

Please
note the **additional
information** inside the
notice of the **Annual
General Meeting
2017**

VACUUM
24 / 7

LETTER TO THE SHAREHOLDERS
FISCAL YEAR 2016

Your attendance and vote count!



Manfred Bender, Chief Executive Officer

Dear shareholders,

This year I want to ask you to read this shareholder letter very carefully and to put forth a special effort on behalf of your company, as the Busch Group aims to gain control of Pfeiffer Vacuum as cheaply as possible and at your expense!

Your vote counts

This takeover of control is not in the company's interest and thus cannot be in your interest. A high attendance at the Annual General Meeting on May 23, 2017, is therefore imperative. Hence, I strongly urge you to either take part in the Annual General Meeting in person and exercise your right to vote in the best interest of Pfeiffer Vacuum, or – if you are unavailable on that day – to task a proxy to attend the Annual General Meeting and cast your vote. The decision as to how and by whom Pfeiffer Vacuum will be managed in the future should not be left to one shareholder; it ought to be made by all shareholders. This is the only way we will be able to achieve the aim of you and all other shareholders, rather than just one shareholder, benefiting adequately from Pfeiffer Vacuum's attractive long-term prospects.

A very successful fiscal year 2016

Even if the effort to contend with the Busch Group's plans looms over everything at the moment, allow me to briefly present the highlights of the past fiscal year. Fiscal year 2016 was an extraordinary year for Pfeiffer Vacuum. With sales amounting to € 474.2 million, we exceeded our forecast of € 470 million and posted one of the most successful fiscal years in recent history. We are particularly

proud of the fact that our sales not only rose by 5 percent; at the same time, we were also able to increase our operating profit (EBIT) by almost 12 percent to € 68 million.

This success clearly attests to the attractiveness of Pfeiffer Vacuum and the vacuum industry, and is based mainly on three pillars:

1. We succeeded in broadening our customer base and selling more products and services to our legacy customers.
2. We focused intensively on driving on with our efforts to put the GAP program into practice to optimize operating processes and set up more efficient structures, and we successfully implemented key measures.
3. The Semiconductor and Coating division proved to be a growth driver in fiscal 2016, and it enabled us to significantly improve our access to rapidly growing markets in Asia.

Proposed dividend of EUR 3.60 per share

As in the past, we want to enable our shareholders to participate in Pfeiffer Vacuum's very good business development. With a dividend of EUR 3.60 per share, we wish to distribute just under 76 percent of our net profit to our shareholders, provided that they agree to our proposal at the Annual General Meeting.

Positive outlook and focal points for the years ahead

I would like to briefly give you an outlook on the current fiscal year and on the focus of our efforts. The first months of the new year have been very satisfying, and we were able to carry over all of last year's momentum. As it stands today, this year's sales are around 20 percent up from last year. This positive trend should continue at least until the end of the year 2017 and lead to significantly increased sales and EBIT compared to 2016.

We intend to persistently put into action the 2020 Strategy to drive this promising development forward. We want to further boost our profitability by wrapping up GAP by the year's end and by pursuing GAP Reloaded until the end of 2020. And we aim to continue to actively leverage our financial strength for attractive acquisitions in order to play a key role in the vacuum industry's consolidation process. Our goal is to offer attractive long-term prospects to our shareholders and to do so upon the strength of our own resources.

The Busch Group is not acting in the interest of all shareholders

The development of Pfeiffer Vacuum has been persistent and very promising, but for several weeks now we have also had to contend more intensively with the Busch Group, a major shareholder. After its first takeover bid failed, the Busch Group announced on March 29, 2017, its intention to issue another public takeover offer aimed to acquire all outstanding shares of Pfeiffer Vacuum. Like the first bid, this offer was neither coordinated nor discussed with the Management and Supervisory Boards of Pfeiffer Vacuum. The Management Board is of the opinion that the Busch Group is primarily pursuing its own interests and not the interests of all shareholders. What is more:

The second takeover offer is again neither adequate nor advisable

The Busch Group is yet again unwilling to offer our shareholders a customary takeover premium for its intended acquisition of a controlling interest, despite the fact that the company itself stated that the reasons for the increased offer are the gratifying business figures for 2016 and the positive outlook for Pfeiffer Vacuum and the industry. These reasons would therefore justify a significantly higher offer, but the announced offer price is even lower than the current share price. As it stands today and pending a detailed review of the offer document that had yet to be published at the time of this shareholder letter's printing, we cannot recommend that you accept this offer.

The Busch Group will advance its interests

Given these facts and the Busch Group's communications to date, we have more cause than ever to be concerned that the Busch Group will attempt to use its stake of just under 30 percent at our Annual General Meeting to make key decisions in a self-serving way with no consideration given to the interests of the company and the remaining 70 percent of our shareholders. In particular, we cannot rule out the possibility that Busch will specifically influence the makeup of our administrative bodies (the Management Board and Supervisory Board).

This cannot be in your interest!

Of course, every shareholder is free to formulate and campaign on behalf of their interests, as is the Busch Group. However, the Executive and Supervisory Boards of Pfeiffer Vacuum must not allow the interests of the company and the interests of the other shareholders to be disregarded. We are obliged to act in the best interest of the company and of all shareholders. As had been announced, this is why we will continue to review further options to ensure our shareholders participate adequately in Pfeiffer Vacuum's value potential.

Take part in the Annual General Meeting and vote in person or via a proxy!

Dear Shareholders, I therefore urge you to participate in this year's Annual General Meeting as an engaged stakeholder and to support, with your attendance and your vote, the planned business process and thus the sustainable development of Pfeiffer Vacuum, in your interest and in the best interest of the company. Do not let the Busch Group decide the future of this great company on its own; have a say in that decision!

To this end, it is important that you first register for the Annual General Meeting. If you are unable to attend the Annual General Meeting in person, please task a proxy to exercise your right to vote. This may be your custodian bank, a shareholder association or any other person of your choice. You will receive with the admission ticket documents and information about how to delegate your vote to a proxy; that is, to have a proxy cast your vote.

Please visit our homepage to learn more

The latest information about our Annual General Meeting and details on registering and voting may be accessed at any time on our website at group.pfeiffer-vacuum.com/agm. Please also note the additional information inside the notice of the Annual General Meeting 2017.

I look forward to seeing you there and want to thank you for your confidence in Pfeiffer Vacuum.

Yours sincerely,

*Yours,
Manfred Bender*

Manfred Bender
Chairman of the Management Board



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



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

Key Figures

		2016	2015	Change
Sales and profit				
Total sales	κ€	474,244	451,521	5.0 %
Germany	κ€	78,254	75,846	3.2 %
Other countries	κ€	395,990	375,675	5.4 %
Operating profit	κ€	67,976	60,759	11.9 %
Net income	κ€	47,032	41,916	12.2 %
Return on sales	%	9.9	9.3	0.6 Pp
Operating cash flow	κ€	63,616	59,653	6.6 %
Balance sheet				
Total shareholders' equity and liabilities	κ€	459,322	453,527	1.3 %
Cash and cash equivalents	κ€	110,032	115,397	- 4.6 %
Shareholders' equity	κ€	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	κ€	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	κ€	157,618	151,996	3.7 %
Per employee	κ€	66	65	1.5 %
Sales per employee	κ€	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 were derived on the basis of amounts in thousands of euros. Rounding differences might result from their presentation in millions of euros.

Share Performance

Share highlights and Shareholder Structure

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

Pfeiffer Vacuum Share Data

		2016	2015	2014
Share capital	in € millions	25.3	25.3	25.3
Number of shares issued	in units	9,867,659	9,867,659	9,867,659
Highest trading price	in €	103.45	115.60	102.05
Lowest trading price	in €	75.28	65.69	56.21
Trading price at year-end	in €	88.82	93.55	68.60
Market capitalization at year-end	in € millions	876	923	677
Dividend per share	in €	3.60 ¹	3.20	2.65
Dividend yield	in %	4.1 ¹	3.4	3.9
Earnings per share	in €	4.77	4.25	3.29
Price/earnings ratio		18.6	22.0	20.9
Free float	in %	72.81	72.81	100.0

¹ Subject to consent of the Annual General Meeting

Management's Discussion and Analysis (Excerpt)

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.

Sales by region

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

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 product

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

Turbopumps

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.

Backing pumps

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.

Instruments and components

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.

Service

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 %).

Systems

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 market

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		

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. 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.

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.

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%.

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 %.

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.

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.

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 disproportionately high cash inflows within the framework of operational activities.

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).

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%).

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 of the annual report 2016. 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 Statements of Income

Pfeiffer Vacuum Technology AG

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

Consolidated Statements of Comprehensive Income

Pfeiffer Vacuum Technology AG

in K €	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	673	7,781
Results from cash flow hedges	- 588	96
Related deferred income tax effects	176	- 32
	261	7,845
Amounts not to be reclassified to income statement in future periods		
Valuation of defined benefit plans	- 7,023	2,269
Related deferred income tax effects	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€	Dec. 31, 2016	Dec. 31, 2015
ASSETS		
Intangible assets	67,579	73,396
Property, plant and equipment	85,053	82,311
Investment properties	472	496
Shares in associated companies	1,636	1,618
Deferred tax assets	23,312	23,267
Other non-current assets	4,508	4,211
Total non-current assets	182,560	185,299
Inventories	81,737	77,743
Trade accounts receivable	69,352	58,556
Income tax receivables	1,112	5,291
Prepaid expenses	3,099	1,863
Other accounts receivable	11,430	9,378
Cash and cash equivalents	110,032	115,397
Total current assets	276,762	268,228
Total assets	459,322	453,527

in K€	Dec. 31, 2016	Dec. 31, 2015
SHAREHOLDERS' EQUITY AND LIABILITIES		
Share capital	25,261	25,261
Additional paid-in capital	96,245	96,245
Retained earnings	211,423	195,968
Other equity components	- 17,355	- 12,450
Equity of Pfeiffer Vacuum Technology AG shareholders	315,574	305,024
Financial liabilities	—	10,222
Provisions for pensions	51,188	43,497
Deferred tax liabilities	1,848	4,832
Total non-current liabilities	53,036	58,551
Trade accounts payable	30,896	21,245
Customer deposits	4,928	4,860
Other accounts payable	20,530	21,931
Provisions	29,767	26,982
Income tax liabilities	4,367	4,431
Financial liabilities	224	10,503
Total current liabilities	90,712	89,952
Total shareholders' equity and liabilities	459,322	453,527

Consolidated Statements of Cash Flows

Pfeiffer Vacuum Technology AG

in K€	2016	2015
Cash flow from operating activities:		
Earnings before taxes	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	20,421	20,677
Gain/loss from disposals of assets	- 58	91
Changes in allowances for doubtful accounts	129	178
Changes in inventory reserves	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

(continued) in K€	2016	2015
Cash flow from investing activities:		
Capital expenditures	- 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	- 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	110,032	115,397

Financial Calendar 2016

Upon request you will receive a full print version of our annual report. Please visit our online version at group.pfeiffer-vacuum.com/financial-reports



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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
