authorized Pfeiffer Vacuum to buy back treasury shares in accordance with § 71 Sub-Para. 1, No. 8, German Stock Corporation Act ("AktG"). This authorization covers the buyback of a proportionate amount of the Company's share capital of up to € 2,526,120,70 (986,766 shares, representing

Application Examples

Semiconductor	Industry	Analytics	R&D	Coating
Lithography	General applications	Mass spectrometers	Renewable energies	Solar cell technology
Metrology	Electron beam welding	Electron microscopy	Nanostructures	Display coating (LED, OLED)
CVD (chemical Vapor Deposition)	Freeze drying	Surface analysis	Particle accelerator technology	Data storage
PVD (physical Vapor Deposition)	Vacuum drying	Gas analysis	Space simulation	Glass coating
Etching	Steel degassing	Biotechnology	Plasma technology	Surface protection
Ion implanter	Leak detection	Life science	Particle physics	Tool coating

10 % of the share capital at the time the resolution was adopted), requires the consent of the Supervisory Board for excecution and is valid through May 20, 2020. The Corporate Group does not own treasury shares as at December 31, 2016 and 2015.

In connection with the service contract with CEO Manfred Bender and the disclosures under the conditions of a change of control after a takeover offer, please refer to the corresponding section in the compensation report.

There are no further aspects that would require discussion within the context of § 315, Sub-Para. 4 HGB.

Markets and market position

Sales by markets

Products from Pfeiffer Vacuum are employed in numerous industry markets. Over 14,000 customers trust in the reliability of our products. Pfeiffer Vacuum divides these customers into the following markets: semiconductor, industry, coating, analytics, and research & development.

As far as the positioning of these markets is concerned, only a limited amount of data is available regarding the size of the entire market and individual market segments. Based on surveys conducted by the German Engineering Federation (VDMA) as well as our own estimates, we expect to take the leading market position in the market segments of industry, coating, analytics, and research & development. In the semiconductor market segment, we should rank second.

Without vacuum technology, a number of innovative processes would be inconceivable, such as in nanotechnology, in producing LEDs or in scientific research. Many of these new technologies create innovative products and production processes. Strong advances in people's personal and professional communication patterns, for example, are bringing forth ever more new technologies in the semiconductor industry. The rising demand for energy coupled with the need to conserve resources is leading to a steadily increasing amount of new developments in the field of energy supply. These, and further social and industrial trends, are typically producing additional marketing opportunities for Pfeiffer Vacuum. Our strengths include the ability to serve all markets, which makes us largely independent of developments in individual market segments.

Semiconductor

Our vacuum pumps are required in the semiconductor industry for the production of microprocessors and handling systems. Customers in this industry predominantly require a large number of medium-sized and large backing pumps, but also turbopumps, as well as measurement equipment. Chip manufacturers can significantly increase their yield with our decontamination systems. The semiconductor industry itself particularly benefits from the changes in communication technology. New fields of application for vacuum arise, for example, in nanotechnology. Our customers are increasingly located in Asia, and also in the United States, as well as – to a lesser extent – in Europe.

Industry

In this segment, we combine a heterogeneous category of industrial customers who require our vacuum solutions for specific production steps. Industrial trends such as quality improvement, energy supply, and conservation, mobility or environmental protection are currently leading to new fields of application. Examples include metallurgy, tube production, as well as air conditioning and refrigeration technology. A further field of application is solar thermal energy. The absorber tubes needed for this technology are evacuated by using our pumping stations as well as continuously being tested for leaks with our leak detectors. Our customers in the industrial segment primarily come from Europe, as well as from the United States, and increasingly from Asia.

Analytics

Our largest customers in this market are so-called OEM (Original Equipment Manufacturer) customers, i.e. manufacturers of industrial systems or analytical instruments. Complex analytical devices such as scanning electron microscopes are primarily employed for industrial quality control. This industry is characterized in particular by megatrends such as Life Science, Biotechnology, and Security. Ever smaller and lighter portable analyzers are required in environmental technology, in security technology or for doping analyses. The analytical industry therefore typically requires small and medium-sized turbopumps along with backing pumps and measurement equipment. Our major customers in this market are located in the United States, Japan, the United Kingdom, and Germany.

Research & Development

Collaboration with research facilities enjoys a long tradition at Pfeiffer Vacuum. Whether in physics or chemistry laboratories at universities, prominent research institutions like the Fraunhofer and Max Planck Institutes or in large multinational research facilities – all of them rely upon the quality and dependability of our mass spectrometers, leak detectors, or vacuum solutions. Working in close cooperation with research facilities in Europe, the United States, and Asia, new applications arise continuously in the fields of energy supply or healthcare technology.

Coating

Without vacuum, many things that are used in daily life could not be produced in the desired quality. The antireflective coatings on eyeglass lenses, the coatings within flat screen manufacturing, the coatings on Blu-ray discs or on high-quality bathroom faucets and fittings as well as the coatings on solar cells or architectural glazing are produced in vacuum chambers, for example. High-quality tools are coated and hardened under vacuum to make them even more durable. One significant megatrend in this segment is the orientation towards regenerative energies, such as solar energy. What is predominantly required in the coating industry are medium-size and large backing pumps and turbopumps as well as measurement equipment and complete vacuum systems. Our customers are located in all industrial nations.

Strategy and control

Strategy

Pfeiffer Vacuum develops, produces and distributes vacuum solutions that are highly challenging in terms of technology, quality, reliability, service life, and performance; all are attributes that our customers associate with products from Pfeiffer Vacuum. The Company's long-term strategic objectives include selling its products on the basis of quality, not price. The sales strategy also includes stressing the long-term total cost of ownership advantages over the life of a Pfeiffer Vacuum product ("Total Cost of Ownership"). These stem, among other things, from lower maintenance and repair costs, longer service lives and lower energy consumption in comparison with rival products.

A further strategic objective is to always be close to the customer. We live up to this objective through our worldwide presence, and we assure that everything we do always focuses squarely on our customers.

Corporate Management

The Management Board of Pfeiffer Vacuum Technology AG assumes responsibility for the strategic leadership of the Corporate Group. In 2015, a business unit structure was put in place below the Management Board level with the goal of meeting the specific requirements of customers in the Semiconductor and Coating market segments, on the one hand, and those of the Analytics, Industry and Research & Development market segments on the other. The "Semiconductor & Coating" and "Analytics & Industry" (including Research & Development) business units formed in this way are managed by a business unit head who reports directly to the Management Board and is responsible for the business unit concerned in all operative and also strategic matters.

The local sales and service companies were allocated to the business units according to the focus of their operations and the market potential. They are directly subordinated to this business unit, and their comprehensive regional responsibility for all market segments continues to apply unchanged.

All subsidiaries in the Group therefore have self-directed managements and basically make their own decisions within central guidelines on how to attain the targets that have been defined by Corporate Headquarters and the business unit (sales, EBIT margin and earnings before taxes).The supervisory bodies of the subsidiaries, whose composition also includes members of the Management Board of Pfeiffer Vacuum Technology AG, the heads of the business units or Headquarters in Asslar, Germany, must be involved in the case of major decisions.

Steering instruments

All subsidiaries are steered by Corporate Headquarters in Asslar through the stipulation of annual sales and profitability targets ("Management by Objectives"), and thus primary steering continues to lie with the legal entities in the regions.

The achievement of these targets is monitored by means of detailed target/actual comparisons and variance analyses within the framework of monthly reporting, which was extended from January 1, 2016 onwards to additionally take account of the requirements of the business unit structure. This ensures that undesirable trends will continue to be identified and corrected early on. Monthly conference calls with the management of the subsidiaries additionally ensure that all business development questions are discussed. In addition, face-to-face meetings with staff at the local site are held by Group and business unit management.

For countries in which Pfeiffer Vacuum is not represented directly through a subsidiary, the sales targets are agreed with the local distribution partner. Here, too, the achievement of sales targets is measured by means of target/actual comparisons. A further steering instrument consists of the variable remuneration of the local management of the non-German subsidiaries and of the sales staff. This sensitizes employees to cost structures, and so to the Company's long-term success, even if they do not work in areas of the Company which have a direct influence on sales.

Profitability, Financial Position, and Liquidity

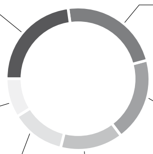
Development of sales in 2016

After recording a very positive increase in sales to € 451.5 million in the year 2015, sales in the past fiscal year again rose noticeably to € 474.2 million. This corresponds to an increase of € 22.7 million or 5.0 %. This renewed positive development is due in particular to the semiconductor and coating segments in Asia.

Presented below are net sales by segment, region, product and market for 2016. It should be noted with respect to net sales by segment that the sales shown in this presentation are allocated on the basis of the registered office of the Company that invoiced the sales. Therefore, the segment-based presentation shows net sales by subsidiary. On the other hand, net sales by region include all sales in a specific region, regardless of which subsidiary within the Pfeiffer Vacuum Group invoiced the sales. Net sales by segment and net sales by region will differ from each other to a greater or lesser extent. Net sales in the Asia segment, for example, differ significantly from those recorded for the Asia region, since the Asia segment includes only the direct sales of our Asian subsidiaries. In contrast, the Asia region additionally contains sales that the manufacturing companies generate directly with Asian customers – for example, with customers in Japan or India. In the case of net sales by segment, the sales generated by the German Company through direct deliveries to agents and/or customers outside Germany were significantly higher than German sales by regions. The sales in the USA region and the USA segment, on the other hand, are nearly identical because virtually all sales in this region are handled by our American subsidiary.

Sales by Segment

Sales by Segment
in %, (previous year)



Germany

After recording only a comparatively moderate increase in sales in the year 2015, sales in Germany in the year 2016 showed substantial growth. The positive increase of € 4.9 million is attributable in particular to the development of sales at Pfeiffer Vacuum Components & Solutions GmbH (formerly Trinos Vakuum-Systeme GmbH) and was generated predominantly with customers from the industry market segment.

USA

Following several years marked by a positive development, we recorded a very slight downward trend in the USA overall in the year 2016. This was due to positive growth in the semiconductor industry and a pickup in demand in the research & development segment, which was overcompensated for by the weaker pace of the analytics and industry segment. Moreover, the completely different ecological orientation of the two presidential candidates and the uncertainty right up to the end concerning the outcome of the election resulted in a significant decline in demand in the U.S. solar industry. This contrasted with the significant growth experienced in this sector in the year 2015.The development of the USD exchange rate in the year 2016 did not affect the sales performance in the USA.

With a 23.0 % share of sales, again almost a quarter of sales in 2016 was invoiced by our American sales subsidiaries (previous year: 24.6 %). Due to the very positive development, the U.S. segment now occupies a leading position together with Germany (also with a 23.0 % share).

Europe (without Germany and France)

Following a very pleasing development in fiscal 2014 and 2015, the European sales subsidiaries recorded a sideways movement in sales in 2016. There is wide disparity in the development experienced by the various countries within Europe. While Sweden achieved a very positive increase, our sales subsidiary in Great Britain recorded a decline in the volume of sales. This must be seen against the weakness of the British pound, which had a significant negative impact on sales performance. As yet, we do not detect any adverse effects on the sales revenue resulting from Britain's exit from the European Union.

Republic of Korea

In general, the sales subsidiaries in the Republic of Korea segment show a strong focus on the semiconductor market. A weaker start to the year was followed by significantly stronger impetus in the fourth quarter in particular, enabling the decline in this segment to remain within bounds at € 2.6 million compared to the year 2015. It must also be borne in mind that currency effects negatively influenced developments by some € 1.6 million in 2016.

Asia (without the Republic of Korea)

With an increase of € 13.7 million or 30.6 % in the year 2016, the Asia segment (without the Republic of Korea) recorded the largest absolute and relative

Sales by Segment

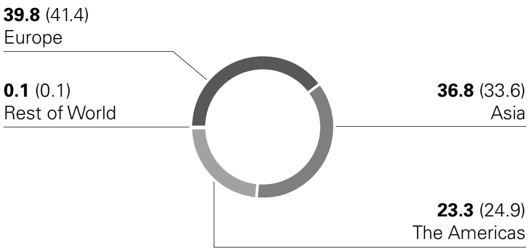
	2016	2015	Change	
	in € millions	in € millions	in € millions	in %
Germany	109.3	104.4	4.9	4.6
USA	108.9	110.9	– 2.0	– 1.8
Europe (without Germany and France)	89.4	90.2	– 0.8	– 0.8
Republic of Korea	66.5	69.1	– 2.6	– 3.8
Asia (without Republic of Korea)	58.3	44.6	13.7	30.6
France	41.8	32.3	9.5	29.5
Total	**474.2**	451.5	22.7	5.0

change. Of particular note here are the local business units in Taiwan and Singapore which experienced a marked increase in demand from the semiconductor and coating segments. Growth was also recorded by the units in China, however, especially in the coating market and there in particular in the solar industry.

France
Sales in France in 2016 were € 9.5 million over the previous year's figure. Whereas the sales volume in France itself was largely constant, the significant growth was the result of direct business with foreign customers. Here, too, the development was largely fueled by the solar industry in China. In France, the sustained weak demand as a result of the ongoing difficult overall economic situation of the second largest economy in the eurozone appears to remain the decisive factor.

Sales by Region

Sales by Region
in %, (previous year)



Europe
With an increase to € 188.9 million, Europe retained its position in 2016 as the region with the highest sales. The increase totaling € 1.9 million was the result of a gratifying development in Sweden and Germany, while in the remaining countries in Europe, almost all were able to reach the level of sales attained in the previous year. Here, too, the burden placed on the level of sales by the weakness of the British pound must be taken into account.

Asia
The considerable improvement in demand from the semiconductor industry and the coating market particularly impacted the development of sales in the Asian region. Following a marked increase already in the previous year, this region again recorded a significant growth in demand of € 23.1 million or 15.2 % in the year 2016.This positive development was not restricted to individual countries in the region but was recorded virtually everywhere with the exception of the Republic of Korea.

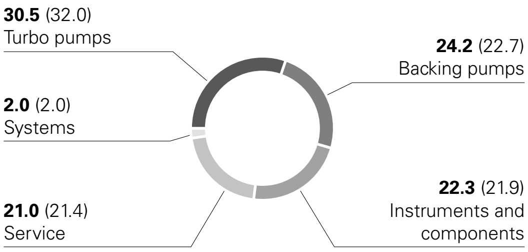
The Americas
Following a very high level of sales of € 112.4 million in the year 2015, sales revenues in 2016 declined slightly to € 110.5 million. The development of sales in the Americas continues to be affected essentially by the development in the USA. Since there is virtually no direct business by the German or French units in this region, this development largely conforms to the previously explained course of sales according to segments. Along with the sales development in North and South America, the share of total revenue also declined slightly from 24.9 % in the previous year to 23.3 % in the year 2016.

Sales by Region

	2016	2015	Change	
	in € millions	in € millions	in € millions	in %
Europe	188.9	187.0	1.9	1.0
Asia	174.6	151.5	23.1	15.2
The Americas	110.5	112.4	– 1.9	– 1.7
Rest of World	0.2	0.6	– 0.4	– 60.0
Total	**474.2**	451.5	22.7	5.0

Sales by Product

Sales by Product
in %, (previous year)



<u>Turbopumps</u>
Sales of turbopumps stabilized at a very high level. With a figure of € 144.5 million, sales in this product group remain virtually at the previous year's level. In contrast, the distribution of turbopumps over the market segments shifted slightly from the coating market to the semiconductor industry. With a share of total sales of 30.5 % (previous year: 32.0 %), turbopumps again represented the strongest product group in 2016.

<u>Backing pumps</u>
In terms of product groups, the increase in sales in 2016 resulted in particular from the development of sales of backing pumps. The largest share of this was accounted for by so-called process pumps for the semiconductor industry together with dry pumps for coating applications. Accordingly, in regional terms, the increase resulted particularly from the Asian economic area, but also to a lesser extent from Germany. With a 24.2 % share of sales, almost a quarter of overall sales were achieved with this product group.

<u>Instruments and components</u>
An analysis of sales according to product groups revealed a very gratifying 6.8 % increase in instruments and components. This can primarily be attributed to products from Pfeiffer Vacuum Components & Solutions GmbH (formerly Trinos Vakuum-Systeme GmbH), which were able to be marketed more actively not only in Europe but also in the USA. Representing a share of 22.3 % of total sales, this product group remains an important pillar of Pfeiffer Vacuum and contributes substantially to the very well-balanced distribution of sales revenues according to product groups.

<u>Service</u>
The installed basis of products from the Pfeiffer Vacuum Group creates a sound foundation for our service activities. The partly aggressive and corrosive process conditions under which the pumps are used, particularly in the semiconductor industry, make regular maintenance an absolute necessity. Similarly to the previous years, the 3.1 % increase in 2016 also resulted primarily from increased sales to our semiconductor customers. Since the increase in sales from service was largely proportional to the development of overall sales revenues, the share of total sales remains virtually unchanged at 21.0 % (previous year: 21.4 %).

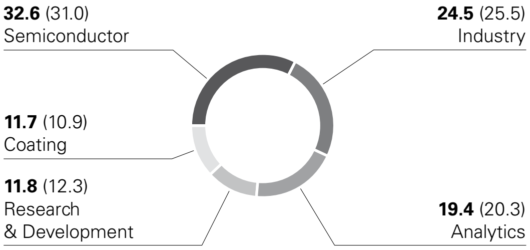
<u>Systems</u>
Sales in this project-driven sector rose slightly from € 8.8 million in the previous year to € 9.5 million in the past fiscal year.

Sales by Product

	2016	2015	Change	
	in € millions	in € millions	in € millions	in %
Turbopumps	144.5	144.8	– 0.3	– 0.2
Backing pumps	115.0	102.4	12.6	12.3
Instruments and components	105.5	98.8	6.7	6.8
Service	99.7	96.7	3.0	3.1
Systems	9.5	8.8	0.7	7.5
Total	**474.2**	451.5	22.7	5.0

Sales by Market

Sales by Market
in %, (previous year)



Semiconductor

The very positive development in the semiconductor industry in previous years continued into 2016 and even slightly gained momentum. The predominant impetus in this market in 2016 came from Asia, particularly from Taiwan and Singapore, and the USA. Overall, we recorded a significant increase in sales revenues of € 14.8 million, or 10.7%.

Industry

Our most heterogeneous market segment includes a broad range of customers from the automotive and the metalworking up to the food industry. This market segment performed a sideways movement with a modest upward trend in fiscal 2016. In view of the heterogeneous nature of this market segment, positive and negative trends are balanced out extremely well, both in individual sectors and regionally. Accordingly, the overall development took place without any major regional or customer-related shifts.

Analytics

Sales in this market segment stagnated at a high level of € 92.1 million. Our customers in this sector use the whole spectrum of products, even if the focus is on turbopumps. The ongoing high level of turbopump sales is substantially impacted by this market segment.

Research & Development

At € 56.1 million, sales in the research & development market segment – our most stable market segment – lay slightly over the previous year's level (€ 55.6 million). Due to the high number of state-owned and partly state-owned research institutes, this segment developed largely independently of economic trends. Also typical is the development within the fiscal year with a slightly more restrained start to the year and a much stronger fourth quarter, which was also observed in 2016.

Coating

In view of impetus from the solar industry, this market segment recorded substantial growth in 2016. Weaker momentum in the USA contrasted with a marked growth in demand in Asia, particularly in China.

New orders and orders on hand

After new orders of € 456.9 million in 2015, this figure increased considerably by € 25.0 million or 5.5 % to € 481.9 million in 2016. This pleasing development was recorded in almost all product areas, but was particularly pronounced in backing pumps. While the volume of new orders developed sluggishly in the first three quarters, the momentum in the fourth quarter in particular was significantly higher. This momentum is continuing into the current fiscal year 2017, according to present information. After 1.01 in the previous year, the book-to-bill ratio, the ratio between new orders and sales, stood at 1.02 in 2016.

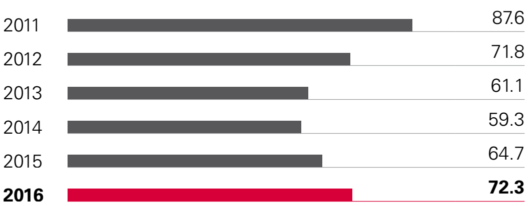
Sales by Market

	2016	2015	Change	
	in € millions	in € millions	in € millions	in %
Semiconductor	154.7	139.9	14.8	10.7
Industry	115.9	115.0	0.9	0.7
Analytics	92.1	91.7	0.4	0.4
Research & Development	56.1	55.6	0.5	1.0
Coating	55.4	49.3	6.1	12.3
Total	**474.2**	451.5	22.7	5.0

The order volume on hand as at December 31, 2016 totaled € 72.3 million, and lay 11.7 % over the previous year's figure of € 64.7 million. The visibility of orders on the basis of average sales in 2016 remains unchanged at about two months.

Development of Order Intake
in € millions

Development of Order Backlog
in € millions



Earnings development

Gross profit and cost of sales

Following € 276.0 million in 2015, the cost of sales totaled € 293.8 million in 2016. This represents an increase of € 17.8 million or 6.4 %, predominantly due to the growth in sales revenues. Economies of scale were exploited, but these were more than offset by a change in the product mix to slightly lower-margin products. Overall, the cost of sales developed disproportionately to the development of sales, resulting in a slight decrease in the gross margin – the ratio of gross profit to sales revenues.

After a very pleasing gross profit of € 175.5 million in the previous year, the gross profit in the past fiscal year was increased again to € 180.5 million. The gross margin decreased for the reasons explained from an excellent 38.9 % in the previous year to currently 38.1 %. The gross profit therefore increased by € 5.0 million or 2.8 %. In addition to the effects referred to previously from the product mix and the economies of scale, the stronger euro during the course of the year compared to the British pound and the Korean won had a slightly negative impact on the development of the gross profit and the gross margin.

Gross Profit
in € millions

Gross Margin
in %

Selling and administrative expenses

The total figure for selling and administrative expenses of € 91.1 million in 2016 lay € 4.6 million below the previous year's figure (€ 95.7 million). This represents a marked decline of 4.8 %, which is due in particular to the development of the selling and marketing costs. These fell from € 59.9 million to € 55.3 million, partly due to the absence of one-time effects in connection with the 125th anniversary of the Company in the previous year. At € 35.7 million, the administrative and general expenses remained virtually at the previous year's level (€ 35.8 million). Consequently, the share of selling and administrative expenses compared to total sales fell considerably overall and accounts for 19.2 % in the past fiscal year (previous year: 21.2 %).

Research and development expenses

We are continuously committed to advancing the development of vacuum technology through our own research projects as well as by rigorously fostering teaching and science. We view research and development expenses as an indispensable investment in the future. Accordingly, a high share of sales was expended for research and development activities again in 2016. After 5.6 % in the previous year, this percentage share still amounted to 5.5 % despite the very good development of sales. In absolute terms, the research and development expenses totaling € 26.3 million in the past fiscal year lay € 0.8 million over the previous year's figure of € 25.5 million.

Adjusted for funds obtained through grants for research and development services with an unchanged amount of € 4.4 million, the net research and development expenses totaled € 21.9 million (previous year: € 21.1 million).

Other operating income and other operating expenses

As in previous years, other operating income and other operating expenses principally included the Group's foreign exchange gains and losses. The other operating income of € 10.8 million (previous year: € 13.3 million) in addition contained subsidies for expenses in an amount of € 4.4 million (previous year: € 4.4 million). Again in 2016, the other operating expenses of € 6.0 million (previous year: € 6.9 million) included virtually only the foreign exchange losses recorded. The net foreign exchange results in 2016 at € + 0.4 million were below the previous year's figure of € + 2.0 million.

Operating profit

Moderately increased operating expenses for research & development, a less advantageous product mix and a declining foreign exchange result had a negative impact on earnings in 2016. In contrast, there was a significant increase in profitability from positive economies of scale and a considerable saving in selling and administrative expenses totaling € 4.6 million. As a result, the operating profit of € 68.0 million in 2016 was almost on a par with the best operating profit of € 68.5 million in 2012 achieved so far in the history of the Company. Compared to 2015 (€ 60.8 million), the operating profit increased again noticeably by € 7.2 million or 11.9 %. This also corresponds to a considerably improved operating profit margin, or EBIT margin, of 14.3 % (previous year: 13.5 %). The amount of depreciation and amortization (for tangible and intangible assets) included in this figure was recorded at € 20.4 million (previous year: € 20.7 million) for 2016, which results in operating profit before depreciation and amortization (earnings before interest, taxes, depreciation and amortization, EBITDA) of € 88.4 million. After € 81.5 million in 2015, this also represents a noticeable increase of € 6.9 million, or 8.6 %. The operating profit per employee also showed a gratifying increase of 11.5 %.

Operating Profit
in € millions

EBIT Margin
in %

Operating Profit per Employee
in K€

Financial income

As a result of the continued decline in interest rates and the redemption of financial liabilities undertaken again at the end of 2016, both financial income and financial expenses decreased once again in the past fiscal year. This resulted in a net financial income of € – 0.4 million (previous year: € – 0.3 million).

Income taxes

As a consequence of the higher earnings before taxes, the tax expenses also rose in 2016 from € 18.5 million to € 20.6 million. Compared to the previous year, the relative burden in the form of the tax ratio slightly decreased however. After 30.7 % in the previous year, this ratio largely stabilized at 30.4 % in 2016. No particular influences on the tax ratio were observed in 2016.

Net income

The highest net income to date in the history of the Company was achieved in 2016 with € 47.0 million. Compared to the previous year, this corresponds to growth of € 5.1 million or 12.2 %. After a virtual record level of operating profit was attained in 2016, reduced net financial expenses and a lower tax rate allowed the previous record figure of € 45.8 million for 2012 to be surpassed by € 1.2 million. The net return on sales, i.e. the ratio of net income to sales, also rose significantly from 9.3 % in the previous year to 9.9 %.

Income before Taxes
in € millions

Net Income
in € millions

Earnings per share

Parallel to the net income, the earnings per share also improved significantly. Following € 4.25 in the previous year, a figure of € 4.77 was achieved in 2016 – also a record level in the history of the Company.

Earnings per Share
in €

Financial position

After € 453.5 million as at December 31, 2015, the balance sheet total of the Pfeiffer Vacuum Group rose to € 459.3 million at the end of the past fiscal year. This increase of € 5.8 million on the asset side of the balance sheet is substantially due to a very differentiated development of individual balance sheet items. Due to a positive course of business and a very good development of sales, particularly towards the end of the year, inventories rose by € 4.0 million and trade accounts receivable by € 10.8 million compared to the previous year. The largest balance sheet item, taken together, of cash and cash equivalents decreased from € 115.4 million at the end of fiscal 2015 to € 110.0 million as at December 31, 2016, and so decreased by € 5.4 million. A detailed analysis of the development of cash and cash equivalents is given in the section "Liquidity and cash flow" that follows. The fixed assets in particular developed contrary to the rise in inventories and trade accounts receivable. As in the previous years, the decrease in intangible assets here was again almost exclusively the result of scheduled amortization relating to items recorded within the framework of the adixen acquisition. Tangible fixed assets rose by a net € 2.7 million as a result of increased capital expenditure in 2016. Besides capital expenditure of € 16.1 million, this development was primarily influenced by scheduled depreciation of € 13.2 million (previous year: € 10.3 million or € 13.5 million). With regard to the development of the items on the liabilities side of the balance sheet, the decrease in financial liabilities of € 20.5 million due to repayment is particularly noteworthy. In contrast, trade accounts payable rose by € 9.7 million – as did the development of trade accounts receivable due to the development of sales towards the end of fiscal 2016. Pension obligations rose by € 7.7 million to a total of € 51.2 million due in particular to actuarial losses resulting from declined discount rates. These effects were recorded in "Other equity components" without affecting profitability.

Equity rose significantly by € 10.6 million from € 305.0 million to € 315.6 million. This change is primarily the result of net income after taxes earned in the reported year (€ 47.0 million) and the dividend payment to Pfeiffer Vacuum Technology AG shareholders (€ 31.6 million) as well as the net € 4.9 million decrease in other equity components. The equity ratio increased from 67.3 % to 68.7 % despite burdens on equity in Other equity components.

Change in Net Working Capital

	Dec. 31, 2016	Dec. 31, 2015	Change
	in € millions	in € millions	in € millions
Inventories	81.7	77.7	4.0
Trade accounts receivable	69.4	58.6	10.8
Trade accounts payable	– 30.9	– 21.2	– 9.7
Net working capital	**120.2**	115.1	5.1

Pfeiffer Vacuum has again improved the already above-average capital base compared to the volume of business. After almost complete redemption, the Group records virtually no more financial liabilities as at December 31, 2016.

Due to the increase in the volume of business, the short-term working capital also rose. The increase amounted to € 5.1 million and so, in relative terms, is in line with the development of sales.

Liquidity and cash flow

After € 59.7 million in 2015, the operating cash flow in the year 2016 was € 63.6 million. This represents an increase by € 3.9 million. Firstly, the higher net income (+ € 7.1 million) positively impacted the operating cash flow. Compared to the prior year, the development of inventories with – € 6.0 million was by far less adverse to the operating cash flow (2015: – € 15.5 million). Following the very sound sales development towards the end of fiscal 2016, receivables strongly increased and caused the operating cash flow to be burdened by € 9.8 million. In the prior year, only slight negative impacts of € 0.7 million had to be recorded. Cash flow per share increased from € 6.05 in 2015 to € 6.45 in the year under review. The still high level of this figure shows the unchanged capacity of Pfeiffer Vacuum to generate disproportionally high cash inflows within the framework of operational activities.

Cash Flow Margin
in %

Cash Flow per Share
in €

The year 2016 was marked by increased levels of scheduled replacement investments and partly also of expansion investments. Capital expenditures rose accordingly from € 11.7 million in the previous year to € 18.0 million in the reporting year. These were to be seen against proceeds from the sale of property, plant and equipment amounting to € 0.6 million, with the result that after € 11.0 million in 2015, the overall cash outflow totaled € 17.4 million. Further information on the composition of capital expenditure can be found in the section "Capital expenditures and financing" that follows.

As in the previous years, the cash flow from financing activities in 2016 was again characterized solely by the dividend payment to Pfeiffer Vacuum Technology AG shareholders (€ 31.6 million) and the repayment of financial debts (€ 20.5 million). In 2016, the cash outflow therefore totaled € 52.1 million. Due to higher repayments compared to the previous year, the Group was able to completely repay the loan taken out in 2010 in the framework of the acquisition of adixen. In the previous year, the dividend payment of € 26.1 million and the repayment of financial debts (€ 10.5 million) resulted in a cash outflow from financing activities amounting to € 36.6 million.

In light of the currency effects, the cash outflow totaled € 5.4 million (previous year: cash inflow of € 13.9 million) due to the higher repayment of financial obligations and the higher dividend payment and led to a decline in cash and cash equivalents of 4.6 % to € 110.0 million (previous year: increase of 13.7 % to € 115.4 million). Following the almost complete redemption, there are no further significant financial liabilities as at December 31, 2016. The Company had unused credit lines amounting to € 53.7 million (previous year: € 41.0 million) at the balance sheet date.

The free liquidity is invested in interest-bearing financial instruments. A cash management system is in place in the German Group companies in Asslar in order to pool liquidity. Conservative and largely short-term investment vehicles, such as money market or time deposits at financial institutions, dominate where financial investments are concerned. Speculative transactions are not conducted. Both liquidity management as well as steering of the interest-rate change risk are thus primarily handled at Corporate Headquarters, taking into consideration all relevant matters within the Corporate Group.

Capital expenditures and financing

Operating business, capital expenditures, and dividend payments were financed as in previous years solely by internal funds of the Corporate Group. In addition, existing financial liabilities from financing acquisitions in the amount of € 20.5 million were fully repaid. Capital expenditures in the amount of € 18.0 million related predominantly to necessary reinvestments for machinery, plant and equipment, but also partly for expansion investments. There were no major changes in the composition of capital expenditures. Increased capital expenditure was consciously optimized in line with the strategic orientation of the Corporate Group. The volume of expenditure was precisely within the forecast given for the year 2016 (€ 18.0 – 20.0 million).

The balance sheet total of the Pfeiffer Vacuum Group has long demonstrated a very solid capital base. With an equity ratio of 68.7 % at the end of the 2016 fiscal year, this figure could be increased again (previous year: 67.3 %). The current assets ratio, as the ratio of current assets to current liabilities, amounted to 305 % (previous year: 298 %) and continues to reflect the sound financing concept and high credit rating of Pfeiffer Vacuum.

The increased capital expenditures of € 18.0 million and a virtually unchanged depreciation/amortization volume of € 20.4 million in 2016 resulted in a depreciation expense ratio (ratio of capital expenditure to depreciation/amortization) of 88 % compared to 56 % in the previous year. As a result, new capital expenditures in 2016 continued to be much closer to the level of the loss of value of fixed assets. These depreciation / amortization amounts remain high as a result of purchase price allocation (PPA).

Currents Assets Ratio
in %

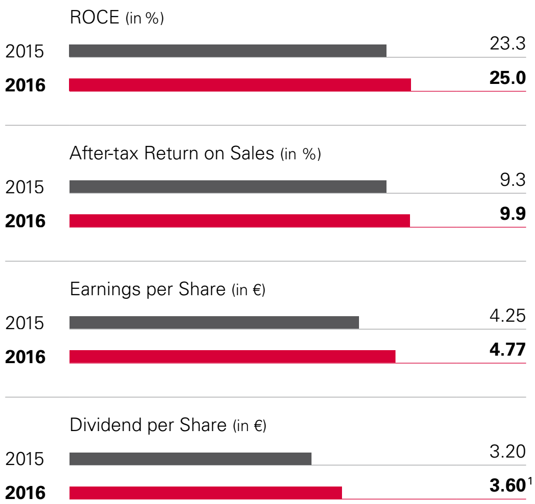
Depreciation Expense Ratio
in %

Value reporting

The concept of value-based steering of the Company remains an integral element of the management approach that exists within the Pfeiffer Vacuum Corporate Group. All important decisions at Pfeiffer Vacuum are taken with due consideration of all material financial aspects. The following graphic provides an overview of various financial performance indicators which are important for us. In addition to ROCE (Return On Capital Employed; operating profit relative to the total of net assets and net working capital) as a parameter for the yield on capital employed, the Company's return on sales, earnings per share, and the paid or proposed dividend are also presented here. The ratio between the dividend and earnings per share serves as an indicator of the extent to which shareholders participate in the Company's economic success.

All previously mentioned success ratios show a markedly positive trend again in 2016 compared to the previous year. Pfeiffer Vacuum therefore would like to maintain the high dividend payout ratio of the net income of the Group. Accordingly, the Management Board and Supervisory Board will propose a dividend of € 3.60 per share at the Annual General Meeting. This corresponds to a dividend payout ratio of 75.5 % (previous year: 75.3 %).

Key Value Reporting Indicators



[1] Subject to approval by the Annual General Meeting

Overall assessment of business performance

A look at the income statement of Pfeiffer Vacuum Group reveals a highly profitable company. The operating profit grew significantly for the second year in a row and, at € 68.0 million, lies only marginally below the previous record figure from the year 2012 (€ 68.5 million). The development of the operating profit margin demonstrates a clear positive trend and at 14.3 % represents a significantly above-average figure for a mechanical engineering company. Furthermore, never before in the history of the Company have a higher net income or higher earnings per share been achieved. The projects that have been initiated to maximize profits over the short to medium term can therefore be considered a success. There has been no change in the rock solid financial position of Pfeiffer Vacuum. The Group remains virtually without any outstanding net liabilities. The equity ratio once again increased over the previous year. The excellent liquidity situation allowed us, in addition to finance the operational activities, to completely repay the financial liabilities and to again distribute an above-average dividend to shareholders. Furthermore, we are extremely confident that we can continue this development in 2017 and beyond by ourselves.

Non-financial Performance Indicators

Employees

Pfeiffer Vacuum employed a total of 2,415 employees at the end of fiscal 2016. This represents an increase of 1.7 % compared to the previous year's figure of 2,374 employees. This development mainly originated in Europe and Asia.

Composition of Workforce by Regions

	2016		2015	
		in %		in %
Europe	1,721	71	1,693	71
Asia	561	23	548	23
The Americas	133	6	133	6
Total	**2,415**	**100**	2,374	100

Diversity

Pfeiffer Vacuum has a global standing and so unites a multitude of people of different origin under one umbrella brand. Our employees are proud of the successful cooperation between different cultures and nationalities. For several years now, Pfeiffer Vacuum has belonged to the "Diversity Charter", an initiative by the German Federal Government. The "Diversity Charter" represents a fundamental commitment to fairness and appreciation of people in companies.

Of the 2,415 employees, 399 are female and 2,016 are male. Therefore, the proportion of women constitutes 17 % of the entire workforce. Vacuum technology is a specific field of mechanical engineering in which there are generally only very few potential young females with adequate training. Nevertheless, it is the firm intention of company policy to increase the proportion of women in this traditionally male-dominated area of work. The French subsidiary of Pfeiffer Vacuum has concluded a formal agreement with all labor unions involved with the specific purpose of promoting women. The Supervisory Board of Pfeiffer Vacuum Technology AG does not include any women. In its subsidiary companies, however, several management and key positions in the areas of Purchasing, Finance, Communications, Marketing, Human Resources as well as Sales are occupied by female managers.

Training young talent

The promotion of young talent is of great importance at Pfeiffer Vacuum. At various locations, we offer company training courses as industrial mechanics, in the business administration area, as well as in warehouse logistics. In fiscal 2016, Pfeiffer Vacuum made a total of 86 apprenticeships available worldwide (previous year: 90).

In addition to the company apprenticeship, Pfeiffer Vacuum in Germany participates very successfully in the "Studium Plus" project, a dual degree program involving the cooperation of the Technical University of Mittelhessen and the Chamber of Industry and Commerce. Furthermore, a partnership exists with the Georg-August University Göttingen in relation to the company apprenticeships. In this way, we ensure our young talent in industrial and mechanical engineering as well as in the area of business informatics.

Also, many of our subsidiaries offer temporary internships for graduates and students and/or temporary positions for students who work during their vacation. This enables young people to gain an insight into operational processes and to qualify themselves as potential employees. In cooperation with different schools and universities, we perform guided tours of the Company and present ourselves to the public at career fairs. In France especially, several of our skilled workers give lectures on vacuum technology and corporate governance at universities. In addition, the name recognition that Pfeiffer Vacuum enjoys among natural science graduates due to the presence of its products in research laboratories is not to be underestimated.

Qualifications of skilled workers and executives

The success of Pfeiffer Vacuum is decisively based on the expertise, the loyalty, and the high motivation of our employees. Particularly the expert knowledge of our service and sales employees plays an important role in the cooperation with our customers. They benefit from the many years of experience to which our experts can resort in relation to physical and chemical reactions of the most diverse molecules and substances under vacuum conditions.

Most projects are developed by our customers together with our Sales and Market teams, which in turn also consult the relevant experts from the areas of Research & Development as well as Production and Service as necessary. The skilled knowledge of our employees is also of major importance in the manufacturing and installation of our products. The ultimate goal is to offer each customer a perfect vacuum solution for his application.

Good training and the readiness to adapt to changes in market forces by continuous development are thus the best prerequisites for all employees, regardless of age, in order to secure jobs and sustain professional success. Further training plays a critical role in our Company in all locations. New employees complete an introductory course in the basic principles of Vacuum Technology, while sales and service employees receive advanced training courses about products and service measures.

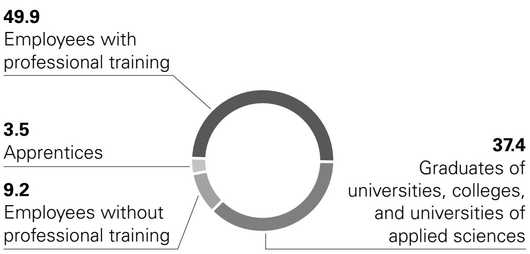
Practical programs exist for the qualification of executives, and foremen and group leaders are trained in leadership and management techniques. Furthermore, the Company pays attention to specialized advanced training to transfer technical innovations into the Company. Chinese, German, English or French language courses are offered depending on location and need.

Professional Qualifications of the Workforce

	2016
Development and Production, Total	**1,222**
Graduates of universities, colleges, and universities of applied sciences	288
Employees with professional training	793
Employees without professional training	84
Apprentices	57
Administration, Service and Sales, Total	**1,193**
Graduates of universities, colleges, and universities of applied sciences	614
Employees with professional training	412
Employees without professional training	138
Apprentices	29

The provision of further training options is generally linked to the local conditions and requirements. For example, the French subsidiary fulfills the relevant statutory requirements with more than twice the expenditure as would be required by law. Here, the focus is on training and further training measures in the area of "quality". The management also operates a software system for competence management of the employees to better identify and implement existing expertise and to be able to match training courses specifically.

Proportional Distribution of Professional Qualifications of all Employees
in %



Remuneration and incentive schemes

The personnel costs in fiscal 2016 amounted to € 157.6 million compared with € 152.0 million in fiscal 2015. The incentive scheme of Pfeiffer Vacuum also differs according to local conditions and customs. The sales personnel basically receive performance-related incentives via a bonus scheme oriented to sales growth and profit. Added to that – depending on the location – are other bonus, incentive or employee participation schemes as well as bonuses for outstanding individual achievements.

Age Structure of the Workforce

	2016		2015	
		in %		in %
Under 30 years of age	410	17	398	17
30 to 50 years of age	1,365	56	1,312	55
Over 50 years of age	640	27	664	28
Total	**2,415**	**100**	2,374	100

Pension scheme

The pension scheme is similarly varied in the individual locations. Apart from a purely public scheme in France funded by the French subsidiary, the worldwide pension scheme includes additional measures and payments into pension funds, the offer of a pension plan and direct insurance with the additional option of deferred compensation. For the employees in the head office in Asslar who had no employer-financed pension contribution up to 2008, voluntary payment into the company pension scheme has been agreed upon as part of the performance-related remuneration.

Social responsibility

We take our social responsibility towards our employees seriously. We therefore endeavor to ensure that the relevant quota of disabled employees in the various countries is met. We also believe that a family-friendly working environment is very important. Varying from region to region, this includes models for flexible working hours, provision of home office connections, models for re-entering the working world with flexible working hours and job sharing, specifically for young mothers and fathers.

The illness rates in Asslar and Göttingen amounted to 6.0 % and 7.1 %, respectively, compared to the regional industry average of 5.4 %. In Annecy, the illness rate was even lower with 3.6 %.

The rate of staff fluctuation also differed depending on the geographical location, with a figure of 5.6 % in Asslar in the past fiscal year and 9.6 % in Göttingen. In Annecy, the rate of staff fluctuation was very low at 4.6 %.

Workplace safety

Issues of workplace safety mainly relate to the production facilities of Pfeiffer Vacuum. In Asslar, there were 8 reported accidents in fiscal 2016 (previous year: 16). This is equivalent to 10.9 accidents per 1,000 employees (previous year: 22.1). With 3 reportable accidents in Göttingen, the ratio amounted to 19.2 accidents per 1,000 employees compared to 56.9 in the prior year. This figure is lower than the corresponding average of 37.0 for 2015 cited by the German Workers' Compensation Insurance Company (numbers for 2016 were not yet available). The corresponding quote for France was 51.5 with 24 reportable accidents.

Sustainability as a corporate policy

In order to fulfill our quality promise, we place the highest demands on our solutions. Energy efficiency also plays an important role. Our experts integrate efficient technologies and innovative ideas for energy saving into the development process of our products.

The entire production process is then designed on the basis of these specifications. This results in sustainable solutions for our customers, which meet the high demands of different industries and applications and, in addition, provide real added value: The efficiency of our products leads to considerable energy savings during operation which, in turn, result in significant overall cost savings.

With its commitment to energy efficiency, Pfeiffer Vacuum also fulfills its environmental responsibility. The conscious use of limited resources and materials, the use of recyclable materials, sophisticated waste management, as well as the heightened environmental awareness and energy-consciousness of our employees show that protecting the environment and natural resources are of special concern to Pfeiffer Vacuum. All of our business activities are based on the requirements of the ISO 14001 standard.

Energy-efficient products by Pfeiffer Vacuum

Our products are the heart of our Company. We meet the highest standards with them and offer our customers a complete and customized program of solutions – for specific requirements from different industries. In addition, we deliver added value through energy-saving technologies that reduce costs and increase efficiency.

Realizing efficient products with the highest possible customer value and fulfilling our environmental responsibilities requires full commitment. We have made energy efficiency and the responsible use of natural resources a cornerstone of our Company by which we live and work – every single day. Pfeiffer Vacuum's philosophy is not only reflected in efficient solutions for our customers, but in every part of the value chain and in the minds of our employees.

Energy efficiency in development and production

Energy efficiency and resource conservation already play important roles during the planning phase of a new product. At Pfeiffer Vacuum, products are viewed in their entirety, from development to recycling, in terms of energy efficiency.

In this way, we ensure right from the start that our products offer our customers extensive advantages: additional added value is created through cost savings, space and time-saving processes, and the more efficient results that are entailed.

Production processes

The efficient structuring of our customer's operations with our energy-saving products is not our only priority. We also design our own production processes as efficiently as possible.

Throughout 2016, there were 16 internal audits conducted in Asslar (previous year: 24). In Annecy, 26 internal quality and environmental audits were performed (previous year: 20). The corresponding number of internal audits which took place in Göttingen was 8 (previous year: 8). Where applicable, elements of ISO 14001 were integrated into all audits.

The resource consumption of our key production facilities is displayed as follows:

Ecological Indicators

	2016		2015	
	Absolute consumption	CO_2 emissions in t	Absolute consumption	CO_2 emissions in t
Yield of photovoltaic plant (in MWh)	– 62	– 37	– 59	– 35
Power consumption (in MWh)	28,545	16,842	28,642	16,899
Gas consumption (in MWh)	24,184	6,071	22,739	5,708
Total		**22,876**		22,572
Gasoline (in l)	168,505	391	178,008	413
Diesel (in l)	238,120	620	245,644	640
Total		**1,011**		1,053
Water consumption (in m3)	30,686	—	31,819	—

We substantiate our quality promise through sustainable production, and guarantee our customers maximum efficiency from manufacturing to service. With all the resources at our disposal, we also contribute directly to energy and resource conservation.

Environmental protection is an important part of our corporate policy

With precisely coordinated processes, we not only ensure that our products, their development, and production allow for energy saving and resource conservation but that sustainability is provided throughout the entire organization and at all locations. An integral part of our corporate strategy is an ISO 14001 certified environmental management which is concerned with the holistic view and the monitoring of all environmental areas. Here, all environmental impacts are documented by Pfeiffer Vacuum and guidelines are identified for the prevention and reduction of environmental pollution.

The most important asset of any company is its employees – the same goes for Pfeiffer Vacuum. Their dedication and work is crucial for enabling us to fulfill the high standards we set for ourselves. This also applies to energy and environmental awareness. We therefore provide our employees with regular information about current policies on energy and environmental issues, the management of hazardous materials, and efficiency aspects of our products.

Corporate Governance Report and Declaration on the Corporate Governance

The recommendations and suggestions contained in the German Corporate Governance Code ("DCGK") have been a firm element of our corporate governance and corporate culture for many years. The close, trustful cooperation between the Management and Supervisory Boards, in addition to a high degree of transparency for corporate communication and in financial reporting, have always been fundamental principles. The members of the Management and Supervisory Boards conduct their activities according to these principles. Significant changes to the Code were and are therefore not necessary.

In October 2016, the Management and Supervisory Boards of Pfeiffer Vacuum Technology AG submitted the Statement of Compliance for the year 2016 required pursuant to § 161 of the German Stock Corporation Act. It was made permanently accessible to shareholders on the Corporation's website (group.pfeiffer-vacuum.com).

Pfeiffer Vacuum Technology AG complies with all recommendations of the Code, as amended in May 2015, with the following exception:

The German Corporate Governance Code recommends that a ceiling is established for the length of time that members may serve on the Supervisory Board (Paragraph 5.4.1). The Supervisory Board does not consider that a particular length of service as a member of the Supervisory Board constitutes a criterion which disqualifies a candidate from reelection to the Supervisory Board, and therefore does not take this criterion into account when selecting candidates.

Shareholders and Annual General Meeting

The Annual General Meeting is the supreme body of the corporation. At the Annual General Meeting, shareholders may exercise their voting rights themselves, through a proxy of their choice, or a proxy nominated by the Corporation who is bound to act on their instructions. The shareholders make key decisions at the Annual General Meeting about the allocation of profits, amendments to the Articles of Association, or the approval of share repurchase programs. All information and documents essential for the Annual General Meeting will be provided to the shareholders in a timely manner. The agenda and an explanation of the conditions of participation in addition to the shareholders' rights will generally be announced one and a half months before the Annual General Meeting date. All documents and information for the Annual General Meeting are also available on our website. In addition, it is possible to electronically direct questions to the employees of our Investor Relations Department. Using our financial calendar, which is made public in the Annual Report, in the quarterly reports, and on our website, we inform shareholders and interested parties about key dates, publications, and events throughout the year. In addition, we maintain close ties with our shareholders through our active Investor Relations work. Moreover, it is also possible to contact the Company with questions at any time.

Management Board

Since the end of 2014, the Management Board consists of: Manfred Bender (CEO), Diploma in Business Administration, and Dr. Matthias Wiemer, Diploma in Mechanical Engineering.

The responsibilities of the Management Board are as follows:

Pfeiffer Vacuum Technology AG Management Board

Manfred Bender Chairman	**Dr. Matthias Wiemer**
Controlling/Finance	Research & Development
IT	Marketing
Purchasing	Training & Service
Investor Relations	Sales
Organization/Logistics	
Human Resources	
Production	

The members of the Management Board are responsible for the further development and strategy of the Company. They are also involved in the day-to-day running of the Company and are even responsible for operations.

The four-eyes principle applies in exercising the duties and responsibilities of the Management Board. Major decisions are always made jointly. Personal expenditures, such as travel and entertainment expenses, require the approval of another Management Board member. In addition to close cooperation and reciprocal information on a daily basis, board meetings are held every two weeks. Minutes are kept of these meetings and the Chairman of the Supervisory Board receives a copy of these.

The members of the Management Board work exclusively for Pfeiffer Vacuum. Moreover, the members of the Management Board are also members of supervisory organs of various subsidiaries. In addition, Manfred Bender is a member of the supervisory board of the Volksbank Heuchelheim eG, Heuchelheim, Germany, and since April 12, 2016, chairman of the supervisory board of Schunk GmbH, Heuchelheim.

Supervisory Board

Pursuant to the statutory requirements and the Articles of Association of Pfeiffer Vacuum Technology AG, the Supervisory Board consists of a total of six persons. Four persons represent the shareholders and two persons represent the employees of the Company. In 2016, periodic new elections were held to the Supervisory Board. As a result, the membership of the Supervisory Board changed slightly compared to the previous year. Membership during the course of the year 2016 was as follows:

- Dr. Michael Oltmanns (Chairman), Attorney of Law and Tax Advisor
- Götz Timmerbeil (Vice Chairman), Certified Public Accountant and Tax Advisor
- Filippo Th. Beck, Attorney of Swiss law, from May 25, 2016
- Helmut Bernhardt (Employee Representative), Development Engineer
- Manfred Gath (Employee Representative), Chairman of the Employee Council
- Wilfried Glaum, Business Administrator, until May 24, 2016
- Dr. Wolfgang Lust, Entrepreneur

All Supervisory Board members representing the shareholders were elected in May 2016 during the Annual General Meeting for a term of five years. For the election, the Nominating Committee submits a nomination suggestion to the Supervisory Board. When selecting the candidates, care is taken to ensure that members of the Supervisory Board at all times possess the requisite expertise, skills, and professional experience and are sufficiently independent. The international activities of the Group and potential conflicts of interest are also taken into account.

The Supervisory Board has determined the following specific objectives of its composition: occupational diversity (at least in the areas of business, technology, and law), internationality gained during overseas professional experience, avoidance of potential conflicts of interest by excluding close relationships with competitors, and an age limit at the beginning of the term which is the same as the statutory retirement age. These objectives have been taken into consideration in the past, and this is also intended for future nominations.

No compensations or benefits for personal service rendered, especially consultation and brokerage services, were paid or granted to the members of the Supervisory Board during the period under review. There were no conflicts of interest for Management and Supervisory Board members requiring immediate disclosure to the Supervisory Board. Finally, the Rules of Procedure for the Management Board provide that the Supervisory Board must grant its approval for significant business transactions.

According to the recommendations of the German Corporate Governance Code, no more than two previous Management Board members hold seats on the Pfeiffer Vacuum Supervisory Board. Furthermore, the Supervisory Board reviews the independence of its members. It has established standards for assessing this independence, which are based on the Code, in particular. According to these principles, the majority of current Supervisory Board members is considered independent, thus assuring independent advice and monitoring of the Management Board.

The establishment of an Audit Committee is a longstanding practice at Pfeiffer Vacuum. As a certified public account, the Chairman of the Audit Committee, Götz Timmerbeil, is eminently qualified to bear responsibility for the activities of the Audit Committee, in particular in connection with questions relating to financial accounting, compliance, and the risk management system.

The task of the Nominating Committee is to suggest suitable candidates to the Supervisory Board who can then recommend them for nomination to the Annual General Meeting. Additional committees of the Supervisory Board are the Management Committee and the Administration Committee. In the past, the Management Committee has deliberated the personnel matters of the board members in detail before – in accordance with the requirements of the German Corporate Governance Code – being resolved by the full Supervisory Board.

The determination of the Management Board compensation is subject to the provisions of the German Management Board Compensation Appropriateness. The Administrative Committee is particularly concerned with transactions requiring approval from the Supervisory Board and with contracts with Supervisory Board members.

The committee memberships of the Supervisory Board members can be seen in the following overview:

Composition of the Supervisory Board Comittees

	Nomination Committee	Audit Committee	Management Committee	Administration Committee
Dr. Michael Oltmanns	Chairman	Yes	Chairman	Chairman
Götz Timmerbeil	Yes	Chairman	Yes	Yes
Filippo Th. Beck (from May 25, 2016)	—	Yes	—	—
Helmut Bernhardt	—	—	—	Yes
Manfred Gath	—	—	—	—
Wilfried Glaum (until May 24, 2016)	Yes	Yes	Yes	—
Dr. Wolfgang Lust	Yes	—	Yes	—

The following members exercised further mandates. These are supervisory board mandates unless otherwise indicated:

- Dr. Michael Oltmanns:
  Becker Mining Systems AG, Friedrichsthal (Chairman), HPC AG, Mannheim (Chairman), Jetter AG, Ludwigsburg (Chairman), until June 29, 2016, and Kathrein SE, Rosenheim (Chairman of the supervisory body), from January 22, 2016
- Götz Timmerbeil:
  VfL Handball Gummersbach GmbH, Gummersbach (Chairman of the advisory board) and Arena Gummersbach GmbH & Co. KG, Gummersbach (Vice Chairman)
- Filippo Th. Beck:
  Candoria Group, Baar (Switzerland), member of supervisory organ, Tenro Group, Bottmingen (Switzerland), member of supervisory organ, Biamathea AG, Basel (Switzerland), member of supervisory organ, Polyterra Liegenschaften AG in liquidation, Küsnacht (Switzerland), member of supervisory organ and, from September 7, 2016, liquidator, IKFE Properties I AG, Zürich (Switzerland), member of supervisory organ, Tainn-Immobilien AG, Bern (Switzerland), member of supervisory organ, Pro Farma AG, Baar (Switzerland), member of supervisory organ, until July 14, 2016

The Company has taken out pecuniary loss liability insurance (so-called D&O insurance) for the members of the Management and Supervisory Boards.

Collaboration between the Management and Supervisory Boards

Close and trustful collaboration between the Management and Supervisory boards is an essential prerequisite for good corporate governance and serves the good of the Company. Quarterly Supervisory Board meetings are held in this context, for which the directors report on the course of business operations in detail. If necessary, other executives also explain the current issues in their respective areas of responsibility. If needed, additional special meetings are held. The Management Board reports to the Supervisory Board on the general condition of the Company, including the risk situation, through a monthly reporting system.

Compensation report

In the following section, the compensation for members of the Management and Supervisory Boards is detailed.

Compensation for the Management Board

The Management Board's compensation has been approved by the entire Supervisory Board. The compensation consists of a fixed and a variable element as well as payment in kind (company car, accident insurance). The variable component is essentially dependent on the Group´s earnings before taxes. The fixed remuneration paid and expensed in fiscal 2016 amounted to K€ 380 for Manfred Bender and K€ 290 for Dr. Matthias Wiemer. The variable component recorded in the Income Statement for Manfred Bender was K€ 580 and for Dr. Matthias Wiemer K€ 380 in fiscal 2016. Payments in kind of K€ 17 and K€ 24, respectively, were effected. This amounted to total compensation in 2016 of K€ 977 for Manfred Bender (previous year: K€ 946) and K€ 694 for Dr. Matthias Wiemer (previous year: K€ 684).

The total compensation for the aforesaid active members of the Management Board amounted to K€ 1,671 after K€ 1,630 in fiscal 2015. Short-term variable remunerations paid in 2016 for fiscal year 2015 totaled K€ 454 for Manfred Bender and K€ 303 for Dr. Matthias Wiemer. These amounts were paid out in 2016 charging a provision recorded in 2015. Furthermore, payments amounting to K€ 40 for Mr. Bender and K€ 27 for Dr. Wiemer were made in the year 2016. These amounts were attributable to variable components from previous years which were not paid out up to now due to a sustainability proviso. After their sustainability was determined in 2016, these amounts were paid out from a reserve that had already been set up.

The variable component is a bonus, which the Supervisory Board determines. The discretion of the Supervisory Board shall prevent extraordinary developments from leading to undue fluctuations in the variable compensation. The development of the bonus shall, as before, be based on the development of the Group's success and shall henceforth be based on the profits before taxes. However, the bonus shall be subject to a condition of sustainability. This means that if the success of the Group during the assessment year increases in comparison to the average of the two previous years, the success during the assessment year will be proven to be sustainable only in the amount of the average of both previous years' successes; the bonus in this respect has therefore been earned and is payable. However, the sustainability of the portion in excess of this has not yet been proven. Therefore, only a small part of the bonus, to the extent that the bonus is based upon the surplus element, will be due when the annual financial statements of the assessment year are approved (so-called short term incentive). The larger part (so-called long-term incentive) will not be due until two years later and only in its fullest amount if the average profits of these two following years are at least as high as the average profits of the previous two years. Should it be less than the average, the long-term incentive will be correspondingly reduced. The purpose of this sustainability proviso is to avoid rewarding so-called "straw fires" at the expense of sustainable profitability.

Manfred Bender has received pension commitments in the unchanged amount of 60 % of the last fixed salary elements. Dr. Matthias Wiemer has received pension commitments in the unchanged amount of 40 % of the last fixed salary elements. In this connection, total net pension expenses in accordance with IFRS of K€ 261 (Manfred Bender) and K€ 215 (Dr. Matthias Wiemer) were recorded in the Consolidated Statements of Income in fiscal 2016 (previous year: K€ 281 and K€ 227 respectively).

In addition, there are pension commitments for former board members. The net pension expenses attributable to these individuals for the year amount to K€ 47 (previous year: K€ 60).

After K€ 267 in 2015, a total of K€ 188 was paid to the Pfeiffer Vacuum Trust e.V. The total net pension obligations for current and former members of the Management Board therefore amount to K€ 5.779 (previous year: K€ 4.675). Current pensions in fiscal 2016 amounted to K€ 358 (previous year: K€ 345).

In fiscal 2016, the contract of employment with CEO Manfred Bender was renewed. The subsequent contract with effect from January 1, 2017, includes the limitation of a potential compensation payment in accordance with the Corporate Governance Codex, also in case of a change of control.

Differences in connection with the former CFO Nathalie Benedikt have meanwhile been settled. Pfeiffer Vacuum notes in this connection that the reason for the departure of Ms Benedikt lay solely in diverging views on corporate strategy. A payment of K€ 440 was effected in 2016 charging a provision recorded in previous years.

Compensation for the Supervisory Board

The members of the Supervisory Board received a fixed compensation determined by the Annual General Meeting. On May 24, 2016, the Annual General Meeting approved an increase in the Supervisory Board's compensation from fiscal year 2016 onwards.

In fiscal 2016, Dr. Michael Oltmanns therefore received compensation of K€ 105 (previous year: K€ 75), while Götz Timmerbeil received K€ 70 (previous year: K€ 50). Helmut Bernhardt, Manfred Gath and Dr. Wolfgang Lust each received K€ 35 (previous year: K€ 25). Filippo Th. Beck received an initial compensation of K€ 21 while Wilfried Glaum received K€ 14 (previous year: K€ 25). The total compensation paid out to the Supervisory Board in fiscal 2016 therefore amounted to K€ 315 (previous year: K€ 225).

Should Supervisory Board members be newly elected or retire during a fiscal year, the compensation will be paid on a pro rata basis.

Negative statement

No further benefits were paid to Management or Supervisory Board members over and above the listed compensation components. In particular, no stock options were granted, no loan entitlements were established, and no liability commitments were pronounced. In addition, no special agreements were made further on in connection with the termination of the activities of the Management or Supervisory Boards.

Transparency

The claim to provide all target groups promptly with the same information at the same time is a high priority in our corporate communications. One of the ways that this is manifested is that all relevant information is published in German and in English. Shareholders and interested parties can directly obtain information on current developments within the Group on the Internet. All ad-hoc releases by the Pfeiffer Vacuum Technology AG shall be made available on the Company's website.

The purchase and sale of Pfeiffer Vacuum shares by members of the Management and Supervisory Boards will be published immediately pursuant to § 15 a of the Securities Trading Act ("Wertpapierhandelsgesetz"), in Europe and on the Company's website at group.pfeiffer-vacuum.com.

No transactions in this respect took place either in the year 2016 or in 2015.The holdings of Board members in the Company as at December 31, 2016 amounted unchanged to 0.1 %.

Equality

According to § 111, Sub-para. 5, German Stock Corporation ACT („AktG"), the Supervisory Board has established a women's quota of 0 – 30 % for the Supervisory and the Management Board and also a time limit until June 30, 2017, for the achievement of this quota. Accordingly, the Nomination Committee of the Supervisory Board as well as the entire Supervisory Board strived towards finding suitable female candidates for Supervisory Board seats. The Chairman of the Supervisory Board has conducted several interviews. Appointments for Management Board members were not appropriate for the year under review.

The provision contained in § 76, Sub-Para. 4, German Stock Corporation Act ("AktG"), refers only to the management level at Pfeiffer Vacuum Technology AG. Due to its function as a finance holding, this company has only very few employees and there are no further management levels.

Accounting and auditing

Pursuant to statutory provisions, the Consolidated Financial Statements of Pfeiffer Vacuum and the Quarterly Financial Reports are prepared in accordance with the current International Financial Reporting Standards (IFRS) as applicable in the European Union.

The Annual Financial Statements of Pfeiffer Vacuum Technology AG as the parent corporation are prepared in accordance with the provisions of the German Commercial Code ("HGB"). This Consolidated Financial Statement was audited pursuant to the resolution of the Annual General Meeting on May 24, 2016 by Ernst & Young GmbH, Wirtschaftsprüfungsgesellschaft, Eschborn, Germany. Ernst & Young GmbH also audits the Annual Financial Statements of Pfeiffer Vacuum Technology AG.

It was agreed with the auditors that the Chairman of the Audit Committee shall be immediately informed about any reasons for exclusion or prejudice arising during the audit, unless these are eliminated immediately. The auditor must also immediately report all findings and events of importance to the Supervisory Board that arise during the audit. In addition, the auditor must inform the Supervisory Board and note in the audit if the auditor determines facts during the course of the audit that are not compatible with the Statement of Compliance submitted by the Management and Supervisory Boards pursuant to § 161 of the German Stock Corporation Act ("AktG").

Risk and Opportunities Report

The purpose of entrepreneurialism is to specifically utilize opportunities that have been identified in order to increase the value of the Company. However, this intrinsically involves taking risks. The opportunity and risk management system that we employ serves to optimize the relationship between risks and opportunities with a view to sustainable business success. To assure this, we use and evolve suitable instruments, such as an appropriate handbook and/or a risk inventory, to identify, analyze, assess, and control opportunities and risks. In the following, opportunities and risks are presented on a gross basis.

Risk management system

The Pfeiffer Vacuum risk management system includes all levels of the Corporate Group. The system is described in a risk handbook that is available to all employees and updated on an as-needed basis. Our flat hierarchy and fast communication channels aid in swiftly identifying risks at every level of the Company and using suitable measures to combat them. The risk coordinator monitors the proper implementation of risk management and the full risk inventory. The risk inventory is performed by the department heads at the large production sites and by the managing directors at the remaining subsidiaries. Consolidating all inventories at an aggregate level produces a differentiated overall picture of the Corporate Group's risk position.

During the year, risk inventories are updated if necessary; what we define, in addition to a concrete description of the risks, is the potential quantitative impact on operating profit, the likelihood of occurrence and suitable countermeasures. At year end, a complete risk inventory is made, which is reviewed by both the risk coordinator as well as the Management Board. In addition, we have defined the areas of risk management within the individual market segments and have put in place the necessary processes as well as early-warning and monitoring systems. The monthly Corporate Group reporting system supports the risk management process with a variety of parameters and reports that serve as an essential basis for the Management and Supervisory Boards upon which to regularly deliberate on current business.

The monthly meetings of senior executives and monthly conference calls are also firmly established institutions that enable the department heads and our subsidiaries to share with the Management Board information relating to potential risks and how to handle them.

In addition to monthly reporting, our internal controlling system (ICS) helps us to identify risks in daily processes and thus avoid potential errors. The processes reviewed in this connection are first and foremost ones that have a major impact on Pfeiffer Vacuum's financial position. Regularly conducted inspections protect against human error, system errors, and breaches of internal regulations.

Risk management as it relates to consolidated accounting pursuant to § 315, Sub.-Para. 2, No. 5, German Commercial Code ("HGB")

The purpose of an internal consolidated accounting control system is to ensure adequate certainty by implementing controls that – despite identified risks – enable consolidated financial statements to be prepared in accordance with applicable standards. The Management Board bears overall responsibility for the internal control and risk management system in respect to the consolidated accounting process. All companies included in the Consolidated Financial Statements are covered by a strictly defined management and reporting organization. The principles, the organizational and procedural structures, as well as the processes of the individual control and risk management systems relating to consolidated accounting, are stipulated throughout the entire Corporate Group in guidelines and organizational procedures that are adapted at regular intervals to reflect current external and internal developments. Our internal experts also work together with external counterparts on a case-by-case basis. This enables us to ensure that our accounting is in compliance with IFRS accounting and valuation regulations.

In respect to the consolidated accounting process, we consider those characteristics of the internal control and risk management system to be major in nature that can have a decisive influence on consolidated accounting and on the overall view presented in the Consolidated Financial Statements. In particular, these are the following elements:

- Identification of the major fields of risk and areas of control that are relevant to the consolidated accounting process,
- Monitoring controls for enabling the consolidated accounting process to be supervised by the Management Board,
- Preventive control measures in the finance and accounting systems of the Corporate Group and the companies included in the Consolidated Financial Statements, as well as in operational corporate processes that generate key information for drawing up the Consolidated Financial Statements, including Management's Discussion and Analysis for the Corporate Group (including separation of functions),
- Measures that assure proper IT-based processing of facts and data that relate to consolidated accounting.

Opportunity management system

The Pfeiffer Vacuum opportunity management system is closely linked to the risk management system, as many risks also offer opportunities that should be utilized where appropriate. This is why the risks identified in the risk inventory are simultaneously examined with a view to potential opportunities, which produces a correlation. In extensive decision-making processes, we analyze the question of whether the potential opportunities or risks predominate, which means that we only engage in risks that appear to be manageable and are compensated for by the opportunities they offer.

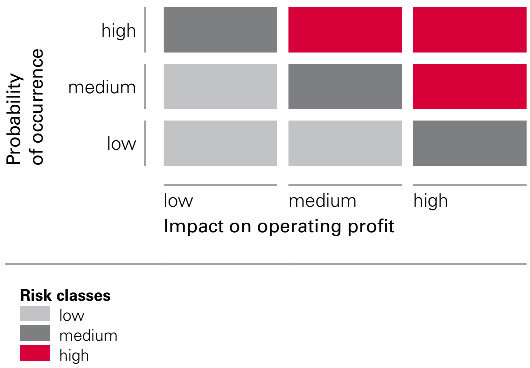
We conduct market and competition analyses in order to be able to explicitly make optimum use of industry and overall economic opportunities. This provides us with a good overview to further broaden our market share by specifically utilizing our potential. Close contact with our customers additionally aids us in identifying trends early on, thus enabling us to actively shape changes in the marketplace.

With variance analyses and development forecasts, our highly refined reporting system also identifies opportunities in our regional structure. Our global sales and marketing network enables us to swiftly and purposefully take advantage of these opportunities.

Risk classification

The risk classification of the risks presented below was effected according to a matrix taking into consideration the probability of occurrence and the potential impact on the operating profit.

Risk Classification



Risks

Overall economy (risk class: low)

As a globally operating company, we are dependent upon global economic developments. Nor can Pfeiffer Vacuum avoid the effects of a decline in world economic growth, and would have to expect to see a direct impact on our sales and profitability. However, the regional and market-segment mix of sales is very balanced at Pfeiffer Vacuum, and its overall structure compensates for revenues in economically weak and economically growing markets and industries. Because it is seldom that all regions and market segments are equally affected by a deteriorating economic development. Despite the overall compensating developments, there may be an impact on the economic sucess of individual segments. The semiconductor market represents a significant share of sales and Pfeiffer Vacuum is therefore exposed to a greater extent to the fluctuations of this market. Managing the economic risk essentially involves steering capacities and costs. Flexible working time models enable us to swiftly and easily adapt production capacities to reflect the development of the order situation.

Market segments (risk class: medium)

Sales in Pfeiffer Vacuum's individual market segments are closely linked to global economic developments. The research & development market, for example, is dependent upon government spending and focuses in connection with research projects. The semiconductor market follows its own cycles, which offers enormous opportunities during boom phases and involves major risks during phases of weakness. The coating market is closely linked to developments in the photovoltaic industry and did not recover again entirely after the crisis in 2011. The heterogeneous industrial market segment follows overall economic trends in its general development. The development work in the product categories goes hand in hand with the trends in the individual market segments. This means that smaller turbopumps and analysis instruments are more likely to be required in the analytical industry, which tends to respond on an early-cyclical basis. Large quantities of backing pumps are employed in the semiconductor market, but also in other industries whose developments generally conform to those in mechanical engineering.

In order to combat the risks stemming from dependence upon individual market segments and products, Pfeiffer Vacuum places a great deal of value on its broad based alignment. At the same time, a disproportionately high share of revenue derives from the semiconductor industry, which presents both an opportunity as well as a risk due to the cyclical nature of this industry's development. Pfeiffer Vacuum's strategy for lowering this risk is to increasingly market products in other industries through our distribution channels, thus lowering the share of total revenues accounted for by the semiconductor industry. Moreover, we estimate that the semiconductor market will grow strongly beyond the cycles.

Acquisition and integration (risk class: low)

The integration of companies into the purchaser's corporate group always poses a special challenge. In order to preclude as far as possible the risk that the expectations which are placed upon the acquisition might not fully materialize, we conduct detailed due diligence reviews in advance of a corporate acquisition. Analyzed in particular in this connection are the legal situation, technical equipment, production planning, and the current and expected financial position of the Company to be acquired. To minimize legal and financial risks in particular, we draw upon the counsel of reputable law firms and tax advisors with substantial experience of acquisitions on this scale during the period of preparing and realizing the acquisition. Taken as a whole, these measures ensure that all aspects of a corporate acquisition are taken into consideration, and enable conclusions to be drawn regarding the potential synergies that will result from an acquisition. This significantly reduces the risk of unanticipated developments. However, this risk can never be entirely excluded because a successful acquisition depends upon many other additional factors. This also applies for the integration which follows after acquisition.

To restrict integration-related risks, proven Pfeiffer Vacuum guidelines, which ensure structured and successful business operations, are implemented within newly acquired companies. Directly after acquisition, newly acquired companies are also integrated into the reporting system in the Pfeiffer Vacuum Group to allow targeted management of the individual companies. Besides extensive reporting, this also includes monthly conference calls and regular meetings on site in the countries concerned. The standardized risk management system is also put in place in all new Group companies. The risk of intransparency is therefore eliminated in this way.

Technology (risk class: medium)

Products and services that do not meet customer expectations lead directly to declining sales, and thus to a loss of market share and reputation. Therefore, the key risk factors for Pfeiffer Vacuum include a lack of innovative strength and the loss of quality of products and services. We combat these risks through ongoing customer contact and the resulting market intimacy. The information thus obtained about the needs of our customers enables us to develop and offer products that are suited to their demands. This allows us to expand both our competitive position as well as our name recognition. We will continue to combat the risk of a lack of innovation through our development investments. In addition, maintaining high standards of quality is a top priority for us. We received certification to ISO 9001:2008 for the first time in 1995, and this has since been sustained without interruption.

Purchasing and manufacturing (risk class: low)

The risks in the sourcing market occur, in particular, in the form of supply bottlenecks and dependency upon individual vendors. Downtimes are viewed as a key risk from a production standpoint. We primarily combat the risk of supply bottlenecks and vendor dependence by continuously reviewing alternative supplier options. Anticipated market shortages of raw materials, such as steel and aluminum, and the price risks which these entail, are combated through long-term framework contracts. In general, however, it can be said that the effects of changes in the price of raw materials do not have any significant influence on profitability. Business interruption insurance is in force to cover the effects of downtimes resulting from fire, storm or flood damage, for example. Qualified technicians and modern production machinery keep technically related downtimes to a low level. Regular servicing and preventive maintenance for our machinery and equipment also help to avoid downtimes.

Human resources (risk class: low)

As a provider of vacuum solutions, i. e. a subset of mechanical engineering, we are dependent upon the high level of education, training and commitment of our employees. We use various measures to combat the risk of losing these people and/or insufficient recruiting possibilities for suitable new talent. An attrition rate that continues to be low documents the acceptance of this on the part of our people.

Information technology (risk class: low)

Because our business processes are mapped by means of software support, Pfeiffer Vacuum's corporate data is subject to a general information technology risk. This includes, first and foremost, the risks of system outages, data losses, virus or hacker attacks that could lead to an interruption of business operations.

We keep the risk of data losses to a minimum by performing daily backups of our complete enterprise data. Our enterprise database, in particular, with which manufacturing operations, materials management, order handling, financial and cost accounting are handled, is subject to a high security standard. All files created by our employees within the server environment are also backed up on a daily basis. Our backup tapes are stored in secure, fire-proof locations. The activities of our in-house support team reduce system outages to a low level. The Company also uses regularly updated virus scanners and modern firewalls to protect its hardware and software against the risk of computer viruses and hacking.

Exchange rates (risk class: low)

As a result of our pronounced international operations and the high percentage of export business that this involves, we are subject to a foreign exchange risk. A distinction must be made with respect to the way foreign exchange risks are controlled: the Company engages in active currency management for the (intercompany) U.S. dollar sales. The objective is to enter into options and future contracts in order to minimize the effects of exchange rate influences on future sales denominated in U.S. dollars. Moreover, there is a valuation risk in some companies at the close of the fiscal year that stems from intercompany accounts receivable denominated in foreign currencies. Both gains and losses from realized options and futures contracts, as well as the valuation results stemming from accounts receivable denominated in foreign currencies, can be controlled to a certain extent. These manifest themselves in the Consolidated Statements of Income. Aside from the substantial exchange rate risks from the U.S. dollar, there are also lower foreign exchange rate parity risks for Pfeiffer Vacuum from developments in the exchange rate of the Korean Won.

In addition to this, the Consolidated Statements of Income also include the income and expenses of the non-German sales subsidiaries that do not report in euros, which therefore have to first be translated into euros. This procedure and the resulting effects will be portrayed below using the U.S. sales subsidiary by way of example. However, these comments also apply analogously to all foreign-currency subsidiaries, such as those in the United Kingdom or the Republic of Korea. The line items in the Statements of Income are converted into euros at the annual average exchange rate and then adjusted for intercompany sales and services. Leaving selling and general administrative expenses out of consideration, it is possible to achieve a correlation within the Corporate Group between sales in U.S. dollars and the cost of sales in euros. In this connection, sales invoiced in U.S. dollars are subject to a foreign exchange rate parity (conversion risk), while the cost of sales are incurred mainly in euros and are not subject to any exchange rate influences.

The magnitude of sales and gross profit are therefore influenced directly by the exchange rate and are externally stipulated and non-hedgeable. A certain degree of compensation for this effect results from the fact that the subsidiary in the U.S. records its own selling and general administrative costs, which change counter to sales (natural hedge). In this connection – as a function of the development of the euro relative to the respective foreign currency – there can be both positive as well as negative effects on sales and operating profit.

Liquidity position (risk class: low)

The risk of a customer's insolvency always exists, independently of the economic situation (default risk). There are general liquidity risks of being unable to satisfy required payment obligations in a timely manner. The rigorous system of accounts receivable management that has long been practiced at Pfeiffer Vacuum, along with monitoring of our customers' payment patterns, minimizes creditworthiness risks and thus accounts receivable losses. Moreover, our dependence upon individual customers is limited. During the course of the year 2016, the financial liabilities were repaid in full. Unchanged from previous years, there is no indebtedness at the end of 2016. This means that there continue to be sufficient reserves to assure the survival of the Company, even in difficult economic times. Our operative business generates sufficient liquid assets to enable the Company to continue to grow from within.

Legal risks (risk class: low)

As a result of Pfeiffer Vacuum's international business operations, the Company is subject to a variety of legal risks. National and international contract law and taxation are of particular significance in this connection. These areas can have a direct bearing on the Company's earnings and financial position. Standardized terms and conditions of contract and business are always employed to minimize the risk stemming from contracts entered into for products and services. In the case of special contracts, the contract instrument is first reviewed in-house and then by external legal counsel, if necessary. The expertise required for assessing the Company's daily business is provided by our qualified staff. We draw upon the assistance of external tax advisors in connection with complex issues that relate to national and international taxation. Product liability risks are covered by appropriate insurance. No legal disputes are currently pending whose outcome could have a material impact on the Company's earnings or financial position.

Takeover risks (risk class: low)

On February 13, 2017, Pangea GmbH, Maulburg, Germany, released a voluntary public takeover offer to the shareholders of Pfeiffer Vacuum Technology AG to purchase all shares of Pfeiffer Vacuum Technology AG. Pangea GmbH is a legally independent entity of the family-run Busch Group. Amongst others, it is stated in the offer document that a profit and loss transfer agreement and/or domination agreement between the Busch Group and Pfeiffer Vacuum is to be considered after the successful consummation of the offer. The conclusion of such a contract would result in the loss of Pfeiffer Vacuum's independence. Because of the still ongoing dispostion right period, the outcome of the offer and its consequences for Pfeiffer Vacuum cannot yet be finally determined.

Opportunities

Macroeconomic and sector-specific opportunities

The global economic development in the past fiscal year was marked by moderate growth. In contrast, the Chinese economy recorded slightly lower growth rates that nevertheless remained at a far higher than average level. Positive growth trends are anticipated in the United States, which will also improve our position here. Being well placed here gives us the opportunity to lock into this trend as well. A similar situation applies for Germany too, where a slight economic upturn is currently anticipated for 2017. The cyclical nature of the semiconductor industry, which has been referred to a number of times, is both an opportunity and a risk.

Technology

Through its many years of experience, Pfeiffer Vacuum is highly successful in developing viable, high-quality products and bringing them to market. The foundation for this consists of our close collaboration with our customers in a spirit of trust, which enables us to anticipate their needs and thus gain a head start over our competitors. With innovative products and by steadily broadening our product portfolio, there are opportunities for better satisfying the demands of existing markets and generating opportunities for additional sales volumes by gaining market shares. This enables us to offer our customers a broader spectrum of products.

Sales

One of the Company's key competitive advantages has always been its lack of dependence upon individual regions, products or markets. We therefore view the expansion of our sales and marketing network as representing an opportunity to increase our market share. The globally active sales teams are interlinked, and uniform Pfeiffer Vacuum sales rules have been put in place. Regular training is also given on the permanently expanding spectrum of products, to enable sales staff to make use of opportunities for increasing sales to existing and prospective customers.

Production and logistics

Through the optimization of our production and logistics processes, we have laid the foundation in recent fiscal years for further improving our profitability. We therefore see this as an opportunity for being even faster in offering high-quality solutions to our customers in future as well. We have rigorously aligned the flows of materials in manufacturing towards our modern logistics processes. Reorganizing and fundamentally modernizing manufacturing operations led to additional productivity gains. As a solutions provider, we focus squarely on the needs of our customers. And through the reorganization of our manufacturing process, we are now being guided even more by the needs of our customers rather than by rigid planning dictates. Moreover, a cutting-edge warehouse system and a standardized system of product shipping increase efficiency. We are confident that the interplay between these modernization measures will help us to reduce throughput times in the future. Pfeiffer Vacuum has a total of three major production sites in Asslar, Göttingen, and Annecy.

Human resources

The development of viable new products, the ongoing improvement of our existing product portfolio, the high level of precision of the production processes, the sale and distribution of our products in a technologically challenging competitive environment, and the administration of an internationally operating, publicly traded Corporate Group necessitate a highly qualified and motivated workforce. We therefore utilize the opportunity of assuring the long-term loyalty of the Company's existing talent while simultaneously being an attractive employer for new people. Attractive pay concepts have been in place for years at Pfeiffer Vacuum. We therefore view ourselves as being well equipped to cover our future needs for qualified skilled labor and university graduates in the future and to assure the loyalty of our talent to the Company – both are absolute prerequisites for the Company's successful further development.

General comments on the risk management system and the presentation of the risk situation

We are of the opinion that the risk management system is suitable for identifying, analyzing, and quantifying existing risks in order to adequately steer them. Our auditor has reviewed the risk management system that is in place in connection with the audit of the Annual Financial Statements. This review did not result in any objections. Despite the number of risks disclosed being higher than the number of identified opportunities, Pfeiffer Vacuum considers the allocation of risks and opportunities as balanced overall. This particularly applies as the Group's economic success is based on a broad number of products for various industries. As those industries vary in terms of structure and economic cycles, this diversification contributes to a risk reduction. No risks are identifiable that could endanger the Company's survival, neither for the year covered by this Report nor for the following years.

Rating

Pfeiffer Vacuum Technology AG is not subject to any official rating by Moody's, Standard & Poor's or similar agencies.

Subsequent Events

With an agreement dated February 13, 2017, Pfeiffer Vacuum Technology AG purchased all further shares in Dreebit GmbH, Dresden, Germany, and thus increased the shareholdings from 24.9 % to 100 %. The acquisition which was made with retroactive effect from January 1, 2017, has to be seen in connection with the strengthening of service business, a growth segment and an important success driver for Pfeiffer Vacuum.

With effect from Februar 14, 2017, a subsidiary of Pfeiffer Vacuum Technology AG acquired all shares of Advanced Test Concepts Inc., Indianapolis, USA, („ATC Inc."). At the same time, an economically integrated but legally separate sister company to ATC Inc., having the same place of business, was acquired. With the purchase of these 100 % participations, Pfeiffer Vacuum will further expand its legacy leak detection product portfolio.

On February 13, 2017, Pangea GmbH, Maulburg, Germany, has released a voluntary public takeover offer to the shareholders of Pfeiffer Vacuum Technology AG to purchase all shares of Pfeiffer Vacuum Technology AG. The offer price as included in the offer document is € 96.20 per share. The offer is not bound to a minimum acceptance threshold. According to the offer, Pangea GmbH holds 29.98 % of the Pfeiffer Vacuum Technology AG shares as at the release date (December 31, 2016: 27.19 %). Pangea GmbH is a legally independent entity of the family-run Busch Group and is therefore indirectly attributable to the Busch family, i.e. Dr. Karl Busch, Ms. Ayhan Busch, Ms. Ayla Busch, Mr. Sami Busch and Mr. Kaya Busch, all Germany. On February 27, 2017, the Management and Supervisory Board of Pfeiffer Vacuum Technology AG released a joint opinion to the takeover offer. In this opinion, the Management and Supervisory Board, amongst others, concluded that the offer price as per the offer document is not adequate according to § 31 Sub-para. 1 of the German Securities Acquisition and Takeover Act ("Wertpapiererwerbs- und Übernahmegesetz", or "WpÜG"). Also on February 27, 2017, the Busch family notified that they exceeded the 30.0 % notification threshold and now hold aggregate shareholdings in Pfeiffer Vacuum Technology AG of 30.003 % via Pangea GmbH.

Significant changes to the branch environment have not occurred since the beginning of the 2017 fiscal year.

Outlook

General economic development

The International Monetary Fund (IMF) expects a moderate increase in global economic growth of 3.4 % in 2017. The corresponding figure for 2016 amounted to 3.1 %. Slightly higher growth overall is forecast for the emerging and developing countries – despite the slowdown in growth predicted again in China. Hopes here continued to be pinned on India, Southeast Asia (ASEAN) and Africa. Russia and Brazil are expected to emerge from their recession at a low level during 2017: Growth of 1.1 percent over the previous year is forecast for Russia. Only a marginal improvement of 0.5 percent over 2016 is expected for Brazil's economy.

In the industrialized countries, however, moderate growth is likely to continue at a slightly accelerated rate. This will be made possible by growth in the USA and Canada and a sound development in the eurozone. A pick-up in growth of more than half a percentage point to 2.2 percent is anticipated in the USA. A similar increase to 1.9 percent is expected in Canada. Growth overall in the eurozone is anticipated by the IMF to remain at a similar level to the previous year at 1.5 percent.

The IMF predicts for Germany that the price-adjusted gross domestic product (GDP) will exhibit a growth rate of 1.4 % in 2017. A continued strong level of private consumption is anticipated that will help to fuel an increase in the gross domestic product. Employment is expected to remain at a high level in 2017 or even continue to increase slightly. In contrast, the development of gross fixed capital investments is projected to lie 0.4 percentage points below the figure for the previous year.

Overall, it is to be expected that the general economic conditions under which our business segments operate will continue to develop differently from region to region.

Mechanical engineering

The German Engineering Federation (VDMA) forecasts an increase of 1 % in real terms in German machine production for 2017. This is a far cry however from a general economic recovery. This growth results essentially from a decline in the downturn in exports to many developing countries and emerging markets and the prospect of renewed increases in some of these markets. This can be seen not just from the recovery in the price of crude oil and gas but also from national factors. The introduction of a uniform rate of value added tax across India may fuel this development. In Russia, the price level resulting from the ongoing comparatively low value of the ruble is helping to make the economy highly competitive. In contrast, Brazil is expected to overcome its recession due to reforms implemented in the current year. The economists from the VDMA are not ruling out a renewed decline in exports to China.

Apart from this, domestic orders and orders from the European Union are anticipated to increase further, similarly to 2016. The rate of capacity utilization in the manufacturing sector in Germany has continued to grow. This could therefore result in greater investments in capacity than in the past year. Numerous uncertainties in world affairs are likely to contain the increase in investments however. The reform process within the EU continues to progress. This could have a positive impact on the demand for machinery. But it remains to be seen whether the elections in the Netherlands, France and Germany, and possibly in Italy, will curb economic development.

Furthermore, it remains unclear whether positive or negative impetus for German mechanical engineering will emerge from the United Kingdom. Even if the impact on the British economy, following the announcement of leaving the EU, is not entirely negative but also has positive effects such as the devaluation of the pound and the resulting improvement in competitiveness due to its prices, it is still not clear what effect the various factors will exert overall on the demand for machinery from Germany.

The level of uncertainty alone about the continued economic development in the UK can lead to the initial deferral of investments.

A further uncertainty factor lies in exports to the USA. The announced protectionism is certainly a burden which can negatively affect sales opportunities for German mechanical engineering in many other markets. But rising costs for infrastructure, falling corporate taxes and the increasing establishment of production sites in the USA may also create short-term sales momentum for German machinery. The long-term effects of this policy, however, are still unclear. A somewhat hesitant approach to placing new orders certainly cannot be ruled out.

The OECD leading indicator is considered a reliable indicator for the mechanical engineering sector in the eurozone and, in contrast, paints a more optimistic picture. With a lead-time of about six months, it tends to predict the future development of machine production. It currently signals a generally subdued development, as it averaged out at values of around 100.4 (previous year: 100.6) for the eurozone in early 2017, thus indicating a slight expansion. This trend should strengthen its impact on EU machine production during the first half of 2017.

In 2016, the order intake in the "Compressors and Vacuum Pumps" sector lay an anticipated 2 % over the previous year's level. In comparison, the overall orders and sales for mechanical engineering tended to be unchanged against the previous year's level. For 2017, the federation expects sales growth of about 1 % across the entire industry.

Development in the markets

Pfeiffer Vacuum divides its customers into the Semiconductor, Industrial, Analytical Industry, Research & Development and Coating market segments.

The Semiconductor market segment is generally regarded as cyclical in nature, but from 2015 onwards, it has experienced a recovery that has progressively gained strength since the second half-year of 2016. Signals from the market and from key customers anticipate this strength continuing into 2017. There are also good opportunities in the longer-term outlook: While some large semiconductor companies are currently investing, other chip manufacturers are still busy with the next generations of their product lines. In the current fiscal year, the course of this market segment will therefore yet again depend on how extensively these customers invest in new production facilities and technologies. Pfeiffer Vacuum still strongly believes that the demand for products from the semiconductor industry will generally grow at an above-average rate in view of the increasing complexity of digital innovations in almost all areas of daily life – even if this development is typically characterized by a strong cyclical nature.

In the industrial market segment, the order growth will primarily be determined by new product developments as well as the general trend towards energy efficiency and resource conservation. Here, Pfeiffer Vacuum expects a relatively stable development in the medium term as well. In the case of the analytical market segment, and also to a certain extent in the research & development market segment, Pfeiffer Vacuum expects a very dynamic development. Analytical instruments are used in research and quality assurance applications in general industry and, in particular, in the semiconductor sector. The research & development market segment is dependent on political decisions on the funding of projects, and on research institutes.

The coating market segment includes customers from sectors such as displays (LED, OLED), architectural glass, solar, and many other areas of surface treatment. Following a lengthy period of restraint due to overcapacities, the solar industry once again gave out some positive signals, which resulted in certain investments in building up new capacities being made again in the past fiscal year. Thus, for 2017, Pfeiffer Vacuum anticipates a stable or slightly increasing development of the solar market – albeit far from the high level at the beginning of the decade.

Development in sales in 2017

Increased sales to customers from the Semiconductor and Coating industry were the primary reasons for the 5.0% growth in sales to € 474.2 million in the year 2016. To date, there have been customer-specific and industry-specific signs of a sustained strong level at least in the first half-year of 2017. The visibility of orders is again approximately two months. Furthermore, the acquisitions made in February 2017 will positively impact on the development of sales.

Due to the reasons mentioned above and also in view of the outlined macroeconomic growth that was predicted – for the global economy as well as the engineering industry – Pfeiffer Vacuum is expecting a noticeable increase in sales over the whole fiscal year 2017.

Earnings development

Operational optimization measures as well as economies of scale related to the expected sales improvement should contribute to a noticeable improvement in the operating results and the operating margin situation in 2017. As a result of our very low financial liabilities, and therefore low financial expenses, we expect the development of our earnings before taxes to progress largely parallel to the development of our operating results. Capital expenditures (excluding acquisitions) currently planned for 2017 for the entire Group amount to some € 28.0 million, following € 18.0 million in the previous year, particularly for reconstruction and expanding a facility in the USA and for other capacity expansions.

Dividends

Pfeiffer Vacuum is specifically known as a dividend yielding stock on the German stock market. The Company wishes to remain faithful to this tradition. The Management Board and the Supervisory Board will therefore propose at the Annual General Meeting to distribute a dividend of € 3.60 per share for fiscal 2016 (previous year: € 3.20 per share). This would correspond to an increase of € 0.40 per share or 12.5 %. With a distribution volume of some € 35.5 million, this would result in 75.5% of the net profit of the Group being paid out to shareholders (previous year: 75.3%).

Dividend Figures

		2016	2015
Payout ratio[1]	in %	75.5	75.3
Dividend per share	in €	3.60[2]	3.20
Dividend yield	in %	4.1[2]	3.4

[1] (Proposed) dividend distribution in relation to the net income for that year
[2] Subject to approval by the Annual General Meeting

Forward-looking statements

The statements, estimations, and other information in this outlook are based upon assumptions about future macroeconomic and sector-specific developments. The assumptions are based upon the latest information available at the time of publication. Due to the inherent risk and uncertainty relating to the probability of the statements and estimations made here, actual developments may differ significantly.

We wish to remain a highly profitable company and expect a noticeably positive development of profitability, financial position and liquidity for fiscal 2017. Overall, we are confident that we can achieve this goal on the basis of the development of business at the end of 2016, the strategic focus on clearly defined target markets, and the ongoing conversations with our customers. With our highly trained and motivated employees, we satisfy key requirements and are excellently positioned to achieve this.

Consolidated Financial Statements

Consolidated Statements of Income Pfeiffer Vacuum Technology AG

in K €	Note	**2016**	2015
Net sales	31	474,244	451,521
Cost of sales	7, 15	– 293,769	– 276,010
Gross profit		**180,475**	175,511
Selling and marketing expenses	7	– 55,330	– 59,850
General and administrative expenses	7	– 35,733	– 35,838
Research and development expenses	7	– 26,282	– 25,479
Other operating income	8	10,818	13,297
Other operating expenses	8	– 5,972	– 6,882
Operating profit	31	**67,976**	60,759
Financial expenses	9, 32	– 662	– 691
Financial income	9, 13, 32	301	383
Earnings before taxes	24, 31	**67,615**	60,451
Income taxes	24	– 20,583	– 18,535
Net income		**47,032**	41,916
Earnings per share (in €):			
Basic	34	4.77	4.25
Diluted	34	4.77	4.25

Consolidated Statements of Comprehensive Income Pfeiffer Vacuum Technology AG

in K €	Note	2016	2015
Net income		**47,032**	41,916
Other comprehensive income			
Amounts to be reclassified to income statement in future periods (if applicable)			
Currency changes	21	673	7,781
Results from cash flow hedges	21, 32	– 588	96
Related deferred income tax effects	21	176	– 32
		261	7,845
Amounts not to be reclassified to income statement in future periods			
Valuation of defined benefit plans	21, 25	– 7,023	2,269
Related deferred income tax effects	21	1,857	– 585
		– 5,166	1,684
Other comprehensive income net of tax		**– 4,905**	9,529
Total comprehensive income net of tax		**42,127**	51,445

Consolidated Balance Sheets Pfeiffer Vacuum Technology AG

in K€	Note	Dec. 31, 2016	Dec. 31, 2015
ASSETS			
Intangible assets	10	67,579	73,396
Property, plant and equipment	11	85,053	82,311
Investment properties	12	472	496
Shares in associated companies	13	1,636	1,618
Deferred tax assets	24	23,312	23,267
Other financial assets	14	4,508	4,211
Total non-current assets		**182,560**	185,299
Inventories	15	81,737	77,743
Trade accounts receivable	16	69,352	58,556
Income tax receivables		1,112	5,291
Prepaid expenses		3,099	1,863
Other accounts receivable	17, 32	11,430	9,378
Cash and cash equivalents	18	110,032	115,397
Total current assets		**276,762**	268,228
Total assets	31	**459,322**	453,527
SHAREHOLDERS' EQUITY AND LIABILITIES			
Share capital	19	25,261	25,261
Additional paid-in capital	19	96,245	96,245
Retained earnings	20	211,423	195,968
Other equity components	21	– 17,355	– 12,450
Equity of Pfeiffer Vacuum Technology AG shareholders		**315,574**	305,024
Financial liabilities	23	—	10,222
Provisions for pensions	25	51,188	43,497
Deferred tax liabilities	24	1,848	4,832
Total non-current liabilities		**53,036**	58,551
Trade accounts payable	26	30,896	21,245
Customer deposits		4,928	4,860
Other accounts payable	27	20,530	21,931
Provisions	28	29,767	26,982
Income tax liabilities		4,367	4,431
Financial liabilities	29	224	10,503
Total current liabilities		**90,712**	89,952
Total shareholders' equity and liabilities		**459,322**	453,527

Consolidated Statements of Shareholders' Equity Pfeiffer Vacuum Technology AG

in K €	Note	Share Capital	Additional Paid-in Capital	Retained Earnings	Other Equity Components	**Equity of Pfeiffer Vacuum Technology AG Shareholders**
Balance as at January 1, 2015		**25,261**	**96,245**	**180,201**	**– 21,979**	**279,728**
Net income		—	—	41,916	—	41,916
Earnings recorded directly in equity	21, 32	—	—	—	9,529	9,529
Total comprehensive income		—	—	**41,916**	**9,529**	**51,445**
Dividend payment	20	—	—	– 26,149	—	– 26,149
Balance as at December 31, 2015		**25,261**	**96,245**	**195,968**	**– 12,450**	**305,024**
Net income		—	—	47,032	—	47,032
Earnings recorded directly in equity	21, 32	—	—	—	– 4,905	– 4,905
Total comprehensive income		—	—	**47,032**	**– 4,905**	**42,127**
Dividend payment	20	—	—	– 31,577	—	– 31,577
Balance as at December 31, 2016		**25,261**	**96,245**	**211,423**	**– 17,355**	**315,574**

Consolidated Statements of Cash Flows Pfeiffer Vacuum Technology AG

in K €	Note	2016	2015
Cash flow from operating activities:			
Earnings before taxes	31	67,615	60,451
Adjustment for financial income/financial expenses		361	308
Financial income received		227	317
Financial expenses paid		– 1,020	– 451
Income taxes paid		– 17,165	– 16,847
Depreciation/amortization	10, 11, 12, 31	20,421	20,677
Gain/loss from disposals of assets		– 58	91
Changes in allowances for doubtful accounts	16	129	178
Changes in inventory reserves	15	2,180	3,439
Other non-cash income and expenses		321	15
Effects of changes in assets and liabilities:			
Inventories		– 5,960	– 15,471
Receivables and other assets		– 9,768	– 726
Provisions, including pension and income tax liabilities		– 1,147	1,029
Payables, customer deposits		7,480	6,643
Net cash provided by operating activities		**63,616**	59,653
Cash flow from investing activities:			
Capital expenditures	10, 11, 12, 31	– 18,018	– 11,655
Proceeds from disposals of fixed assets		574	649
Net cash used in investing activities		**– 17,444**	– 11,006
Cash flow from financing activities:			
Dividend payments	20	– 31,577	– 26,149
Redemptions of financial liabilities		– 20,503	– 10,483
Net cash used in financing activities		**– 52,080**	– 36,632
Effects of foreign exchange rate changes on cash and cash equivalents		543	1,914
Net increase/decrease in cash and cash equivalents		**– 5,365**	13,929
Cash and cash equivalents at beginning of period		115,397	101,468
Cash and cash equivalents at end of period	18	**110,032**	115,397

Notes to the Consolidated Financial Statements

Remarks relating to the Company and its Accounting and Valuation Methods

1. General remarks relating to the Company

The parent company within the Pfeiffer Vacuum Group ("the Company" or "Pfeiffer Vacuum") is Pfeiffer Vacuum Technology AG, domiciled at Berliner Strasse 43, 35614 Asslar, Germany. Pfeiffer Vacuum Technology AG is a stock corporation organized under German law and recorded in the Register of Companies at the Local Court of Wetzlar under Number HRB 44. The Company is listed in the Prime Standard of Deutsche Börse Stock Exchange in Frankfurt am Main, Germany, where it is included in the TecDAX index.

Pfeiffer Vacuum is one of the leading full-line vacuum technology manufacturers, offering custom solutions for a wide range of needs in connection with the generation, control, and measurement of vacuum. The products developed and manufactured at the Company's production facilities in Asslar and Göttingen, Germany, as well as in Annecy, France and Asan, Republic of Korea, include turbopumps, a range of backing pumps, such as rotary vane, Roots and dry pumps, complete pumping stations, as well as custom vacuum systems, leak detectors and components.

Pfeiffer Vacuum markets and distributes its products through its own network of sales companies and independent marketing agents. Moreover, there are service support centers in all major industrial locations throughout the world. The Company's primary markets are located in Europe, the United States, and Asia.

2. Basis for preparing Consolidated Financial Statements

Statement of compliance with IFRS

The Consolidated Financial Statements of Pfeiffer Vacuum Technology AG for the fiscal year from January 1 to December 31, 2016, have been prepared in accordance with International Financial Reporting Standards (IFRS) and the interpretations of the IFRS Interpretations Committee (IFRS IC) as applicable in the European Union (EU). This includes the International Accounting Standards (IAS), which continue to retain their validity, the interpretations of the Standing Interpretations Committee (SIC) and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC). Those standards that have been published but whose application is not yet mandatory have generally not been adopted at an earlier stage. The Notes to the Consolidated Financial Statements additionally include the information required by § 315a, Sub-Para. 1, of the German Commercial Code ("HGB").

Basic valuation principles

The Consolidated Financial Statements are prepared essentially in accordance with the acquisition cost principle. However, this does not include derivative financial instruments, which are carried at fair values. Pfeiffer Vacuum prepares its Consolidated Financial Statements in euros (€). Unless otherwise indicated, the presentation is in thousands of euros (K€). For mathematical reasons, the numbers presented in the Consolidated Financial Statements may include rounding differences.

Consolidated companies and principles of consolidation

All companies which Pfeiffer Vacuum directly or indirectly controls are consolidated. The Company is considered to control an entity if it is exposed to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Associated companies are accounted for using the equity method. Companies are considered to be associated if Pfeiffer Vacuum Group has significant influence. Significant influence is the possibility to participate in financial or operational decisions but excluding control or joint decisions.

Inclusion in the Consolidated Financial Statements is made on the basis of individual financial statements prepared in accordance with consistent accounting and valuation principles. The balance sheet date of the individual financial statements of the included companies is the same as the balance sheet date of the Consolidated Financial Statements.

There were no investments in joint ventures or joint operations as at December 31, 2016, or in previous years. Nor were there any investments in unconsolidated structured entities.

Consolidation of investments is effected at the acquisition date in accordance with the acquisition method. In this connection, all assets (including, if applicable, intangible assets to be recognized additionally) and liabilities are first valued at their attributable fair values. The acquisition costs of the equity investment, i.e. the total compensation transferred, valued in accordance with attributable fair values, are then offset against the acquired, newly valued shareholders' equity. Any resulting positive difference is recognized as goodwill and written down only in the event of an impairment (impairment-only approach).

All intercompany receivables and liabilities, gains and losses, revenues and expenses are eliminated in connection with the consolidation process.

Foreign currency translation

The annual financial statements of subsidiaries domiciled outside the European Currency Union have been translated into euros (€) in accordance with IAS 21, "The Effects of Changes in Foreign Exchange Rates." Each company within the Corporate Group stipulates its own functional currency. The functional currency of the subsidiaries is the respective local currency. When translating financial statements presented in foreign functional currencies, year-end exchange rates are applied to assets and liabilities, while average annual exchange rates are applied to income statement accounts. The resulting translation adjustments are recorded in other equity components.

In the consolidated financial statements, foreign-currency transaction gains and losses from regular operations of consolidated companies are recorded as other operating income and expenses in the income statement.

3. Application of amended or new standards

The accounting and valuation principles used are essentially the same as those used the year before. In variance thereto, the Company in 2016 has applied the following new or amended standards for the first time, if application was mandatory. Basically, this did not have any impact on the Consolidated Financial Statements.

Application of amended or new Announcements

	Issued by IASB/IFRIC	Applicability [1]
Mandatory application fiscal year 2016		
Amendments to IFRS 10, IFRS 12 and IAS 28: Investment Entities – Applying the Consolidation Exception	December 2014	January 1, 2016
Amendments to IAS 27: Equity Method in Separate Financial Statements	August 2014	January 1, 2016
Amendments to IAS 1: Disclosure Initiative	December 2014	January 1, 2016
Annual Improvements to IFRSs 2012 – 2014 Cycle	September 2014	January 1, 2016
Amendments to IAS 16 and IAS 38: Clarification of Acceptable Methods of Depreciation and Amortisation	May 2014	January 1, 2016
Amendments to IFRS 11: Accounting for Acquisitions of Interests in Joint Operations	May 2014	January 1, 2016
Amendments to IAS 16 and IAS 41: Bearer Plants	June 2014	January 1, 2016
Voluntary applicability in fiscal year 2016		
IFRS 9 Financial Instruments	July 2014	January 1, 2018
IFRS 15 Revenue from Contracts with Customers	May 2014	January 1, 2018

[1] Fiscal years beginning on or after the indicated date according to EU regulation

The following standards were issued by the IASB but not yet endorsed by the EU until fiscal year 2016.

Application of amended or new Announcements

	Issued by IASB/IFRIC	Applicability
IFRS 16 Leases	January 2016	January 1, 2019
Amendments to IAS 12: Recognition of Deferred Tax Assets for Unrealised Losses	January 2016	January 1, 2017
Amendments to IAS 7: Disclosure Initiative	January 2016	January 1, 2017
Clarifications to IFRS 15 Revenue from Contracts with Customers	April 2016	January 1, 2018
Amendments to IFRS 2: Classification and Measurement of Sharebased Payment Transactions	June 2016	January 1, 2018
Amendments to IFRS 4: Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts	September 2016	January 1, 2018
Annual Improvements to IFRSs 2014 – 2016 Cycle	December 2016	January 1, 2018
Amendments to IFRS 10 and IAS 28: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	September 2014	open
IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration	December 2016	January 1, 2018
Amendments to IAS 40: Transfers of Investment Property	December 2016	January 1, 2018

In July 2014, the IASB published the final version of IFRS 9 "Financial Instruments" which was endorsed by the EU in the meantime. The new IFRS 9 will replace the existing rules of IAS 39 „Financial Instruments: Recognition and Measurement". These new rules for accounting of financial instruments will be mandatorily applicable for fiscal years beginning on or after January 1, 2018. First time application generally has to be effected retrospectively, but with a number of simplification rules available. The option to voluntarily apply this standard ahead of time has not been utilized.

In May 2014, the IASB published IFRS 15 „Revenue from Contracts with Customers" which was endorsed by the EU in the meantime. New IFRS 15 will replace IAS 11 „Construction Contracts", IAS 18 „Revenue" and the related interpretations. These new rules for accounting of revenue from contacts with customers will be mandatorily applicable for fiscal years beginning on or after January 1, 2018. First time application generally has to be effected retrospectively, but with a number of simplification rules available. The option to voluntarily apply this standard ahead of time has not been utilized.

In January 2016, the IASB published IFRS 16 „Leases". The endorsement by the EU is yet pending. New IFRS 16 will replace IAS 17 „Leases "and the related interpretations. These new rules for accounting of leases will be mandatorily applicable for fiscal years beginning on or after January 1, 2019. First time application generally has to be effected retrospectively, but with a number of simplification rules available. An early adoption is permitted in case IFRS 15 is adopted, too. The option to voluntarily apply this standard ahead of time will presumably not be utilized.

Currently, Pfeiffer Vacuum did not yet entirely analyze the impact from first time adoption of IFRS 9, IFRS 15 and IFRS 16 and thus reliable conclusions in this regard cannot yet be made. The Company intends to finalize the required detailed analyses during the course of the fiscal year 2017.

The impact on the Consolidated Financial Statements resulting from the application of the further published standards is also being analyzed.

4. Accounting and valuation methods

Income recognition

Sales are recognized when the material risks and rewards relating to the ownership of the products sold passes to the purchaser, which is essentially the case when the goods are shipped. Should product sales be subject to customer acceptance, revenues are not recognized until customer acceptance has occurred. Service revenues are recognized when the underlying services are performed. These revenues include the invoiced working hours of the service personnel, as well as spare parts and replacement products. Rebates are recorded as a reduction of sales. Interest income is recorded when the interest originates. Rental income from investment properties is recorded on a straight-line basis over the term of the leases.

Construction contracts

Construction contracts are accounted for under IAS 11, "Construction Contracts." The percentage of completion method is used for revenue recognition, with the stage of completion being calculated as the ratio between contract costs incurred and expected total contract costs (cost-to-cost method). Receivables from construction contracts are presented under trade accounts receivable on the assets side of the balance sheet, net of partial clearings.

Cost of Sales

Cost of sales include the manufacturing costs for the products sold as well as the costs for the services rendered. This includes all directly attributable material and production costs as well as indirect costs including depreciation/amortization on production buildings and machines. In addition, freight costs, expenses for inventory valuation, and warranty expenses are included in here. Based on historical experience, warranty provisions for recognized revenues are recorded as at year-end.

Research and development expenses

Research and development costs are expensed as incurred. Development costs are not capitalized, since the capitalization prerequisites in IAS 38, "Intangible Assets," are not fully satisfied.

Property, plant and equipment and intangible assets

Property, plant and equipment and intangible assets are stated at cost and depreciated/amortized on a straight-line basis over the customary useful lives of the assets. At the close of each fiscal year, the useful lives and depreciation/amortization methods, as well as the residual values in the case of property, plant and equipment, are reviewed and adjusted where necessary. The following useful lives are assumed:

Estimated useful Life	
Production halls, production and administration buildings and similar facilities	20–40 years
Machinery and equipment (including IT equipment)	3–15 years
Intangible Assets[1]	2–5 years

[1] With the exception of goodwill and a trademark recognized in connection with a purchase price allocation, there are no intangible assets with indefinite useful lives.

Scheduled depreciation and amortization are allocated to the expense lines in the income statement on the basis of the input involved. Repair and maintenance costs are expensed as incurred.

The Company reviews long-lived assets for impairment whenever events or changes in circumstances suggest that the carrying amount of an asset may not be recoverable. Should impairment indicators exist, the Company performs the analyses required under IAS 36, "Impairment of Assets," with the carrying amount of the asset being compared to the recoverable amount. The recoverable amount of an asset or a cash-generating unit is the greater of the fair value less its selling costs and value in use. The resulting amount must be determined for each individual asset, unless an asset generates cash flows that are dependent upon those from other assets or other asset groups. Should the carrying amount of an asset be higher than its recoverable amount, the asset is viewed as being impaired and is written down to its recoverable amount. To determine the value in use of an asset, the anticipated future cash flows are discounted to their cash value, taking into consideration a before-tax discount rate that reflects current market expectations with respect to the interest rate effect and the specific risks of the asset in question. An appropriate valuation model is employed to determine the fair value less selling costs. This model is based on valuation multiples and other available indicators for the fair value. Any required reversals of impairment losses are recorded in future-period income statements up to the amount of the impairment loss reversal limit. This limit is determined by the amount that would have resulted at the close of the respective fiscal year given scheduled depreciation of the asset.

At least once a year, the Company reviews goodwill for possible impairments. For the purpose of the impairment test, goodwill acquired within the context of a corporate merger is allocated at the acquisition date to those cash generating units of the Corporate Group that can be expected to be able to benefit from the corporate merger. This review is also made whenever events or changes in circumstances suggest that the carrying amount may not be recoverable. In this case, the above described process for impairments under IAS 36, "Impairment of Assets," is applied. Any resulting impairment loss is recorded in the income statement. A reversal of goodwill impairment losses in future periods is not permissible.

A fixed or intangible asset is derecognized either at the time of disposal or at such time as no economic benefit can any longer be expected from the further utilization or sale of the asset. Gains and losses from disposals of assets are determined and recorded in the income statement on the basis of the difference between selling costs and carrying amount, less any directly attributable selling costs, where applicable.

Investment properties

Real estate properties are allocated to the portfolio of investment properties if they are held for the purpose of generating rental income. They are stated at cost and depreciated on a straight-line basis over their estimated useful lives (cost model). Assessment of their residual values, useful lives and depreciation methods, as well as any impairment losses, is performed analogously to the procedure described in connection with property, plant and equipment. Investment properties are derecognized upon disposal or when they are no longer being permanently used and they are no longer expected to produce any further future economic benefit.

Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or an equity instrument of another entity. Accounting for financial instruments in the case of usual and customary purchase or sale is performed on the settlement date, i.e. the day on which the asset is delivered. According to IAS 39, "Financial Instruments: Recognition and Measurement," financial instruments are allocated to the following categories upon initial recognition:

- Financial assets at fair value through profit and loss (financial assets held for trading),
- Financial assets held-to-maturity,
- Loans and receivables,
- Financial assets available-for-sale,
- Financial liabilities at fair value through profit and loss (financial liabilities held for trading) and
- Financial liabilities measured at amortized cost.

Accounts receivable, in particular trade accounts receivable, are categorized as "loans and receivables" and are measured at (amortized) cost. They typically do not bear interest. Costs of acquisition are recorded at the invoiced amount (including any value added tax). The Company continuously assesses the adequacy of the allowances for doubtful accounts receivable and makes appropriate adjustments on the basis of both specific probability and aging distribution. Any subsequent reversal is recorded in the income statement in an amount not to exceed its carrying amount (net of amortization or depreciation). Receivables are derecognized after all means of collection have been exhausted.

The Company uses derivatives only to manage foreign currency exchange rate risks. Around 53 % (2015: 59 %) of total consolidated sales are invoiced in foreign currencies (non-euro, predominantly in U.S. dollars). The Company enters into forward exchange and option transactions to hedge its future sales invoiced in foreign currencies against exchange rate fluctuations. Derivative financial instruments are acquired exclusively for this purpose. Pfeiffer Vacuum does not engage in speculative hedging transactions. Derivative financial instruments employed for hedging purposes are recorded at their fair values both at the time they are first recorded as well as in subsequent periods. Derivative financial instruments are recorded as assets if their fair value is positive and as liabilities if their fair value is negative. Changes in the fair value of these derivatives are recorded in equity without any impact on the income statement if the hedging is classified as a cash flow hedge according to IAS 39 and is effective. The derivative is reclassified into other operating income and expenses as foreign exchange gains/losses at the time of realization of the underlying transaction that has been hedged. If derivatives were purchased for hedging purposes but do not formally qualify for hedging under IAS 39, they are recorded at fair value through profit and loss. The fair values of derivatives are determined on the balance sheet date using current reference quotations and taking into account forward premiums and discounts. Please refer to Note 32 for further information relating to financial instruments.

Trade accounts payable are categorized as financial liabilities and are measured at amortized cost. They are recorded at the higher of their notational value or their redemption amount at the close of the fiscal year, including any value added tax.

Bank loans are also categorized as financial liabilities and are measured at fair value upon first recognition and in future periods at amortized costs using the effective interest method. This takes into consideration all components of the effective interest rate. Interest income and expenses resulting from the application of the effective interest rate method are shown under financial results.

Shares in associated companies

An associate is an entity over which the Company has significant influence. In distinguishing between significant influence and control, the Company considers all factors categorized substantial according to judgment. Associated companies are valued in accordance with the equity method, with the book value of the Company being adjusted annually by the percentage of results, dividend distributions, and other changes to shareholders' equity. Any goodwill in connection with an associated company is included in the book value of the shareholdings, and is subjected to neither scheduled depreciation nor any special impairment test. If there are indications of an impairment, the equity investment valuation is reduced, with the change being charged to income.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, bank balances, and all highly liquid bank investments having original maturities of three months or less. Due to the short investment period, this line item is only subject to minor value fluctuations. Cash and cash equivalents are defined accordingly in the consolidated cash flow statements.

Inventories

Inventories are valued at the lower of net realizable value and acquisition or manufacturing costs. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated selling costs. Acquisition or manufacturing costs comprise all costs for acquisition or manufacturing as well as all costs incurred for bringing the inventories to their current place and to the current status. With regard to work in process and finished products, the manufacturing costs include, besides directly attributable material and production costs, also production related indirect costs. Removals from inventory are determined on a weighted average cost basis. Interests on borrowed capital are not considered as part of acquisition or manufacturing costs for inventories. Valuation adjustments on excess inventories are determined on the basis of internal procedures in accordance with the ratio between inventory turnover and future sales or usage. Excess inventories are stocks of individual inventory items that exceed anticipated sales or usage. Management utilizes its judgment in forecasting sales or usage.

Other accounts receivable and other assets

Other accounts receivable and other assets are recorded at amortized cost and less allowances, where applicable. Non-current receivables and assets are valued using the effective interest method.

Provisions

Provisions are formed when the Corporate Group presently has a legal or constructive outside obligation as a result of a past event and it is likely that settlement of the obligation will lead to an outflow of economic resources and the amount of the obligation can be reliably determined. The valuation is made on the basis of the best estimate of the extent of the obligation.

Pensions

Valuation of pension obligations under defined benefit plans is based upon the projected unit credit method in accordance with IAS 19 "Employee Benefits." Actuarial gains and losses from changes in the amount of either the defined benefit obligation (under pension plans), the actuarial present value of earned entitlements (under other plans) as well as those variances between actual returns and returns calculated with the discount rate or from changes in other actuarial assumptions are recorded directly in the other equity components. The pension provision thus shows the net benefit obligation resulting from the difference of the defined benefit obligation and the plan assets measured at fair value. Additionally, the return on plan assets is considered with the discount rate. The accounting for obligations under defined benefit plans is based upon actuarial reports calculated as per the close of the fiscal year. The existing pension plans are detailed in Note 25.

Expenses for defined contribution plans are recorded as expense in the income statement when the premium obligation is incurred. Provisions are formed only if the payment is not made in the year the premium was incurred.

Other accounts payable

Other accounts payable are measured at amortized costs. Thus, they are recorded at their notational value or at their higher redemption amount at the close of the fiscal year, including any value added tax.

Income taxes

Current income taxes are stated as a liability to the extent to which they have not yet been paid. General tax risks within the Group are additionally considered. Should the amounts already paid for income taxes exceed the amount owed, the difference is stated as an asset. Calculation of the amount is based upon the tax rates and tax legislation applicable at the close of the fiscal year.

Under IAS 12, "Income Taxes," deferred tax assets and liabilities are formed in the consolidated and taxation financial statements for temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases or for unused tax loss carry-forwards (liability method). In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. In making this assessment, management considers the scheduled reversal of temporary differences, projected future taxable income, and tax planning strategies. Valuation of deferred tax assets and liabilities is performed using the local tax rates expected to be in effect at the time of realization of the asset or satisfaction of the liability, with the tax rates applicable at the close of the fiscal year being employed. The effects of changes in tax laws are recognized in the results of operations in the period in which the new tax rates go into effect. Deferred taxes that relate to line items recorded directly under shareholders' equity are recorded directly under equity and not in the income statement. An adjustment is recorded for deferred tax assets if it is unlikely that future tax advantages will be realized. Deferred tax assets and liabilities are offset if the entitlements and obligations relate to one and the same tax authority.

Leases

In accordance with IAS 17, "Leases," leasing contracts are classified as either finance or operating leases. Pfeiffer Vacuum is only acting as a lessee in this regard. Assets that are subject to operating leases are not capitalized. Lease payments are charged to income statement in the year they are incurred.

Under a finance lease, substantially all of the risks and rewards related to the leased asset are transferred. Assets that are subject to a finance lease are recorded at the present value of the minimum lease payments, with a leasing liability being recorded in the same amount. The periodic lease payments are divided into principal and interest components. While the interest component is recorded as an interest expense, the principal component reduces the outstanding liability. Assets recognized are depreciated over the useful life of the respective asset.

Government grants

Government grants which compensate the Group for expenses (expense subsidies) are recorded in the income statement in other operating income in the same period the underlying expenses are incurred.

Determination of fair value

IFRS 13 "Fair Value Measurement" includes uniform regulations for fair value measurement and rules the determination of fair value in cases where other standards allow or require measurement at fair value. Pfeiffer Vacuum Group did not apply any fair value measurement options.

Use of estimates

The process of preparing financial statements requires the use of estimates and assumptions on the part of the management. These estimates are based upon management's historical experience, are verified regularly, and adjusted if necessary. Certain of the Company's accounting policies are considered critical, as they can have a major impact on the profitability, financial position, and liquidity of the Corporate Group and necessitate significant or complex judgment on the part of management. These estimates and assumptions could differ from the actual results. As at December 31, 2016, based on current estimate, no judgment uncertainties existed that could lead to the significant risk of the need for a material adjustment of book values in the 2017 fiscal year.

Material forward-looking estimates and assumptions exist, among others, in estimating the cash flows in connection with the goodwill impairment test, with regard to the formation of pension and warranty provisions, in forecasting the useful lives of fixed assets, or in connection with deferred tax assets. The major assumptions are detailed in the Notes relating to the individual line items of the balance sheet or in the accounting principles. With regard to the assumptions the goodwill impairment test is based on, please refer to Note 10. The parameters underlying the pension accounting are detailed in Note 25. Information concerning the estimated useful life of tangible and intangible assets is included in Note 4, section "Property, plant and equipment, and intangible assets". Further details for provisions are described in Note 28.

Notes to the Scope of Consolidation

5. Composition of consolidated companies

In addition to Pfeiffer Vacuum Technology AG, again two German and 18 foreign subsidiaries are fully consolidated in the Company's Consolidated Financial Statements as at December 31, 2016.

Pfeiffer Vacuum Group as at December 31, 2016

in %	Location	Holdings
Pfeiffer Vacuum Technology AG	Germany	
Pfeiffer Vacuum GmbH	Germany	100.0
Pfeiffer Vacuum Austria GmbH	Austria	100.0
Pfeiffer Vacuum (Schweiz) AG	Switzerland	99.4
Pfeiffer Vacuum (Shanghai) Co., Ltd.	China	100.0
Pfeiffer Vacuum (India) Private Ltd.	India	27.0 [1]
Pfeiffer Vacuum Ltd.	Great Britain	100.0
Pfeiffer Vacuum Scandinavia AB	Sweden	100.0
Pfeiffer Vacuum Inc.	USA	100.0
Pfeiffer Vacuum Singapore Ltd.	Singapore	100.0
Pfeiffer Vacuum Taiwan Corporation Ltd.	Taiwan	100.0
Pfeiffer Vacuum Benelux B.V.	The Netherlands	100.0
Pfeiffer Vacuum (Xi'an) Co., Ltd.	China	100.0
Pfeiffer Vacuum Holding B.V.	The Netherlands	100.0
Pfeiffer Vacuum Italia S.p.A.	Italy	100.0
Pfeiffer Vacuum (India) Private Ltd.	India	73.0 [1]
Pfeiffer Vacuum Korea Ltd.	Republic of Korea	75.5 [1]
Trinos Vakuum-Systeme GmbH [2]	Germany	100.0
Pfeiffer Vacuum SAS	France	100.0
adixen Vacuum Technology (Shanghai) Co., Ltd.	China	100.0
Pfeiffer Vacuum Romania S.r.l.	Romania	100.0
Pfeiffer Vacuum Semi Korea, Ltd. [3]	Republic of Korea	100.0
Pfeiffer Vacuum Korea Ltd.	Republic of Korea	24.5 [1]

[1] Total Group holdings: 100.0 %
[2] Renamed to Pfeiffer Vacuum Components & Solutions GmbH in January 2017
[3] Renamed; formerly adixen Vacuum Technology Korea Co. Ltd.

6. Changes in consolidated companies and purchase of non-controlling interests

There were no changes in consolidated companies in fiscal year 2016.

In fiscal 2015, Pfeiffer Vacuum Brasil Ltda. was liquidated and was thus excluded from the scope of consolidation. In addition, adixen Manufacturing Korea Co. Ltd. was merged into adixen Vacuum Technology Korea Co. Ltd (renamed to Pfeiffer Vacuum Semi Korea, Ltd. in 2016). There was no material impact on the Company's net worth, financial position or profitability.

Notes to the Consolidated Statements of Income

7. Functional expenses

Cost of Sales

Cost of sales predominantly include the manufacturing costs for the products sold as well as the costs for the services rendered. This includes all directly attributable material and production costs as well as indirect production costs (including depreciation on production buildings and machines). In addition, freight costs, expenses for inventory valuation, and warranty expenses are included here.

Selling and marketing expenses

Selling and marketing expenses predominantly include wages and salaries, marketing and advertising costs, costs relating to trade shows and conventions, as well as other merchandising costs (such as catalogs, brochures, etc.).

General and administrative expenses

General and administrative expenses predominantly include wages and salaries, expenses related to allowances for doubtful accounts, audit and other general consulting fees, as well as all costs relating to the Company as a whole.

Research and development expenses

Research and development expenses include personnel and material expenses allocated to this functional section. Amortization expenses for developed technology recognized in connection with the adixen purchase price allocation totaled € 2.8 million in 2016 (2015: € 3.0 million) and are also included in research and development expenses.

For further analysis of operating expenses, please refer to Note 15 (relating to cost of sales), to Note 25 (relating to the development of pension expenses), and to Note 37 (relating to development of personnel expenses).

8. Other operating income and other operating expenses

Other operating income and expenses are comprised as follows:

Composition of Other Operating Income and Expenses

in K€	**2016**	2015
Foreign exchange gains	6,169	8,914
Government grants	4,351	4,383
Other	298	—
Other operating income	**10,818**	13,297
Foreign exchange losses	– 5,740	– 6,863
Other	– 232	– 19
Other operating expenses	**– 5,972**	– 6,882

9. Financial expenses and financial income

Financial expenses and financial income as recorded in 2016 and the previous year comprises as follows:

Composition of Financial Income and Financial Expenses

in K€	**2016**	2015
Interest expenses and similar	– 662	– 691
Total financial expenses	**– 662**	– 691
Interest income	283	365
Income from associated companies	18	18
Total financial income	**301**	383
Financial result	**– 361**	– 308

Notes to the Consolidated Balance Sheets

10. Intangible assets

The intangible assets item mainly includes software purchased within the consolidated Group and intangible assets recognized in connection with the adixen acquisition (amongst others developed technology, customer base, trademark right) as well as goodwill. The development of intangible assets in 2016 and 2015 was as follows:

Development of Intangible Assets in 2016

in K €	Software	Goodwill	Other intangible assets	**Total**
Acquisition cost				
Balance as at January 1, 2016	6,290	56,630	47,995	110,915
Currency changes	– 1	170	140	309
Additions	1,675	—	220	1,895
Disposals	– 834	—	—	– 834
Balance as at December 31, 2016	7,130	56,800	48,355	112,285
Amortization				
Balance as at January 1, 2016	3,967	—	33,552	37,519
Currency changes	– 1	—	492	491
Additions	838	—	6,427	7,265
Disposals	– 569	—	—	– 569
Balance as at December 31, 2016	4,235	—	40,471	44,706
Net book value as at December 31, 2016	**2,895**	**56,800**	**7,884**	**67,579**

Development of Intangible Assets in 2015

in K €	Software	Goodwill	Other intangible assets	**Total**
Acquisition cost				
Balance as at January 1, 2015	5,496	55,155	46,889	107,540
Currency changes	11	1,475	1,056	2,542
Additions	1,279	—	80	1,359
Disposals	– 496	—	– 30	– 526
Balance as at December 31, 2015	6,290	56,630	47,995	110,915
Amortization				
Balance as at January 1, 2015	3,532	—	26,151	29,683
Currency changes	6	—	978	984
Additions	767	—	6,441	7,208
Disposals	– 338	—	– 18	–356
Balance as at December 31, 2015	3,967	—	33,552	37,519
Net book value as at December 31, 2015	**2,323**	**56,630**	**14,443**	**73,396**

Impairment losses or respective reversals did not have to be recorded for intangible assets in fiscal 2016 and 2015.

For the purpose of testing the recoverability, goodwill and trademark rights with indefinite useful life recognized in connection with acquisitions were allocated to cash generating units. Recoverability was tested on December 31, 2016 by means of an impairment test.

The trademark right “adixen” recognized in connection with the acquisition (net book value € 3.4 million; 2015: € 3.3 million) has an indefinite useful life and was allocated to the business segments based on sales portions. Here, amongst others, € 0.8 million related to France, € 1.0 million to the Republic of Korea, and € 0.6 million to the USA. No impairment was determined under the impairment test conducted on December 31, 2016.

The recoverable amount (value in use) for impairment testing of the goodwill was determined as at December 31, 2016. Bases were cash flow forecasts for the years 2017 through 2019. These forecasts are developed from the yearly sales and cost planning and the corresponding operating results. In doing so, the current operating results as well as the expected market, economic, and competitor developments are considered and checked against the historical results. The cash flows expected after the detailed forecast 2017 through 2019 were extrapolated using individual growth rates. Discounting of cash flows is carried out using weighted average cost of capital (WACC) that also reflect country specific risks.

The recoverable amount (value in use) for impairment testing of the goodwill recognized in connection with the adixen acquisition (€ 48.4 million; 2015: € 48.2 million) was determined as at December 31, 2016, based on cash generating units. The adixen goodwill allocation to the cash generating units and the major assumptions used in calculating the recoverable amount are detailed in the following table.

Allocation of adixen Goodwill and Major Valuation Assumptions

	December 31, 2016			December 31, 2015		
	Goodwill	Pre-tax discount rate	Long-term growth rate	Goodwill	Pre-tax discount rate	Long-term growth rate
	€ in millions	in %	in %	€ in millions	in %	in %
Germany	3.4	7.8	1.5	3.4	8.7	1.5
France	22.9	9.3	1.5	22.9	10.3	1.5
Rest of Europe	2.8	10.3	1.5	2.8	11.2	1.5
USA	8.4	8.9	1.5	8.1	10.0	1.5
Republic of Korea	4.4	8.4	1.5	4.3	9.3	1.5
China	4.3	8.7	1.5	4.5	9.5	1.5
Rest of Asia	2.2	9.4	1.5	2.2	10.3	1.5

The determination of the adixen goodwill, too, did not result in any impairment loss.

The recoverable amount (value in use) for impairment testing of the goodwill recognized in connection with the Trinos acquisition (again € 8.2 million) was also determined as at December 31, 2016. The cash flows expected for this separate cash generating unit after the detailed forecast for 2017 through 2019 were extrapolated using a growth rate of 1.5 % (unchanged). The pre-tax discount rate employed was 8.1 % (2015: 9.0 %). The determination of this value did not result in an impairment.

An increase in discount rate by 0.75 %-point with all other assumptions kept constant would cause the recoverable amount (value in use) of the goodwill allocated to the Italy region to match its net book value (2015: 1.0 %-points). The same situation would result from a 0.75 %-point to 5.75 % reduction of the sustainable EBIT margin used for the cash flow extrapolation or a 0.9 % point reduction in the sustainable sales growth rate or a reduction of the sustainable free cash flow by K€ 66 used for the cash flow extrapolation (2015: 0.9 %-points and 1.2 %-points, respectively; no free cash flow sensitivity). An increase in discount rate by 1.2 %-points with all other assumptions kept constant would cause the recoverable amount (value in use) of the goodwill allocated to the China region to match its net book value (2015: 0.6 %-points). The same situation would result from a 1.1 %-point to 4.4 % reduction of the sustainable EBIT margin used for the cash flow extrapolation or a 1.3 %-point reduction in the sustainable sales growth rate or a reduction of the sustainable free cash flow by K€ 181 used for the cash flow extrapolation (2015: 0.7 %-points and 0.7 %-points, respectively; no free cash flow sensitivity). As at December 31, 2016, the amount by which the value in use exceeded the respective unit's net book value for the said two cash generating units in Italy and China totaled € 0.7 million and € 2.8 million, respectively.

11. Property, plant and equipment

Development of Property, Plant and Equipment 2016

in K€	Land and Buildings	Technical Equipment and Machinery	Other Equipment, Factory and Office Equipment	Construction in Progress	**Total**
Acquisition or manufacturing cost					
Balance as at January 1, 2016	71,820	74,299	27,301	3,145	176,565
Currency changes	– 54	87	5	8	46
Additions	1,334	6,624	3,006	5,159	16,123
Disposals	– 414	– 1,033	– 950	—	– 2,397
Reclassifications	1,544	802	1,148	– 3,494	—
Balance as at December 31, 2016	74,230	80,779	30,510	4,818	190,337
Depreciation					
Balance as at January 1, 2016	30,507	47,487	16,260	—	94,254
Currency changes	– 50	102	– 8	—	44
Additions	3,506	6,786	2,840	—	13,132
Disposals	– 414	– 987	– 745	—	– 2,146
Balance as at December 31, 2016	33,549	53,388	18,347	—	105,284
Net book value as at December 31, 2016	40,681	27,391	12,163	4,818	**85,053**

Development of Property, Plant and Equipment 2015

in K€	Land and Buildings	Technical Equipment and Machinery	Other Equipment, Factory and Office Equipment	Construction in Progress	**Total**
Acquisition or manufacturing cost					
Balance as at January 1, 2015	68,341	70,596	24,983	3,815	167,735
Currency changes	336	409	387	125	1,257
Additions	1,163	3,869	3,085	2,179	10,296
Disposals	– 122	– 1,327	– 1,274	—	– 2,723
Reclassifications	2,102	752	120	– 2,974	—
Balance as at December 31, 2015	71,820	74,299	27,301	3,145	176,565
Depreciation					
Balance as at January 1, 2015	26,819	41,448	14,333	—	82,600
Currency changes	8	134	220	—	362
Additions	3,802	6,850	2,793	—	13,445
Disposals	– 122	– 945	– 1,086	—	– 2,153
Balance as at December 31, 2015	30,507	47,487	16,260	—	94,254
Net book value as at December 31, 2015	41,313	26,812	11,041	3,145	**82,311**

In fiscal 2016, buildings and machinery having a net book value of K€ 3,429 (2015: K€ 3,275) were used as collateral to secure the Group's financial liabilities.

Neither in 2016 nor in the previous year, there were any impairment losses or related reversals for property, plant, and equipment.

12. Investment properties

Development of Investment Properties

in K€	**2016**	2015
Acquisition or manufacturing cost		
Balance as at January 1	861	861
Additions	—	—
Disposals	—	—
Reclassifications	—	—
Balance as at December 31	861	861
Depreciation		
Balance as at January 1	365	341
Additions	24	24
Disposals	—	—
Reclassifications	—	—
Balance as at December 31	389	365
Net book value as at December 31	**472**	496

The real estate shown in this line item was rented out in fiscal 2016 and 2015. Unchanged to the previous year, rental revenues amounted to K€ 51 and direct operating expenses amounted to K€ 27 (2015: K€ 26). Impairment losses or related reversals did not have to be recorded in 2016 and 2015.

The fair value of investment properties remains unchanged at € 0.5 million as at December 31, 2016 and 2015. Fair values were derived on the basis of the Company's own calculations by discounting expected net rental revenues during the estimated remaining life by an appropriate discount rate (level 3 of the fair value hierarchy according to IFRS 13).

13. Shares in associated companies

Since 2010, Pfeiffer Vacuum holds a total of 24.9 % of the shares of Dreebit GmbH, Dresden, Germany. This company is active in the field of service for vacuum pumps and systems, and additionally conducts developments in the field of medical technology.

Composition of Equity Value

in K€	**2016**	2015
Current assets	2,623	1,475
Non-current assets	6,229	6,388
Current liabilities	– 2,283	– 613
Non-current liabilities	—	– 751
Total Equity	**6,569**	**6,499**
Holdings quota	24.90 %	24.90 %
Equity Value	**1,636**	**1,618**

Dec. 31

With sales of K€ 6,900 (2015: K€ 6,510), Dreebit GmbH generated a net income of K€ 71 (2015: K€ 74). The impact of the change in the investment book value is shown in the financial income, please refer to Note 9.

14. Other financial assets

Other financial assets include non-current financial assets, mainly cash items K€ 3,150 (2015: K€ 2,530) and deposits K€ 915 (2015: K€ 886).

15. Inventories

Composition of Inventories

in K€	**2016**	2015
Raw materials	26,778	30,573
Work in process	23,725	20,112
Finished products	31,234	27,058
Total inventories, net	**81,737**	77,743

Dec. 31

Materials consumption in fiscal 2016 amounted to € 180.6 million (2015: € 171.9 million) and is included in cost of sales.

In 2016, an amount of K€ 2,180 (2015: K€ 3,439) from the valuation of inventories at net realizable value was recorded as expense. This expense was shown under cost of sales.

16. Trade accounts receivable

In connection with its normal course of business, the Company extends credit to a wide variety of business customers. The Company performs ongoing credit evaluations of its customers and establishes adequate allowances for identified credit risks. Trade accounts receivable do not bear any interest and have a remaining term of less than one year.

Composition of Trade Accounts Receivable

in K€	2016	2015
Trade accounts receivable	69,980	59,752
Allowance for doubtful accounts	– 628	– 1,196
Trade accounts receivable, net	**69,352**	58,556

Dec. 31

Summary of Activity in the Allowance for Doubtful Accounts

in K€	2016	2015
Balance as at January 1	1,196	1,239
Currency changes	– 9	50
Additions	129	178
Utilization	– 688	– 271
Balance as at December 31	**628**	1,196

Composition of Unreserved Trade Accounts Receivable

			Thereof: Unreserved and Overdue in the Following Periods					
in K€	Net Book Value	Thereof: Unreserved and not Overdue	< 30 Days	30–60 Days	61–90 Days	91–180 Days	181–360 Days	> 360 Days
2016	**69,352**	**55,684**	**9,319**	**2,240**	**751**	**402**	**227**	**280**
2015	58,556	46,072	8,145	2,171	658	401	455	358

Dec. 31

As at December 31, 2016 receivables with a nominal value of K€ 1,077 were subject to allowances for doubtful accounts (December 31, 2015: K€ 1,492).

In 2016, expenses for derecognition of unreserved receivables amounted to K€ 51 (2015: K€ 37).

17. Other accounts receivable

This line item totals K€ 11,430 as at December 31, 2016 (December 31, 2015: K€ 9,378). As in the year before, this position was characterized by expense subsidies of K€ 3,047 (December 31, 2015: K€ 3,110) and VAT claims of K€ 1,492 (December 31, 2015: K€ 1,117).

In addition, there are asserted indemnity claims in connection with a former acquisition which have not yet been recorded. Additional information is not disclosed at this point to avoid negative impact on the ongoing dispute.

18. Cash and cash equivalents

The cash and cash equivalents item consists of cash at banks and cash on hand. Additionally, the Company records all bank deposits having an original maturity of three months or less as cash equivalents. The fair value of cash and cash equivalents corresponds to their net book value.

19. Share capital and additional paid-in capital

Unchanged compared to the previous year end, the share capital of Pfeiffer Vacuum Technology AG (parent company) consisted of 9,867,659 issued and outstanding no-par ordinary shares.

The Annual Shareholders Meeting on May 24, 2016, authorized the Management Board to increase the Company's share capital by K€ 12,631, or 4,933,829 shares, in consideration for contributions in cash and/or kind once or in partial amounts (authorized capital). This authorization is valid through May 23, 2021, and is subject to the consent of the Supervisory Board.

According to the resolution of the Annual Shareholders Meeting on May 22, 2014, the Management Board is authorized to issue fractional bonds with option or conversion rights or conversion obligations, profit participation rights or participating bonds (or combinations of these instruments) with an aggregate nominal value of up to € 200,000,000.00 and to grant the holders conversion rights for up to 2,466,914 no-par bearer shares of the Company having a pro-rata amount of up to € 6,315,299.84 of the share capital. This authorization is valid until May 21, 2019, and requires the consent of the Supervisory Board.

There were no changes of the additional paid-in capital in 2016 or 2015.

20. Paid and proposed dividends

The Annual Shareholders Meeting on May 24, 2016, resolved to pay a dividend of € 3.20 per share (Annual Shareholders Meeting on May 21, 2015: € 2.65 per share). The dividend payment carried out thereunder amounted to K€ 31,577 in 2016 (2015: K€ 26,149).

At the Annual Shareholders Meeting, the Management and Supervisory Boards will propose that the shareholders participate in the Company's success in the form of a dividend in the amount of € 3.60 per share. This proposal is subject to the approval of the Annual Shareholders Meeting. Because the proposal must be approved by the Annual Shareholders Meeting, the resulting payment of K€ 35,524 has not been recorded as a liability in the balance sheet for the fiscal year ended December 31, 2016.

21. Other equity components

Other equity components comprise unrealized gains/losses on hedges and actuarial gains/losses resulting from valuation of defined benefit obligations and plan assets at fair value. Furthermore, this position comprises foreign currency translation adjustments.

Development of Other Equity Components

in K€	Actuarial Gains/Losses	Unrealized Gains/Losses on Hedges	Foreign Currency Translation Adjustments	Total
Balance as at January 1, 2015	– 26,687	– 64	4,772	**– 21,979**
Changes in actuarial gains/losses (net of tax)	1,684	—	—	1,684
Changes in fair value of cash flow hedges (net of tax)	—	64	—	64
Changes in foreign currency translation	—	—	7,781	7,781
Balance as at December 31, 2015	– 25,003	—	12,553	**– 12,450**
Changes in actuarial gains/losses (net of tax)	– 5,166	—	—	– 5,166
Changes in fair value of cash flow hedges (net of tax)	—	– 412	—	– 412
Changes in foreign currency translation	—	—	673	673
Balance as at December 31, 2016	– 30,169	– 412	13,226	**– 17,355**

Due to the fact that the terms of all cash flow hedges are less than one year, the reported year-end balances as at December 31 of the respective years will be reclassified to the income statement the next year. The new year-end amounts result form changes during the respective year and thus not from prior years.

Tax Effect on Other Comprehensive Income

	2016			2015		
in K€	Gross Amount	Tax Effect	Net Amount	Gross Amount	Tax Effect	Net Amount
Actuarial gains/losses	– 7,023	1,857	– 5,166	2,269	– 585	1,684
Cash flow hedges	– 588	176	– 412	96	– 32	64
Currency changes	673	—	673	7,781	—	7,781
Total other comprehensive income	**– 6,938**	**2,033**	**– 4,905**	10,146	– 617	9,529

Dec. 31

22. Treasury shares

At the Annual Shareholders Meeting on May 21, 2015, the shareholders authorized the Management Board to acquire treasury shares pursuant to § 71, Sub-Para. 1, No. 8, German Stock Corporation Act. This authorization allows the Company to acquire treasury shares representing up to € 2,526,120.70 of the capital stock (986,766 shares equal to 10 % of capital stock at the time of the resolution), requires the consent of the Supervisory Board for execution, and is valid through May 20, 2020.

23. Long-term financial liabilities

In connection with the acquisition of the adixen entities, long-term financial liabilities having a net cash inflow of € 67.0 million were taken out as at December 31, 2010. In fiscal 2016, the Company decided to fully repay these liabilities with effect from December 31, 2016. As of this date, no long-term or short-term financial liabilities resulting from the acquisition were shown accordingly (2015: € 10.0 million each). These liabilities had a Euribor-based variable interest rate including a margin. Interest clearing was made quarterly. Again for the fiscal year 2016, interest expenses totaling € 0.3 million were recorded. Guarantors of the credit agreement were Pfeiffer Vacuum Technology AG and Pfeiffer Vacuum GmbH. Under the loan agreement, the Group has committed to comply with a determined financial ratio. The Company has complied with this ratio in 2016 and 2015.

Further long-term financial liabilities totaling € 0.2 million as on December 31, 2015, were due to the partial external funding of one Group entity. As of December 31, 2016, these liabilities are shown under short-term financial liabilities.

Pfeiffer Vacuum and its subsidiaries have various lines of credit available to them for operating purposes, totaling approximately € 53.7 million (December 31, 2015: € 41.0 million).

24. Income taxes

Under current German corporate tax law, taxes on the income of German companies comprise corporate taxes, trade taxes, and an additional surtax.

Income Before Tax was Taxable in the Following Jurisdictions

in K€	**2016**	2015
Germany	43,354	38,901
Outside Germany	24,261	21,550
Total	**67,615**	60,451

Composition of Income Tax Expense

in K€	**2016**	2015
Current taxes		
Germany	– 12,651	– 12,992
Outside Germany	– 8,859	– 9,670
	– 21,510	– 22,662
Deferred taxes		
Germany	– 1	801
Outside Germany	928	3,326
	927	4,127
Income tax expense	**– 20,583**	– 18,535

K€ 20,183 of current tax expense relate to earnings in 2016 (2015: K€ 21,258). This line item additionally contains tax expenses for prior years amounting to K€ 1,327 (2015: tax expenses of K€ 1,404).

Reconciliation from Expected to Actual Income Tax Expense

in K€	**2016**	2015
Earnings before taxes	67,615	60,451
Expected tax expense using the tax rate of the parent company (28.81 %)	– 19,480	– 17,416
Tax credits/debits due to tax filings in prior years	– 1,327	– 1,404
Non-deductible expenses	– 1,100	– 1,187
Effects due to dividend payments	– 182	– 389
Non-taxable income	1,306	1,843
Higher foreign tax rates	106	– 151
Other	94	169
Income tax expense	**– 20,583**	– 18,535

As opposed to 30.7 % the year before, the tax ratio for the Pfeiffer Vacuum Group amounted to 30.4 % in 2016.

Deferred Taxes Relate to the Following Balance Sheet Items

in K€	2016	2015
Deferred tax assets		
Pensions	18,385	16,842
Inventories	5,722	6,226
Personnel and other provisions	3,537	2,714
Tax loss carry forwards	733	2,610
Derivatives	288	18
Property, plant and equipment	246	497
Receivables (including allowances for doubtful accounts)	172	291
Intangible assets	138	103
Other	43	162
Total deferred tax assets	**29,264**	29,463
Deferred tax liabilities		
Property, plant and equipment	– 5,003	– 6,000
Intangible assets	– 2,349	– 4,369
Receivables (including allowances for doubtful accounts)	– 285	– 243
Personnel and other provisions	– 137	—
Inventories	– 26	– 207
Tax-privileged reserves of a Swedish subsidiary	—	– 49
Other	—	– 160
Total deferred tax liabilities	**– 7,800**	– 11,028
Total deferred taxes, net	**21,464**	18,435

Dec. 31

Amounts Recorded in the Balance Sheet

in K€	2016	2015
Deferred tax assets	23,312	23,267
Deferred tax liabilities	– 1,848	– 4,832
Total deferred taxes, net	**21,464**	18,435

Dec. 31

Deferred Taxes Recorded in the Income Statement

in K€	2016	2015
Intangible assets	2,092	1,927
Personnel and other provisions	787	– 263
Property, plant and equipment	762	601
Derivatives	93	– 2
Tax-privileged reserves of a Swedish subsidiary	47	79
Tax loss carry forwards	– 1,881	254
Inventories	– 337	908
Pensions	– 313	590
Receivables (including allowances for doubtful accounts)	– 248	30
Other	– 75	3
Total deferred taxes (income)	**927**	4,127

As at December 31, 2016, the total deferred tax assets include income taxes recorded directly in equity of K€ 12,475 (December 31, 2015: K€ 9,568). The total deferred tax liabilities include no income taxes recorded directly in equity (December 31, 2015: K€ – 874). The amount recorded in 2016 related to actuarial gains/losses and derivatives (2015: actuarial gains/losses).

For tax losses totaling K€ 2,946 (thereof K€ 615 deductible until 2019, K€ 508 deductible until 2020 and K€ 1,823 deductible until 2021), no deferred tax assets have been recorded as these losses will presumably not be offset against taxable gains until the expiration.

Provisions have not been established for additional taxes on the undistributed earnings of non-German subsidiaries. These earnings are considered to be permanently reinvested and could become subject to additional tax if remitted or deemed remitted as dividends. Under current German law, dividends from non-German and German subsidiaries are 95 % tax-exempt, i.e. 5 % of dividend income is not deductible from income for corporate tax purposes. The management estimates that the effects of this rule in Germany will be negligible.

25. Pensions and similar obligations

Defined benefit pension plans

Composition of the Net Liability Recorded in the Balance Sheet

in K€	2016	2015
Present value of funded defined benefit obligation	99,782	93,160
Present value of unfunded defined benefit obligation	10,231	9,347
Total present value of defined benefit obligation	110,013	102,507
Fair value of plan assets	– 58,825	– 59,010
Net defined benefit liability	**51,188**	43,497

Dec. 31

Regional Split of the Net Liability Recorded in the Balance Sheet

in K€	2016	2015
Germany	36,813	30,723
Europe (excluding Germany)	8,893	8,433
Rest of world	5,482	4,341
Net defined benefit liability	**51,188**	43,497

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For Pfeiffer Vacuum GmbH, there are plans in place consisting of old-age, invalidity, and surviving dependents benefits. These obligations are based upon plans reflecting period of service and final salary. However, these plans have been closed for new employees for many years. For new employees, there is a retirement arrangement in place since December 31, 2007 which has been implemented as a direct commitment on a period of service and funded basis. Accordingly for all employees of Pfeiffer Vacuum GmbH, an employer funded pension scheme is in place which is partially funded via the Pfeiffer Vacuum Trust e.V. There are no legally binding minimum funding requirements for these plans.

For re-appointed members of the Pfeiffer Vacuum Technology AG Management Board, there are individually agreed plans in place, consisting of old-age, invalidity, and surviving dependents benefits. These obligations are based on period of service as well as final salary commitments and are also largely funded via the Pfeiffer Vacuum Trust e.V. Again, there are no legally binding minimum funding requirements. These benefit obligations are detailed in the compensation report (an element of MD&A).

For Pfeiffer Vacuum Inc., USA, there is a plan in place consisting of old-age, invalidity, and surviving dependents benefits with the obligations being based upon period of service and final salary. These benefits are partially funded via a trust arrangement. There are no legally binding minimum funding requirements.

For Pfeiffer Vacuum SAS, France, and for Pfeiffer Vacuum Semi Korea, Ltd., Republic of Korea, there are plans in place with the obligations being based upon period of service and final salary to be paid as a one-time installment due at the beginning of the retirement. The plan of Pfeiffer Vacuum Semi Korea, Ltd. is partially funded. There are no legally binding minimum funding requirements in France or the Republic of Korea. A Dutch pension plan was realigned in fiscal 2016 and was thus no longer considered a defined benefit plan as at December 31, 2016. The adjustment impacts were shown as plan curtailments/settlements.

Composition of the Net Pension Expenses

in K€	2016	2015
Current service cost	3,433	3,605
Net interest expense	953	924
Income from plan curtailments/settlements	– 267	—
Net pension expenses	**4,119**	4,529

Net pension expenses were allocated to the functional expenses according to the input involved.

Development of the Defined Benefit Obligation

in K€	2016	2015
Present value of defined benefit obligation as at January 1	102,507	101,409
Current service cost	3,433	3,605
Interest cost on the defined benefit obligation	2,352	2,237
Actuarial gains/losses from changes in demographic assumptions	676	375
Actuarial gains/losses from changes in financial assumptions	6,027	– 2,431
Actuarial experience gains/losses	– 371	– 702
Benefits paid	– 3,506	– 3,148
Curtailments/settlements	– 1,434	—
Currency changes	329	1,162
Present value of defined benefit obligation as at December 31	**110,013**	102,507
Thereof attributable to:		
Active employees	64,887	60,513
Deferred employees	4,192	3,356
Pensioners	40,934	38,638

Development of Plan Assets

in K€	2016	2015
Fair value of plan assets as at January 1	59,010	57,206
Interest income	1,399	1,313
Experience gains/losses	– 645	– 392
Company contributions	3,531	3,142
Benefit payments	– 3,506	– 3,148
Curtailments/settlements	– 1,167	—
Currency changes	203	889
Fair value of plan assets as at December 31	**58,825**	59,010

Actuarial Assumptions

in %	2016	2015
Germany		
Discount rate	1.75	2.20
Wage and salary trend	3.00	3.00
Pension trend	2.00	2.00
United States		
Discount rate	4.40	4.85
Wage and salary trend	2.00	2.00
France, Republic of Korea		
Discount rate (weighted average)	1.83	2.09
Wage and salary trend (weighted average)	3.35	3.51

Dec. 31

Composition of Plan Assets

	2016		2015	
	in K€	in %	in K€	in %
Equity securities	13,816	23.5	15,199	25.8
Debt securities	40,078	68.1	41,561	70.4
Cash and cash equivalents	3,714	6.3	374	0.6
Other	1,217	2.1	1,876	3.2
Total	**58,825**	**100.0**	59,010	100.0

Dec. 31

With the exemption of plan assets in the category "Other" totaling K€ 621 (December 31, 2015: K€ 1,825), all plan assets are traded on an active market.

Plan assets do not contain financial instruments issued by the Company or other assets owned by the Company.

Accounting for 89 %, the vast majority of plan assets related to the funding of the German benefit plans. To invest these funded amounts fiducially and insolvency protected, Pfeiffer Vacuum Trust e.V. was founded. Pfeiffer Vacuum Trust e.V. issued a mutual fund with a pursued target equity allocation of up to 30 % as well as a pursued fixed-income securities and cash allocation of at least 70 %. The fund is managed by an unrelated third-party asset management company with the major conditions regarding the asset allocation being given and adjusted when necessary. Funds are invested conservatively using also a value safeguarding approach. Underlying risks in connection with the investment of plan assets, for example fair value and default risks, are minimized accordingly.

The risks relating to the defined benefit plans within Pfeiffer Vacuum Group predominantly relate to the determination of discount rates. Changes to this parameter impact disproportionately the present value with the current relatively low interest rate level leading to a comparably high benefit obligation. In addition, benefit obligation is impacted by the other actuarial assumptions (for example life expectancy, wage and salary trend, pension trend). Depending on the elements of the pension plan life expectancy or pension trend are of subordinate importance. The following table shows the respective impact of an isolated adjustment of individual assumptions with all other parameters including the basic methodology kept constant compared to the original calculation.

Sensitivity Analysis 2016

	Change in actuarial assumption	Impact on defined benefit obligation	
		in K€	in %
Present value of defined benefit obligation as at December 31, 2016		110,013	
Discount rate	1.0 %-point increase	– 14,638	– 13.3
	1.0 %-point decrease	18,685	17.0
Pension trend	0.25 %-point increase	2,609	2.4
	0.25 %-point decrease	– 2,492	– 2.3
Wage and salary trend	0.5 %-point increase	2,096	1.9
	0.5 %-point decrease	– 1,983	– 1.8
Life expectancy	increase by 1 year	4,215	3.8
	decrease by 1 year	– 4,227	– 3.8

Dec. 31

Sensitivity Analysis 2015

	Change in actuarial assumption	Impact on defined benefit obligation	
		in K€	in %
Present value of defined benefit obligation as at December 31, 2015		102,507	
Discount rate	1.0 %-point increase	– 13,515	– 13.2
	1.0 %-point decrease	17,246	16.8
Pension trend	0.25 %-point increase	2,420	2.4
	0.25 %-point decrease	– 2,251	– 2.2
Wage and salary trend	0.5 %-point increase	2,146	2.1
	0.5 %-point decrease	– 2,018	– 2.0
Life expectancy	increase by 1 year	3,740	3.6
	decrease by 1 year	– 3,782	– 3.7

Dec. 31

Expected Maturity of Undiscounted Pension Payments

in K€	2016	2015
Less than 1 year	3,800	3,572
Between 1 and 2 years	4,014	3,452
Between 2 and 3 years	4,021	3,868
Between 3 and 4 years	4,497	4,058
Between 4 and 5 years	4,644	4,194
More than 5 until 10 years	28,718	24,801

Dec. 31

The weighted average duration of the defined benefit obligation at December 31, 2015 amounted to 16.1 years (December 31, 2015: 16.1 years).

The expected contributions for defined benefit plans in 2017 will be approximately € 3.5 million.

Defined contribution plans

Employees of the Company in certain countries are covered by defined contribution plans. Generally, contributions are based upon a percentage of the employee's wages or salaries. The costs of these plans charged to operations amounted to K€ 10,375 in 2016 (2015: K€ 9,974).

26. Trade accounts payable

Trade accounts payable do not bear any interest and, as in the year before, have maturities of less than one year.

27. Other payables

Other payables (K€ 20,530 as at December 31, 2016, and K€ 21,931 as at December 31, 2015) mainly consist of payroll taxes and VAT, as well as payables from social security contributions and legally binding participation programs. They do not bear any interest and, as in the year before, have maturities of less than one year.

28. Provisions

Composition of Provisions

in K€	2016	2015
Personnel provisions	13,775	12,305
Warranty provisions	13,062	12,844
Other provisions	2,930	1,833
Total	**29,767**	26,982

Dec. 31

Provisions for employee-related expenses primarily include provisions for profit-sharing obligations and bonuses.

Warranty provisions include the amounts expected due to claims in connection with product warranties. They are recorded as per the close of the fiscal year for realized revenues based on management's estimates and experience.

Development of Provisions

in K €	Personnel	Warranty	Other	Total
Balance as at January 1, 2016	12,305	12,844	1,833	26,982
Currency changes	71	32	28	131
Additions	11,511	6,238	2,360	20,109
Utilization	– 9,698	– 6,046	– 1,202	– 16,946
Releases	– 414	– 6	– 89	– 509
Balance as at December 31, 2016	**13,775**	**13,062**	**2,930**	**29,767**

29. Short-term financial liabilities

As at December 31, 2016, short-term financial liabilities include bank liabilities in the amount of € 0.2 million maturing within one year (December 31, 2015: € 0.5 million). After the whole repayment of the bank loan taken out in connection with the adixen acquisition in 2016, there is no financial liabilities as at December 31, 2016 concerning this matter (December 31, 2015: € 10.0 million, please also refer to Note 23).

30. Commitments and other financial obligations

The Company has entered into leases and maintenance agreements which expire on various dates, some of which are renewable. The tables below present the maximum amount of the contractual commitments as at year end, classified by the periods in which the contingent liabilities or commitments will expire.

Contractual Obligations as at December 31, 2016

		Payments Due by Period			
in K €	Total	< 1 Year	1 – 3 Years	3 – 5 Years	> 5 Years
Operating leases	8,914	3,512	2,989	2,369	44
Purchase obligations	15,033	11,984	3,049	—	—
Repair and maintenance	2,289	1,993	239	47	10
Total	**26,236**	17,489	6,277	2,416	54

Contractual Obligations as at December 31, 2015

		Payments Due by Period			
in K €	Total	< 1 Year	1 – 3 Years	3 – 5 Years	> 5 Years
Operating leases	10,363	3,823	4,001	1,641	898
Purchase obligations	17,384	12,837	4,547	—	—
Repair and maintenance	1,128	922	170	26	10
Total	**28,875**	17,582	8,718	1,667	908

Purchase obligations include long-term arrangements for future supplies of materials. Rental expenses amounted to € 4.2 million (2015: € 3.9 million) and mainly related to the local sales companies' rented premises.

31. Segment reporting

The Company's business operations include the development, manufacture, sale and service of vacuum pumps, vacuum components and instruments, as well as vacuum systems. The subsidiaries in the individual countries are independent legal entities with their own management, which distribute products and provide services. The entire product portfolio is offered by all sales subsidiaries.

Controlling of business development by corporate management is carried out on the level of the legal entities. Accordingly, the Company identifies its primary operating segments by legal entity. Due to the similarity of their economic characteristics, including nature of products sold, type of customers, methods of product distribution, and economic environment, the Company basically aggregates its European and Asian subsidiaries into one reporting segment, "Europe (excluding Germany and France)" and "Asia (excluding Republic of Korea)". In contrast, the companies in France and the Republic of Korea were presented separately each as an individual segment. This was caused by the different functions of the French entities, including research and development as well as production, and the production function of the Korean entities, respectively. Unchanged compared to previous year, all information is based upon the geographic location of the Group Company in question.

Transactions between segments are based upon the arm's length principle. The internal reporting, on which the disclosures are based is IFRS. Segment sales and segment results in the primary reporting format initially include the effects of inter-segment transactions. These effects are eliminated in connection with the consolidation process.

Segment Reporting as at December 31, 2016

in K€	Germany	France	Europe (excl. G and F)	USA	Republic of Korea	Asia (excl. Korea)	Other / Consolidation	**Group**
Net sales	221,010	173,297	92,939	109,367	69,595	62,199	– 254,163	474,244
Third party	109,284	41,757	89,437	108,941	66,526	58,299	—	474,244
Intercompany	111,726	131,540	3,502	426	3,069	3,900	– 254,163	—
Operating profit	42,420	9,338	6,478	5,382	3,673	710	– 25	67,976
Financial results	—	—	—	—	—	—	– 361	– 361
Earnings before taxes	42,420	9,338	6,478	5,382	3,673	710	– 386	67,615
Segment assets	142,597	127,303	38,155	54,014	54,533	42,720	—	459,322
Thereof: Assets according to IFRS 8.33 (b)[1]	53,640	57,704	5,468	10,469	17,074	13,257	—	157,612
Segment liabilities	53,781	58,068	7,048	7,899	11,775	5,177	—	143,748
Capital expenditures:								
Property, plant and equipment[2]	6,646	5,312	1,788	231	575	1,571	—	16,123
Intangible assets	1,290	569	—	23	1	12	—	1,895
Depreciation[2]	– 4,590	– 5,366	– 543	– 368	– 1,298	– 991	—	– 13,156
Amortization	– 824	– 4,257	– 174	– 568	– 926	– 516	—	– 7,265

[1] Non-current assets other than financial instruments, deferred tax assets and prepaid pension cost
[2] Including investment properties

Segment Reporting as at December 31, 2015

in K€	Germany	France	Europe (excl. G and F)	USA	Republic of Korea	Asia (excl. Korea)	Other / Consoli-dation	**Group**
Net sales	223,308	157,012	93,118	111,816	72,788	49,676	– 256,197	451,521
Third party	104,459	32,252	90,160	110,895	69,122	44,633	—	451,521
Intercompany	118,849	124,760	2,958	921	3,666	5,043	– 256,197	—
Operating profit	38,854	7,218	5,360	5,209	2,618	2,292	– 792	60,759
Financial results	—	—	—	—	—	—	– 308	– 308
Earnings before taxes	38,854	7,218	5,360	5,209	2,618	2,292	– 1,100	60,451
Segment assets	141,673	124,959	36,016	57,201	49,858	43,820	—	453,527
Thereof: Assets according to IFRS 8.33 (b)[1]	51,997	61,427	4,533	10,949	18,358	13,150	—	160,414
Segment liabilities	66,776	52,615	7,354	6,501	10,376	4,881	—	148,503
Capital expenditures:								
Property, plant and equipment[2]	3,835	3,887	468	239	951	916	—	10,296
Intangible assets	903	422	21	—	11	2	—	1,359
Depreciation[2]	– 4,376	– 5,745	– 582	– 320	– 1,396	– 1,050	—	– 13,469
Amortization	– 770	– 4,261	– 190	– 549	– 926	– 512	—	– 7,208

[1] Non-current assets other than financial instruments, deferred tax assets and prepaid pension cost
[2] Including investment properties

Aside from directly allocatable assets, the "Other" segment contains all assets that cannot be allocated on a reasonable basis (e.g. securities). Sales with one major customer (> 10 % of total sales) amounted to € 50.3 million in 2015 and were recorded in the Republic of Korea, USA and Asia (excl. Korea) segment. In 2016, these sales were less than 10 % of total sales.

Sales by Product

in K€	**2016**	2015
Turbopumps	144,518	144,777
Backing Pumps	114,989	102,381
Instruments and Components	105,520	98,777
Service	99,698	96,730
Systems	9,519	8,856
Group	**474,244**	451,521

32. Financial instruments

Fair value

The net book value of financial instruments (e.g. cash and cash equivalents, trade accounts receivable and trade accounts payable, other accounts receivable and payable) essentially equals their fair value.

Interest rate risks

The interest-bearing portion of cash and cash equivalents involves interest rate risks. All investment forms have variable interest rates and are invested on a short-term basis. There are no further investment forms that result in interest rate risks within the Pfeiffer Vacuum Group.

Due to the short investment period for cash and cash equivalents, the agreed interest rate equals the market rate. Even if the market rate should change significantly, there will be no material impact on the fair value of cash and cash equivalents because the interest rate can be adjusted after only a short period of time.

As at December 31, 2016, just like in the year before, there were no more interest-sensitive financial assets. As a result of cash and cash equivalents as at December 31, 2016, an increase (decrease) in interest rate by 50 basis points would increase (decrease) earnings by K€ 550 (December 31, 2015: increase/decrease by K€ 577). As a result of the almost entire repayment of financial liabilities shown until December 31, 2016, there is no longer a related interest sensitivity. In 2015, an increase (decrease) in interest rate by 50 basis points would decrease (increase) earnings by K€ 104.

Credit risks

Due to the Company's vastly heterogeneous customer structure, there are no material credit risk concentrations within the Group. Credit risks are additionally minimized through rigorous accounts receivable management and by monitoring our customers' payment patterns. Furthermore, deliveries to new customers are essentially made only after credit assessment, against payment in advance or credit limit. As a result, Pfeiffer Vacuum is able to keep the level of its allowance for doubtful accounts low, even in difficult economic times.

Liquidity risks

Due to the above-average level of cash and cash equivalents, no liquidity risks can be identified.

Foreign exchange rate risks

Approximately 53 % (2015: 59 %) of the Company's net sales are denominated in currencies other than the euro, primarily in U.S. dollars. The Company enters into foreign currency forward contracts and options to hedge the exposure of its forecasted sales against currency fluctuations. All derivative financial instruments are entered into only within this scope.

The derivatives that qualify for cash flow hedges under IAS 39 are recognized either as assets or liabilities at their fair values. Changes in the values of these cash flow hedges are recorded in equity under other equity components, net of applicable taxes. These amounts are subsequently reclassified as earnings (foreign exchange gains / losses) in the same period as the underlying transactions affect operating income. For the fiscal years ended December 31, 2016, and 2015, there were no gains or losses that were recognized in earnings due to hedge ineffectiveness. For the same periods, no gains or losses had to be reclassified to earnings from other equity components as a result of the discontinuance of cash flow hedges. If derivatives are kept, these derivatives are marked to market at period end using quoted forward rates. The negative fair values of the cash flow hedges recorded under other accounts payable for the period ended December 31, 2016, totaled K€ 588. Because the changes in fair value for cash flow hedges are recorded directly in equity, other equity components decreased by K€ 412, net of taxes of K€ 176, as at December 31, 2016. As at December 31, 2015, there were no contracts to be classified as cash flow hedges. The derivatives classified as fair value hedges totaled K€ 372 as at December 31, 2016, were recorded through the income statement, and shown under other accounts payable (December 31, 2015: K€ 54). The Company does not engage in speculative hedging for investment purposes. As at December 31, 2016, and at December 31, 2015, no contracts held by the Company had a maturity date greater than one year.

As at December 31, 2016, the Company has entered into foreign currency forward contracts (U.S. dollar and South Korean Won) totaling € 35.2 million (December 31, 2015: € 3.5 million). Pfeiffer Vacuum performs ongoing credit evaluations of the parties to these contracts and enters into contracts only with well-established financial institutions. Currency risks as defined by IFRS 7 arise as a result of financial instruments being denominated in a currency that is not the functional currency and being of a monetary nature; differences resulting from the translation of financial statements into the Group's presentation currency are not taken into consideration. Relevant risk variables are generally all non-functional currencies in which Pfeiffer Vacuum has entered into financial instruments. The vast majority of non-derivative monetary financial instruments within the Pfeiffer Vacuum Group are directly denominated in functional currency. In variance thereto, exchange rate risks arise from the securities available-for-sale, from a portion of trade accounts receivable, and from derivative financial instruments. If derivative financial instruments classify as cash flow hedges, changes in the exchange rate do not impact the income statement but are recorded directly in equity. Exchange rate-based changes in securities available-for-sale are also recorded directly in equity.

Had the euro, as at December 31, 2016, depreciated 10 %, net income would have been higher by K€ 2,442 and total equity higher by K€ 645. A 10% appreciation in the euro as at that balance sheet date would have decreased net income by K€ 2,143 and total equity by K€ 863. Had the euro, as at December 31, 2015, depreciated 10%, net income would have been higher by K€ 1,470. A 10% appreciation in the euro as at December 31, 2015, would have decreased net income by K€ 1,159. In all cases, net income and equity were affected mostly by the sensitivity of the U.S. dollar which is predominantly material for the Consolidated Financial Statements.

Composition of financial instruments

The following tables show the composition of financial instruments by balance sheet line item and valuation category and fair value as well as net results by valuation category.

Composition of Financial Instruments as at December 31, 2016

			Amounts Recognized According to IAS 39			
in K €	Category According to IAS 39	Net Book Value	Amortized Cost	Fair Value Recognized in Equity	Fair Value Through Profit and Loss	Fair Value
Assets						
Cash and cash equivalents	LaR	110,032	110,032	—	—	110,032
Trade accounts receivable	LaR	69,352	69,352	—	—	69,352
Other financial assets	LaR	4,508	4,508	—	—	4,508
Derivative financial instruments (hedges)	n/a	—	—	—	—	—
Liabilities						
Trade accounts payable	FLAC	30,896	30,896	—	—	30,896
Financial liabilities	FLAC	224	224	—	—	224
Derivative financial instruments (incl. hedges)	n/a	588	—	588	—	588
Derivative financial instruments (excl. hedges)	n/a	372	—	—	372	372
Totals by valuation categories:						
Loans and Receivables (LaR)		183,892	183,892	—	—	183,892
Held-to-Maturity Investments (HtM)		—	—	—	—	—
Financial Assets Available for Sale (AfS)		—	—	—	—	—
Financial Assets Held for Trading (FAHfT)		—	—	—	—	—
Financial Liabilities Measured at Amortized Cost (FLAC)		31,120	31,120	—	—	31,120
Financial Liabilities Held for Trading (FLHfT)		—	—	—	—	—

Composition of Financial Instruments as at December 31, 2015

in K€	Category According to IAS 39	Net Book Value	Amounts Recognized According to IAS 39: Amortized Cost	Fair Value Recognized in Equity	Fair Value Through Profit and Loss	Fair Value
Assets						
Cash and cash equivalents	LaR	115,397	115,397	—	—	115,397
Trade accounts receivable	LaR	58,556	58,556	—	—	58,556
Other financial assets	LaR	4,211	4,211	—	—	4,211
Derivative financial instruments (hedges)	n/a	—	—	—	—	—
Liabilities						
Trade accounts payable	FLAC	21,245	21,245	—	—	21,245
Financial liabilities	FLAC	20,725	20,725	—	—	20,725
Derivative financial instruments (excl. hedges)	n/a	54	—	—	54	54
Totals by valuation categories:						
Loans and Receivables (LaR)		178,164	178,164	—	—	178,164
Held-to-Maturity Investments (HtM)		—	—	—	—	—
Financial Assets Available for Sale (AfS)		—	—	—	—	—
Financial Assets Held for Trading (FAHfT)		—	—	—	—	—
Financial Liabilities Measured at Amortized Cost (FLAC)		41,970	41,970	—	—	41,970
Financial Liabilities Held for Trading (FLHfT)		—	—	—	—	—

Net Results by Valuation Category

in K€	From Interest/ Dividends	From Subsequent Valuation: At Fair Value	Currency Translation	Impairment/ Reversal of Impairment	From Derecognition	Net Results: **2016**	2015
Loans and Receivables (LaR)	283	—	429	– 129	– 41	542	2,210
Held-to-Maturity-Investments (HtM)	—	—	—	—	—	—	—
Financial Assets Available-for-Sale (AfS)	—	—	—	—	—	—	—
Financial Assets Held for Trading (FAHfT)	—	—	—	—	—	—	—
Financial Liabilities Measured at Amortized Cost (FLAC)	– 644	—	—	—	—	– 644	– 673
Financial Liabilities Held for Trading (FLHfT)	—	—	—	—	—	—	—

Determination of fair values of financial instruments

Determination of the fair value of derivative financial instruments (K€ – 960 as at December 31, 2016; K€ – 54 as at December 31, 2015) was done according to level 2 of the fair value hierarchy as set out in IFRS 13 “Fair Value Measurement” using accepted valuation principles and directly obtainable and up-to-date market parameters.

Determination of fair value of financial liabilities with variable interest rates is based on the assumption that agreed interest rates equal the rates customary in the market. Accordingly, the net book values correspond to their fair values.

Due to the underlying short terms fair values of trade accounts receivable and payable, other accounts receivable and payable and cash and cash equivalents equal their respective net book values.

33. Management of financial risks

With an equity ratio of 68.7 % as at December 31, 2016, Pfeiffer Vacuum still has an equity base that is far above average. Additionally, cash and cash equivalents totaled € 110.0 million as at December 31, 2016. As a result of the almost entire redemption of financial liabilities until the close of fiscal year 2016 (December 31, 2015: € 20.7 million), the Group did again not show any net financial liabilities as at December 31, 2016. This situation improved once more compared to last year and provides the Group with the required liquidity range to successfully develop.

Liquid assets are invested on a short-term conservative basis. Due to its high equity ratio and its superior liquidity, Pfeiffer Vacuum will not depend upon interest-bearing liabilities to fund its capital expenditures for replacement and expansion or the dividend payment. Moreover, there are sufficient liquidity reserves to respond to changes in the economic situation.

34. Earnings per share

Computation of Earnings per Share

in K€	**2016**	2015
Net income (in K€)	47,032	41,916
Weighted average number of shares	9,867,659	9,867,659
Number of conversion rights	—	—
Adjusted weighted average number of shares	9,867,659	9,867,659
Earnings per share in € (basic/diluted)	4.77	4.25

There were no transactions with ordinary shares or ordinary shares issued during the period between the balance sheet date of December 31, 2016, and the preparation of the Consolidated Financial Statements.

Additional Notes and Supplemental Information

35. Related party disclosures

Related party transactions predominantly consist of all transactions with those companies included in the Consolidated Financial Statements. The amounts of these transactions are detailed in the segment reporting in Note 31, which also includes intercompany sales. All transactions are carried out at conditions that are usual and customary in the market and are entirely eliminated during the consolidation process. Therefore, there is no impact on financial position or results. Pfeiffer Vacuum does not have holdings in any jointly controlled entities. Furthermore, no factual control exists with respect to special purpose entities.

Following the purchase of 24.9 % of the share capital of Dreebit GmbH, Dresden, in fiscal 2010, this company is an associated company. There were no material transactions with this company in fiscal 2016 and 2015.

Please refer to Notes 39 and 40 regarding the compensation paid to the members of the Management and Supervisory Boards, as well as regarding potential transactions with members of these corporate bodies. Aside from their activities on the Supervisory Board, the members of the Supervisory Board do not provide individual services for the Group or any of its companies. In contrast thereto, the employee representatives on the Supervisory Board receive salaries under the rules of the respective employment contracts for their work at the Company.

Members of the Management and Supervisory Boards held an aggregate total of 5,177 shares of the Company as at December 31, 2016 (2015: 6,377). Following the resignation of one Supervisory Board Member holding Company shares after the Annual General Meeting on May 24, 2016, the aggregate shareholdings held by Board Members decreased accordingly. The holdings of members of corporate bodies are thus negligible.

In 2016, the reimbursements from Pfeiffer Vacuum Trust e. V. amounted again to € 2.8 million). Contributions to Pfeiffer Vacuum Trust e. V. totaled € 3.0 million in 2016 and 2015.

The law firm of Menold Bezler was contracted on the basis of usual and customary terms and conditions, to perform consulting projects. The expenses recorded in this context totaled € 0.3 million as at December 31, 2016 (2015: € 0.4 million). The Chairman of the Supervisory Board, Dr. Michael Oltmanns, is a partner in that firm.

As at December 31, 2016 and December 31, 2015, Dr. Karl Busch, Ms. Ayhan Busch, Ms. Ayla Busch, Mr. Sami Busch, and Mr. Kaya Busch, all Germany, together had 27.19 % of the voting rights of the Company according to the voting rights notification dated October 15, 2015. The shares are indirectly held through Pangea GmbH, Maulburg, Germany, and further independent legal entities belonging to the family-run Busch group. Based on unchanged arm's length conditions, goods in an aggregated purchasing value of a very low single digit million Euro amount were received from an operating company of the Busch group in the fiscal years 2016 and 2015. Please also refer to the events after the balance sheet date section in the following note 36.

36. Events after the balance sheet date

With an agreement dated February13, 2017, Pfeiffer Vacuum Technology AG purchased all further shares in Dreebit GmbH, Dresden, Germany, for a purchase price of € 3.0 million and thus increased the shareholdings from 24.9 % to 100 %. The fair value of the existing shareholdings as at the acquisition date totaled € 1.6 million. At the time of the preparation of the Consolidated Financial Statements, the accounting of the acquisition was not finalized due to timing constraints. The acquisition which was made with retroactive effect from January 1, 2017, has to be seen in connection with the strengthening of service business, a growth segment and an important success driver for Pfeiffer Vacuum.

With effect from February 14, 2017, a subsidiary of Pfeiffer Vacuum Technology AG acquired all shares of Advanced Test Concepts Inc., Indianapolis, USA, („ATC Inc."). At the same time, an economically integrated but legally separate sister company to ATC Inc., having the same place of business, was acquired. The total purchase price was USD 12.0 million. At the time of the preparation of the Consolidated Financial Statements, the accounting of the acquisition was not finalized due to timing constraints. With the purchase of these 100 % participations, Pfeiffer Vacuum will further expand its legacy leak detection product portfolio.

On February 13, 2017, Pangea GmbH, Maulburg, Germany, has released a voluntary public takeover offer to the shareholders of Pfeiffer Vacuum Technology AG to purchase all shares of Pfeiffer Vacuum Technology AG. The offer price as included in the offer document is € 96.20 per share. The offer is not bound to a minimum acceptance threshold. According to the offer, Pangea GmbH holds 29.98 % of the Pfeiffer Vacuum Technology AG shares as at the release date (December 31, 2016: 27.19 %). Pangea GmbH is a legally independent entity of the family-run Busch Group and is therefore indirectly attributable to the Busch family, i.e. Dr. Karl Busch, Ms. Ayhan Busch, Ms. Ayla Busch, Mr. Sami Busch and Mr. Kaya Busch, all Germany. On February 27, 2017, the Management and Supervisory Board of Pfeiffer Vacuum Technology AG released a joint opinion to the takeover offer. In this opinion, the

Management and Supervisory Board, amongst others, concluded, that the offer price as per the offer document is not adequate according to § 31 Sub-para. 1 of the German Securities Acquisition and Takeover Act ("Wertpapiererwerbs- und Übernahmegesetz", or "WpÜG"). Also on February 27, 2017, the Busch family notified that they exceeded the 30.0% notification threshold and now hold aggregate shareholdings in Pfeiffer Vacuum Technology AG of 30.003 % via Pangea GmbH.

Significant changes to the branch environment have not occurred since the beginning of the 2017 fiscal year.

37. Personnel expenses

Personnel expenses

in K€	2016	2015
Wages and salaries	– 127,725	– 123,291
Social security, pension and other benefit cost	– 29,893	– 28,705
Thereof for pensions	– 14,494	– 14,503
Total	**– 157,618**	– 151,996

38. Number of employees

The number of employees was as follows as at December 31, 2016, and 2015:

Number of Employees

	2016	2015
Annual average		
Male	1,981	1,922
Female	404	402
Total	**2,385**	**2,324**
Balance sheet date		
Male	2,016	1,971
Female	399	403
Total	**2,415**	**2,374**

39. Management Board

As at December 31, 2016, the Management Board of the parent company, Pfeiffer Vacuum Technology AG, consisted of:

- Manfred Bender (Chief Executive Officer), Diploma in Business Administration
- Dr. Matthias Wiemer (Member of the Management Board), Diploma in Mechanical Engineering

Total short-term benefits recorded in the income statement for the aforesaid members of the Management Board for fiscal 2016 were € 1.7 million, thereof € 1.0 million short-term variable benefits (2015: € 1.6 million, and € 0.9 million, respectively). Short-term variable benefits recorded in the income statement in 2015 were paid out in 2016. Total pensions expenses in 2016 were € 0.5 million (2015: € 0.6 million). Pursuant to § 289, Sub-Para. 2, No. 4, German Commercial Code ("HGB") or § 315, Sub-Para. 2, No. 4, German Commercial Code ("HGB"), the compensation paid to the members of the Management Board is detailed in the compensation report (an element of MD&A). Additionally, the distribution of responsibilities within the Management Board is shown in MD&A. Benefits to former members of the Management Board (pensions) amounted to € 0.4 million (2015: € 0.3 million).

In connection with the dismissal of Ms. Nathalie Benedikt as a Board member in fiscal 2014 a payment totaling € 0.4 million was made in 2016. This payment did not impact the income statement utilizing a provision set up in prior years. There were no further benefits or commitments granted.

40. Supervisory Board

Pursuant to § 96, Sub-Para. 1, § 101, Sub-Para. 1, German Stock Corporation Act ("AktG"), § 4, German One-Third Participation Act ("DrittelbG") of 2004, and § 9, Sub-Para. 1, Articles of Association and Bylaws, the Supervisory Board comprises four members elected by the Annual Shareholders Meeting and two members elected by the Company's employees.

In 2016, the Supervisory Board comprised the following persons:

- Dr. Michael Oltmanns (Chairman), Attorney at Law and Tax Advisor

  Further supervisory board seats:
  - Becker Mining Systems AG, Friedrichsthal, Germany (chairman)
  - HPC AG, Mannheim, Germany (chairman)
  - Jetter AG, Ludwigsburg, Germany (chairman), until June 29, 2016
  - Kathrein SE, Rosenheim, Germany (chairman), from January 22, 2016

- Götz Timmerbeil (Vice Chairman and Chairman of the Audit Committee), Certified Public Accountant and Tax Advisor

  Further supervisory board seats:
  - VfL Handball Gummersbach GmbH, Gummersbach, Germany (chairman of the advisory board)
  - Arena Gummersbach GmbH & Co. KG, Gummersbach, Germany (vice chairman)

- Filippo Th. Beck, Attorney at Swiss Law, since May 25, 2016

  Further supervisory organ seats:
  - Candoria Group, Baar, Switzerland
  - Tenro Group, Bottmingen, Switzerland
  - Biamathea AG, Basel, Switzerland
  - Polyterra Liegenschaften AG in liquidation, Küsnacht, Switzerland, member of the supervisory organ and since September 7, 2016 liquidator
  - IKFE Properties I AG, Zürich, Switzerland
  - Tainn-Immobilien AG, Bern, Switzerland
  - Pro Farma AG, Baar, Switzerland, until July 14, 2016

- Helmut Bernhardt (Employee Representative), Development Engineer

- Manfred Gath (Employee Representative), Chairman of the Employee Council

- Wilfried Glaum, Business Administrator, until May 24, 2016

- Dr. Wolfgang Lust, Entrepreneur

Pursuant to § 289, Sub-Para. 2, No. 4, German Commercial Code ("HGB") or § 315, Sub-Para. 2, No. 4, German Commercial Code ("HGB"), the compensation paid to the members of the Supervisory Board is detailed in the compensation report (an element of MD&A).

41. Exempting provision under § 264 Sub-Para. 3, German Commercial Code ("HGB")

Pfeiffer Vacuum GmbH, Asslar, Germany, is included in the Consolidated Financial Statements of Pfeiffer Vacuum Technology AG. Accordingly, this company has made use of the exempting provision under § 264, Sub-Para. 3, German Commercial Code.

42. Audit fees for independent auditors

The expenses for services rendered by the auditor of the Consolidated Financial Statements recorded in the statements of income were as follows for fiscal 2016 and 2015:

Audit Fees for the Auditor of the Consolidated Financial Statements

in K€	2016	2015
Fees resulting from:		
Audit services	– 804	– 813
Other certification and consulting services	– 10	– 13
Tax advisory services	– 32	– 17
Other services	—	– 2
Total	**– 846**	– 845

The total amount included fees from affiliates of the auditor of the consolidated financial statements of K€ 378 (2015: K€ 372).

43. German Corporate Governance Code/Declaration pursuant to § 161, German Stock Corporation Act ("AktG")

The recommendations and suggestions contained in the Code have been a firm element of our corporate governance and corporate culture for many years. Pursuant to § 161 of the German Stock Corporation Act, the Management and Supervisory Boards issued the statement of compliance for the year 2016 in October 2016 and made it permanently available for shareholders and interested parties at the Company's homepage. With the following exception, this statement reflects compliance with the recommendations of the German Corporate Governance Code Government Commission as amended in May 5, 2015:

- The German Corporate Governance Code recommends a determined limit to the duration of a member's participation in the Supervisory Board (item 5.4.1). The Supervisory Board does not regard the duration of a member's participation as an attribute which specifically qualifies a candidate for any position and therefore disregards this criterion when selecting the most suitable candidate.

The full text of the Code is available at the following Internet address: www.corporate-governance-code.de.

44. Authorization for issuance of Consolidated Financial Statements

Through a resolution by the Management Board on February 28, 2017, the Consolidated Financial Statements were authorized for issuance.

Asslar, February 28, 2017

The Management Board

M. Bender | M. Wiemer

Manfred Bender | Dr. Matthias Wiemer

Certification of Legal Representatives

To the best of our knowledge, and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Asslar, February 28, 2017

The Management Board

Manfred Bender	Dr. Matthias Wiemer

Independent Auditors' Report

We have audited the consolidated financial statements prepared by Pfeiffer Vacuum Technology AG, Asslar, comprising the income statement, the statement of comprehensive income, the balance sheet, the statement of changes in equity, the cash flow statement and the notes to the consolidated financial statements, together with the group management report for the fiscal year from January 1 to December 31, 2016. The preparation of the consolidated financial statements and the group management report in accordance with IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315a (1) HGB are the responsibility of the parent company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

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

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs as adopted by the EU, the additional requirements of German commercial law pursuant to Sec. 315a (1) HGB and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The group management report is consistent with the consolidated financial statements, 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 relating to future development.

Eschborn/Frankfurt am Main, February 28, 2017

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Bösser	Hillebrand
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

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Consolidated Statements of Income (6-Year-Overview)

in K€	**2016**	2015	2014	2013	2012	2011
Net sales	**474,244**	451,521	406,642	408,727	461,327	519,509
Cost of sales	– 293,769	– 276,010	– 263,259	– 259,345	– 294,182	– 352,129
Gross profit	**180,475**	175,511	143,383	149,382	167,145	167,380
Selling and marketing expenses	– 55,330	– 59,850	– 52,789	– 51,343	– 50,431	– 54,521
General and administrative expenses	– 35,733	– 35,838	– 29,853	– 29,407	– 30,118	– 35,009
Research and development expenses	– 26,282	– 25,479	– 23,936	– 22,900	– 22,317	– 22,713
Other operating income	10,818	13,297	10,176	8,268	10,515	14,648
Other operating expenses	– 5,972	– 6,882	– 2,237	– 3,477	– 6,317	– 8,008
Operating profit	**67,976**	60,759	44,744	50,523	68,477	61,777
Financial expenses	– 662	– 691	– 978	– 1,217	– 2,245	– 2,923
Financial income	301	383	507	644	822	645
Earnings before taxes	**67,615**	60,451	44,273	49,950	67,054	59,499
Income taxes	– 20,583	– 18,535	– 11,854	– 15,135	– 21,230	– 17,931
Net income	**47,032**	41,916	32,419	34,815	45,824	41,568
Earnings per share (in €)	**4.77**	4.25	3.29	3.53	4.64	4.19
Number of shares (weighted average)	9,867,659	9,867,659	9,867,659	9,867,659	9,867,659	9,867,659
Profitability figures						
Gross margin	38.1 %	38.9 %	35.3 %	36.5 %	36.2 %	32.2 %
Operation profit margin	14.3%	13.5 %	11.0 %	12.4 %	14.8 %	11.9 %
After-tax return on sales	9.9%	9.3 %	8.0 %	8.5 %	9.9 %	8.0 %
Sales by region						
Europe	188,860	187,003	183,181	182,070	190,753	229,857
Asia	174,604	151,511	130,323	143,863	171,483	189,781
The Americas	110,542	112,412	92,636	81,447	98,204	98,769
Rest of world	238	595	502	1,347	887	1,102
Sales by product						
Turbopumps	144,518	144,777	124,693	125,351	132,992	144,337
Backing pumps	114,989	102,381	89,419	92,075	121,023	182,941
Instruments and components	105,520	98,777	96,899	101,151	110,863	111,335
Service	99,698	96,730	84,967	81,653	78,217	72,487
Systems	9,519	8,856	10,664	8,497	18,232	8,409

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Financial Calendar 2017

Feb. 15	WEDNESDAY, Preliminary results for fiscal year 2016
Mar. 23	THURSDAY, Results for fiscal year 2016
May 02	TUESDAY, Interim report 1st quarter 2017 results
May 23	TUESDAY, Annual General Meeting 2017
Aug. 02	WEDNESDAY, Interim report 2nd quarter / 1st half-year 2017 results
Nov. 02	THURSDAY, Interim report 3rd quarter / 9-month 2017 results

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Financial Glossary

Cash and cash equivalents
Indicates the cash and cash equivalents provided by the various capital flows and is the result of the cash flow accounting.

Cash flow from financing activities
Indicates the balance of cash and cash equivalents provided to or used by a company in connection with transactions involving shareholders' equity or outside capital.

Cash flow from investment activities
Indicates the balance of cash and cash equivalents that a company has invested or received in connection with the acquisition or sale of financial and tangible assets.

Cash flow from operating activities
Indicates the change in cash and cash equivalents resulting from operative business during the period under review.

Corporate governance
The organizational structure and content of the way companies are managed and controlled.

Dividend yield
Indicates the ratio between a dividend and a defined share trading price – typically the year-end trading price. The dividend yield expresses the magnitude of the effective yield of the capital invested in shares.
Calculation: Dividend ÷ Trading Price x 100

Equity ratio
Describes the relationship between shareholders' equity and total capital. The more shareholders' equity that is available to a company, the better its credit rating will typically be.
Calculation: Shareholders' Equity ÷ Balance Sheet Total x 100

Free-float
The free-float includes all shares that are not held by major shareholders; i. e. shares that can be acquired and traded by the general public. Under Deutsche Börse's definition, shares totaling over 5 percent of total equity or over 25 percent held by investment funds are not considered to be part of the free-float.

Gross margin
Indicates the ratio between gross profit and net sales, enabling conclusions to be drawn regarding a company's production efficiency.
Calculation: Gross Profit ÷ Net Sales x 100

Gross profit
The result of net sales less cost of sales.
Calculation: Net Sales – Cost of Sales

Market capitalization
Indicates the current market value of a company's shareholders' equity on the stock exchange.
Calculation: Number of Shares Outstanding x Trading Price

Operating profit (EBIT)
Operating profit (earnings) before interest and taxes.
Calculation: Net Income ± Financial Income / Expenses ± Income Taxes ± Gain / Loss from Investment

Operating profit margin (EBIT margin)
The ratio between operating profit and net sales – the higher the ratio, the higher the profitability of operating activities.
Calculation: Operating Profit (EBIT) ÷ Net Sales x 100

Research and development expense ratio
Is an expression of the relationship between the volume of research and development expenses and the volume of net income generated. Is thus considered to be an indicator of a company's willingness to invest in its own innovation activities.
Calculation: R & D Expenses ÷ Net Income x 100

Return on capital employed (ROCE)
Ratio between operating profit and the total capital employed during a period.
Calculation: EBIT ÷ (Net) Assets + Working Capital x 100

Return on equity
Provides information about the yield on the equity provided by shareholders.
Calculation: Net Income ÷ Shareholders' Equity x 100

Working capital
A liquidity parameter that indicates the surplus of a company's assets that are capable of being liquidated short term (within one year) over its short-term liabilities.
Absolute calculation: Current Assets – Short-Term Borrowed Capital; Relative calculation: Current Assets ÷ Short-Term Borrowed Capital x 100

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