



sharing

Annual Report



excellence

2016

Jenoptik at a glance

in million euros	2016	2015	Change in %
Revenue	684.8	668.6	2.4
Domestic	226.5	217.8	4.0
Foreign	458.3	450.8	1.6
EBITDA*	96.9	88.8	9.1
EBITDA margin* (EBITDA in % of revenue)	14.2	13.3	
EBIT*	68.5	61.2	11.8
EBIT margin* (EBIT in % of revenue)	10.0	9.2	
Earnings before tax*	64.7	57.4	12.7
Earnings after tax*	57.5	49.9	15.1
EPS (in euros)	1.00	0.87	15.8
Dividend (in euros)	0.25	0.22	13.6
Free cash flow (before income taxes)	80.4	71.8	12.0
Net debt	- 17.9	43.9	- 140.8
Equity ratio (equity in % of total equity and liabilities)	58.6	56.6	3.6
Order intake	733.8	636.7	15.2

	31/12/2016	31/12/2015	Change in %
Order backlog (in million euros)	405.2	373.4	8.5
Frame contracts (in million euros)	160.9	59.2	172.1
Employees	3,539	3,512	0.8

* including discontinued operations

Please note that there may be rounding differences compared to the mathematically exact amounts (monetary units, percentages, etc.) in this Annual Report.

Summary by Quarter 2016

		1st quarter 1/1 – 31/3	2nd quarter 1/4 – 30/6	3rd quarter 1/7 – 30/9	4th quarter 1/10 – 31/12
Revenue	million euros	158.2	168.7	165.7	192.2
Optics & Life Science	million euros	52.2	55.9	56.4	57.1
Mobility	million euros	52.1	56.8	60.0	78.6
Defense & Civil Systems	million euros	54.4	57.2	50.6	56.1
Other ¹⁾	million euros	-0.6	-1.2	-1.3	0.4
EBIT²⁾	million euros	9.8	17.6	19.8	21.4
Optics & Life Science	million euros	5.2	8.1	11.2	8.9
Mobility	million euros	2.3	4.8	5.6	11.8
Defense & Civil Systems	million euros	3.2	6.1	4.0	5.9
Other ¹⁾	million euros	-0.9	-1.4	-1.0	-5.1
EBIT margin²⁾	%	6.2	10.4	11.9	11.1
Optics & Life Science	%	10.0	14.5	19.9	15.6
Mobility	%	4.4	8.5	9.3	14.9
Defense & Civil Systems	%	5.8	10.6	7.9	10.5
Order intake	million euros	158.4	160.9	228.3	186.1
Optics & Life Science	million euros	59.1	54.5	58.6	64.4
Mobility	million euros	64.8	63.2	68.9	70.5
Defense & Civil Systems	million euros	37.6	42.6	100.9	50.4
Other ¹⁾	million euros	-3.0	0.6	-0.1	0.7

¹⁾ including consolidation

²⁾ including discontinued operations

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[May 11, 2017](#)

Publication of Interim Report January – March 2017

[June 7, 2017](#)

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The contents of this publication address men and women equally. For better readability, the masculine forms are used normally.

This is a translation of the original German-language Annual Report of the Jenoptik Group. JENOPTIK AG shall not assume any liability for the correctness of this translation. In case of differences of opinion the German text shall prevail.

A strong brand for our success

The Jenoptik brand is older than you might think. It is first mentioned in old trademark registers from 1957. The state-owned firm Carl Zeiss Jena sold products to countries outside the socialist bloc under the “Jenoptik” name. Nevertheless, the Jenoptik brand was still virtually unknown in 1990. This all changed with the founding of JENOPTIK Carl Zeiss Jena GmbH, which became JENOPTIK GmbH in 1991.

Various acquisitions initiated by the managing director Lothar Späth, especially in Western Germany, were useful addition to the Jena-based company’s skills and products and were to open up new sales channels for Jenoptik on the global market. Between 1995 and 2010, this resulted in a great variety of brands. Many of these companies, some of which have a rich tradition, previously positioned themselves with their own guiding principles and different key messages in the market. They are now united under the roof of Jenoptik and make up our core business under the Jenoptik brand.

The well-known “blue rectangle” in our logo was introduced in 1991 and has seen a few changes over the last 25 years. The most recent form of the logo has been used since January 1, 2009.

What makes Jenoptik special under a common brand? The answer is “SHARING EXCELLENCE”. We worked hard on our brand project in the past fiscal year. In 2017, we’re gradually introducing our streamlined, standardized brand concept to the markets. This will further tighten our brand image and make a significant contribution to our corporate success.

We want to foreground “SHARING EXCELLENCE” more than ever before, and you can read about many examples and initiatives over the next pages of the Annual Report.

Lothar Späth, who died in Spring 2016, created the basis for the Jenoptik Group with his courage and strategic vision. But that today Jenoptik is considered to be a successful company and a strong brand is our common success and clearly in the interests of all employees, customers, partners and shareholders.

Management

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Executive Board

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We once again demonstrated our operational strengths: after 25 years, the figures do us credit and promise a successful future for Jenoptik.

We share...

Dr. Michael Mertin
President & CEO



*Dear shareholders,
dear clients, partners and friends of our company,*

We are delighted to be able to present you with this Annual Report which details yet another successful year in the history of our company. After achieving record revenue and earnings in 2015, these figures were again exceeded in 2016, with new records being set also for order intake and cash flow.

Once again, we have been able to demonstrate our operational strength, as the economic environment continued to be challenging in 2016. Key factors here include the emissions scandal, which affected the entire automotive industry, investment restraint due to the fall in oil prices, which primarily affected our Traffic Solutions business, as well as the overall uncertain situation around the world, looking particularly towards the UK, Turkey, the Middle East and Ukraine, Russia and, not least, the USA.

Thanks to an outstanding team performance, we have more than held our ground in this environment: our revenue rose to 684.8 million euros, up on the prior year's figure of 668.6 million euros. This growth is purely organic. In contrast to 2015, we had no significant currency effects in 2016 which had an additional positive effect on our financial statements. Again business development proved to be especially strong in the Americas and Asia/Pacific. In 2016, these two key target regions were responsible for generating 34.4 percent of total revenue. In Asia, we exceeded the 100 million euros revenue mark in 2016. In comparison: In 2007, our revenue in this region amounted to around 35 million euros.

We are following a profitable growth path: on the whole, the EBIT including discontinued operations improved at a faster rate than revenue by 11.8 percent to 68.5 million euros. This corresponds to an EBIT margin totaling 10.0 percent, significantly above our target for 2016. The Optics & Life Science and Defense & Civil Systems segments as well as the laser machines for the automotive industry made a particular contribution to this development. In the Mobility segment, revenue and earnings were down in Traffic Solutions, particularly from the Middle East. In addition, we posted start-up costs for major orders, meaning that here earnings were significantly less than in the prior year. In this area, but also in defense technology and the new Healthcare & Industry business launched in 2016, we achieved a significant increase in orders compared to prior years.

As of January 1, 2016, we had realigned our structures within the segments, in part with the aim of focusing even more strongly on growth markets and megatrends. This was a challenging task for the organization, but its implementation has already led to significantly higher order intakes in the past fiscal year. The order intake in 2016 was 733.8 million euros (prior year 636.7 million euros). In addition, there are so-called frame contracts, which are not yet included in the order intake, amounting to 160.9 million euros (prior year 59.2 million euros).

Our new market-oriented structure on the one hand, but also our investments in expertise, innovations as well as new products and business models on the other hand, were the guarantors for numerous business successes in 2016. For example, we steadily expanded our new business in information and communication technology. As a partner for the Patriot missile defense system, we received order intakes of more than 80 million euros for new business and spare parts in 2016 alone. In Traffic Solutions, we secured major projects in Canada and Australia. We also succeeded in entering the toll payment monitoring market in Germany due to our combined expertise in sensor technologies, image processing, software solutions and data handling. It is precisely this expertise that we strengthened at the beginning of 2017 through the strategic acquisition of a British software company.

In the future, we will continue to make acquisitions such as these, which strategically strengthen our portfolio in line with megatrends and therefore also our core business, and help us to be closer to the customers. We are now strategically and financially ideally positioned for this.

Jenoptik has been free of net debt since the end of 2016: Our net debt has been eliminated. Even more – at the end of 2016, for the first time in more than 15 years, cash and cash equivalents exceed financial debt by 17.9 million euros. In 2006, net debt was still around 260 million euros, including liabilities to silent investors from real estate firms. The fact that we have been able to consistently reduce net debt over the years is the result of the strong cash flows generated. The free cash flow exceeded the 80 million euro mark in 2016.

The figures speak for us and for the continued successful development of Jenoptik. In 2017, we want to continue to grow profitably and to achieve purely organic revenue growth to 720 to 740 million euros. Earnings are also expected to continue to rise and the EBIT margin will be between 9.5 and 10 percent.

Our success to date also serves as an incentive for further development. Given the political and economic conditions and our cyclical, consolidated high-tech environment, the challenges we face on a daily basis will not decrease. In view of our internationally active Group, our strong brand, our innovative products in comparison with the top group of our competitors and our specific plans for the operating business, we are focusing on measures for more growth and profitability in all areas.

This includes measures for the continuous optimization of purchasing and the establishment of lean management. The vision of our “Market Excellence Program” is to further develop ourselves from a global seller to a global player, while sensibly aligning all sales processes and activities to the needs of our customers. The aim of our JOE project (Jenoptik One ERP) is to harmonize the software landscape at all Jenoptik locations, so that our processes can be transparently and efficiently managed. We will also start to integrate our international sites into this in 2017.

After 25 years, Jenoptik is stronger than ever before. We celebrated our anniversary with our employees at all sites in the Summer of 2016. We would like to express our particular thanks for the work done by our employees, without which Jenoptik would not have been able to report such positive results which also reflected in the share price during the course of 2016 and early 2017. At the beginning of the current year, our market capitalization reached 1 billion euros.

On this note, we would like to thank you for your trust in Jenoptik.



Dr. Michael Mertin
President & CEO



Hans-Dieter Schumacher
Chief Financial Officer

Honored shareholders,

After almost exactly ten years at the head of Jenoptik, I would like to take this opportunity to bid you farewell. I wish continued successful development for Jenoptik as a whole, taking into account all interests in a sustainable and balanced manner. The company has a very good starting position from which it can continue to grow into its target role as a global player. I would like to thank all my associates for their trust, support and the many intensive discussions as we have battled to achieve the best development of our Jenoptik.

Dr. Michael Mertin

...excellence

Hans-Dieter Schumacher
Chief Financial Officer



Supervisory Board Report

Honored Shareholders,

Jenoptik's business continued to show very good development in the past fiscal year despite underlying conditions that were not always favorable, accordingly, the company can look back on its best fiscal year in recent history, with order figures and particularly earnings and cash flow all seeing very good growth. The Supervisory Board provided significant support to the Executive Board throughout the fiscal year. Together, we addressed the challenges by resolutely pushing on with our strategy, further improving our processes and broadening our international reach, and we are now confident of our prospects in the current fiscal year.

In the 2016 fiscal year, the Supervisory Board diligently performed the duties imposed on it by law, by the Articles of Association and by the rules of procedure, regularly provided advice on the management of the company to the Executive Board and continuously monitored the latter's work. The Executive Board directly involved the Supervisory Board in all decisions of fundamental importance to Jenoptik and notified it regularly, in good time and in full, both verbally and in writing, of the current status of business transactions, the course of business and the economic situation, the risk position, risk management and issues relating to compliance, strategy and corporate planning. The members of the Supervisory Board fully engaged with the reports submitted by the Executive Board at committee and Supervisory Board meetings. In the event that the business development deviated from the established plans and targets, the Executive Board notified the Supervisory Board of this, explaining the reasons in detail. It further maintained full compliance with the reporting obligations set out in § 90 of the Stock Corporation Act (AktG) and the German Corporate Governance Code ("Code").

The Supervisory Board gave its approval to business transactions requiring such approval following due deliberation and discussion. Over the course of 2016 fiscal year, it met for five ordinary meetings and one extraordinary meeting, at which members of the Executive Board were also present. Individual agenda items relating to personnel matters on the Executive Board were addressed without the presence of the members of the Executive Board. In addition, resolutions were adopted by written consent in two instances. In further written correspondence relating to the pending election of Supervisory Board members at the next Annual General Meeting, the shareholder representatives on the Supervisory Board rejected the principle of full compliance with a gender quota. No member of the Supervisory Board attended half or fewer than half of the meetings. Overall, attendance at Supervisory Board meetings was 97 percent. There were also five meetings of the Audit Committee (one of which by telephone), nine meetings of the Personnel Committee and one Nomination Committee telephone meeting. Three Personnel Committee meetings were face-to-face meetings; six were held as a mixture of telephone and in-person meetings. Detailed information on attendance at meetings can be found in section 11.3 of the Notes.

The Executive Board and the Supervisory Board worked together in an atmosphere of mutual trust and understanding at all times. The Chairman of the Supervisory Board and the chairmen of the committees maintained ongoing contact with the Executive Board between the meetings of the Supervisory Board and the committees. Detailed monthly reports on the company's position were regularly sent to all members of the Supervisory Board between meetings.

Particular Subjects Discussed by the Supervisory Board

At all its regular meetings, the Supervisory Board dealt with the detailed reports of the Executive Board on the business outlook of JENOPTIK AG and the Group, in particular current revenue and earnings performance and the financial and asset position. This included a comprehensive examination and discussion of the monthly and quarterly reports. Recurring topics at several meetings further included the status of current acquisition plans and the Market Excellence Program, which aims to align Jenoptik's sales activities more closely with the needs of our customers.

The members of the Supervisory Board adopted their report for the 2016 Annual General Meeting and approved the Corporate Governance Statement and the Corporate Governance Report for the 2015 Annual Report by unanimous written consent in February 2016.

At its meeting on March 21, 2016, the Supervisory Board discussed the audit of JENOPTIK AG's Financial Statements, the Consolidated Financial Statements, the Combined Management Report and the appropriation of accumulated profits at length in the presence of the auditor. Following in-depth discussions, it approved the Executive Board's proposal for the appropriation of profits, providing for an increase in the dividend per no-par value share to 0.22 euros, and also approved the Financial Statements of JENOPTIK AG and the Consolidated Financial Statements. The Financial Statements were thus adopted. Another core issue was the approval of the agenda for the Annual General Meeting on June 8, 2016. The meeting also considered the current Group Risk and Opportunity Report, settlement of the target agreements for Executive Board members in the 2015 fiscal year and the conclusion of new target agreements for 2016. The Supervisory Board also dealt with the development of the Jenoptik share and agreed to reduce the Personnel Committee from eight to six members.

In addition to the recurring topics, the Supervisory Board also used its meeting on June 7, 2016 to discuss the company's current business outlook and financial situation following the end of the first quarter and changes brought about by the EU Commission's Market Abuse Regulation. The Chief Risk & Compliance Officer also reported to the Supervisory Board on the status of current projects related to risk & compliance management. The meeting continued on the following day with a discussion of current issues relating to the forthcoming Annual General Meeting.

During an extraordinary meeting on July 28, 2016, the Supervisory Board deliberated on an extension of the service contract held by the President & CEO, Dr. Michael Mertin.

Extending Dr. Michael Mertin's service contract, was also a subject of in-depth discussion at the meeting on September 20, 2016; in the course of the meeting, Dr. Michael Mertin stated he would not be seeking to extend his service contract which runs until June 30, 2017. In addition to the regular submissions, other items on the agenda included the Group's current Risk and Opportunity Report. In accordance with the decision of the Annual General Meeting of June 7, 2016, and on the recommendation of the Audit Committee, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft in Stuttgart was appointed the new auditor and group auditor.

On a separate strategy day in November, the Supervisory Board, together with the Executive Board, members of the Executive Management Board and the Head of Strategy, engaged in detailed discussion of the long-term strategic positioning of the Group from a market, competitor and customer perspective, as well as potential areas of growth for the segments.

In written correspondence in November, the Supervisory Board approved an agreement with Dr. Michael Mertin regarding the details of his departure from the company.

At the last meeting of the year on December 14, 2016, the Supervisory Board, following detailed preparations carried out by the Personnel Committee, appointed Dr. Stefan Traeger successor to Dr. Michael Martin as future Chairman of the Executive Board for a term of three years, beginning in the course of the second quarter of 2017, and approved the conclusion of the service contract with Dr. Traeger. With the support of an independent compensation consultant, changes were made in the area of multi-year variable remuneration compared to the existing remuneration system, it is now based on multi-year targets. The exact form of the target system is yet to be determined, the remuneration system will therefore be specified in the 2017 Annual Report and will probably be submitted to a vote to the 2018 Annual General Meeting according to § 120 (4) (1) of the Stock Corporation Act (AktG). The Supervisory Board also addressed in detail and approved the corporate planning for the 2017 fiscal year and the medium-term planning following a report on the business and financial position of the Group at the end of the third quarter and as of at October 31, 2016. Together with the Executive Board and following a review of a corporate governance checklist, it also adopted JENOPTIK AG's declaration of conformity according to § 161 (1) of the Stock Corporation Act (AktG). It was also informed about innovation management in the Group and the Jenoptik Innovation Days 2016.

Work in the Committees

The Supervisory Board has established four committees to help perform its tasks with greater efficiency. To the extent permissible by law, these committees make, in individual cases, decisions in place of the Supervisory Board and prepare topics which are then addressed by the Supervisory Board. The chairmen or their deputies on the committees provided in-depth information on the content and outcomes of each committee meeting at the following meeting of the Supervisory Board. Information on the individual members of each committee can be found in the Group Notes appended to the Annual Report, from page 182 on.

The [Audit Committee](#) headed by Mr. Heinrich Reimitz convened four meetings and one conference call in the period covered by the report. The Chief Financial Officer, the Head of Group Controlling and the Head of Group Accounting and Tax were present at all meetings; the President & CEO also participated on particular issues and representatives of the auditor attended the first and the last face-to-face meeting in the fiscal year. Following statutory requirements and

those of the corporate governance code, at least one independent member of the Audit Committee, to include its Chairman Mr. Heinrich Reimitz, must possess expertise in the fields of financial accounting, internal control procedures and auditing. In addition to the monthly, quarterly and half-year financial statements and the financial statements and consolidated financial statements, the Audit Committee paid particular attention to the effectiveness and ongoing development of the risk management, internal control and compliance management systems.

During a conference call in January 2016 prior to publication of the preliminary figures, the Audit Committee together with the Executive Board discussed the key indicators in the 2015 fiscal year as well as current accounting issues in connection with preparation of the financial statements. In the presence of the auditor, the balance sheet meeting in March focused on the audit of the Combined Management Report, JENOPTIK AG's Financial Statements, the Consolidated Financial Statements and the Executive Board's proposal for the appropriation of profits. The Audit Committee recommended that the Supervisory Board propose Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft in Stuttgart to the Annual General Meeting on June 7, 2016 as the new auditor and group auditor. This recommendation was preceded by an extensive tender for appointment of auditors, including a review of the auditor's independence and qualifications. The Audit Committee also dealt with the audit plan proposed by Internal Audit and the action plan following a completed audit.

At the meeting in May, the Audit Committee closely examined the quarterly financial statements for the first quarter of 2016 and was informed about audits completed by Internal Audit in the last five years and current analyst assessments.

Alongside the half-year financial statements, the key matters discussed in August were the fee agreement, the determination of the main points for audit in the 2016 fiscal year and the changes brought about by Audit Reform Act. The Audit Committee also set out a list of the auditor's approved non-audit services.

At the last meeting of the year in November, the Audit Committee, in addition to the nine-month financial statements, examined the progress made in implementing current legislative proposals at European level relating to corporate social responsibility reporting and was informed about the status of the switch to the new auditor and group auditor. The meeting also dealt with Internal Audit's regular annual reporting and information on the development of the Jenoptik share and the Group's treasury management system.

The **Personnel Committee** headed by the Chairman of the Supervisory Board, Mr. Matthias Wierlacher, convened nine times in the past fiscal year. Settlement of the target agreements and the conclusion of new target agreements with both members of the Executive Board were the subjects of the first two meetings of the year. At two meetings in July and August, the Personnel Committee dealt in detail with the extension of Dr. Michael Mertin's service contract. Following Dr. Mertin's decision not to seek an extension to his contract beyond June 30, 2017, announced at the September meeting of the Supervisory Board, the Personnel Committee, with the support of an external, independent personnel consultant, concerned itself in depth with the search for and assessment of potential successor candidates at three further meetings in October, November and December 2016. The Personnel Committee then compiled a shortlist from several candidates.

With the help of an independent compensation consultant, it focused on the review and restructuring of the remuneration system for the Chairman of the Executive Board and then accordingly submitted its recommendations to the Supervisory Board for its meeting on December 14, 2016.

The **Nomination Committee**, also headed by the Chairman of the Supervisory Board, Mr. Matthias Wierlacher, convened once in the past fiscal year, and in due consideration of the targets set by the Supervisory Board regarding its composition approved a requirements profile for the candidates to be appointed at the upcoming Annual General Meeting. In the year covered by the report, there was no occasion for a meeting of the **Mediation Committee** formed in accordance with § 27 (3) of the Codetermination Act (MitbestG).

Corporate Governance

Over the past fiscal year, the Supervisory Board engaged with corporate governance issues on an ongoing basis and, in particular at its meeting in June, was updated on current legislative proposals in this area. In December, following comprehensive examination of a corporate governance checklist, and in conjunction with the Executive Board, the Supervisory Board adopted the updated declaration of conformity according to § 161 (1) of the Stock Corporation Act (AktG). The current declaration of conformity, together with prior declarations extending back to 2004, are permanently available to shareholders on the company's website. The latest declaration of conformity can also be found on pages 38 ff. of the Annual Report.

The Supervisory Board uses a formal questionnaire every two years to regularly review the efficiency of its work. No efficiency deficits were established at the last evaluation in November 2015. The next formal self-assessment will take place in Autumn 2017.

Although individual members do exercise an executive role at other companies with which Jenoptik has a business relationship, Jenoptik does not consider any of these business transactions to be of significance, especially as they are conducted under the same conditions as would have been maintained with third-party companies. Consequently, it is the belief of the Supervisory Board that they do not affect the independence of the members. Information on business transactions with related persons or companies can be found on page 178 in section 8.6 of the Notes. There were no conflicts of interest subject to reporting requirements which could have called the independence of the Supervisory Board members into question under the directives of the Corporate Governance Code in the past fiscal year.

Detailed information on corporate governance at Jenoptik can be found in the Corporate Governance Report beginning on page 38 of the Annual Report and from page 47 on in the Remuneration Report.

Financial Statements and Consolidated Financial Statements

In accordance with the decision of the Annual General Meeting, Ernst & Young Wirtschaftsprüfungsgesellschaft in Stuttgart was appointed to audit the Financial Statements of JENOPTIK AG and the Consolidated Financial Statements for the first time in September 2016. The audit partner was Mr. Michael Blesch. Ernst & Young audited the Financial Statements prepared by the Executive Board according to the provisions of the German Commercial Code (HGB), the Consolidated Financial Statements prepared according to § 315a of the German Commercial Code HGB and

on the basis of International Financial Reporting Standards (IFRS) and the Combined Management Report, and issued its unqualified approval. A further subject of the audit was whether the Executive Board had adopted suitable measures to ensure that developments which may endanger the continued existence of the company are identified in good time. The auditor undertook its audit according to § 317 of the German Commercial Code (HGB), giving consideration to the generally accepted German audit principles defined by the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer [IDW]). On completion, the audit reports were dispatched to all members without delay and, together with the documents submitted by the Executive Board, discussed in great detail by the Audit Committee and the Supervisory Board at their March meetings. At both these meetings, representatives of the auditor reported personally on the key outcomes of their audits and on services rendered beyond the scope of the auditing work. They were also available to answer further questions and provide information. According to the auditor, there were no circumstances that gave rise to a concern of bias. No major weaknesses in the risk early warning system or the accounting-related internal control system were reported. The Chairman of the Audit Committee also reported in detail on the audits of the Financial Statements and the Consolidated Financial Statements by the Audit Committee.

Following the final outcomes of the preliminary audit by the Audit Committee and its own review and discussion, the Supervisory Board raised no objections to the outcomes of the audit at its meeting on March 21, 2017 and approved the Financial Statements and Consolidated Financial Statements prepared by the Executive Board. The Financial Statements for 2016 are thus adopted according to § 172 (1) of the Stock Corporation Act (AktG). The Supervisory Board discussed in detail the Executive Board's resolution on the appropriation of profits, which provides for an increased dividend of 0.25 euros per no-par value share, and approved it following an internal review.

Composition of the Executive Board and Supervisory Board

On September 20, 2016, Dr. Michael Mertin announced his intention not to extend his contract beyond June 30, 2017. Dr. Michael Mertin has shaped and managed Jenoptik's successful growth over ten years and will remain in office up until the transfer to his successor in 2017. The Supervisory Board would like to take the opportunity to thank him for the benefits he has contributed to the company. The Supervisory Board has appointed Dr. Stefan Traeger to succeed Dr. Michael Mertin as Chairman of the Executive Board. Dr. Stefan Traeger is a very capable manager with both knowledge of Jenoptik's key technologies and markets, and with international experience, and will help to grow the future success of the Group.

We extend our thanks to the members of the Executive Board and to all employees for their outstanding personal dedication, and to our shareholders for the trust they place in us.

Jena, March 2017

On behalf of the Supervisory Board



Matthias Wierlacher
Chairman

Highlights 2016

New microscope cameras

Since Autumn, five camera models have completed the PROGRES GRYPHAX® product line for scientific microscopy applications.

Toll payment monitoring with Jenoptik solution

Jenoptik announces it will supply up to 600 systems to Toll Collect for future enforcement of truck toll payments on Germany's federal highways by 2018. The monitoring system with new optical and tracking sensors sets standards in toll monitoring.

Innovation award for new machine concepts

Jenoptik receives the "SPE Automotive Innovation Award" in the US state of Michigan. The Society of Plastic Engineers recognizes the company for its excellent machine concepts relating to bumper processing.

International orders for more traffic safety

With Jenoptik's support, one of the largest and most successful traffic safety projects in Canada is continued and expanded for at least five years. The police in Western Australia, too, will use camera systems from Jenoptik over the next seven years. Jenoptik supplies the Kingdom of Jordan with over 100 stationary traffic safety systems and software for analyzing traffic violations.

Major medical technology order

Jenoptik receives a major medical technology order and will supply lasers worth around 10 million euros to the US over three years. The lasers will be used in ophthalmology.

Change on the Executive Board

The Supervisory Board appoints Dr. Stefan Traeger the company's future Chairman of the Executive Board of JENOPTIK AG. Before, President & CEO Dr. Michael Mertin had announced he would not seek to extend his present contract beyond June 2017. Stefan Traeger is appointed for three years.





Investment in the USA

With a symbolic groundbreaking ceremony, Jenoptik commences construction of a modern technology campus in Rochester Hills, Michigan, in Spring 2016. The company is investing around 14 million euros to expand production, sales and service for metrology and laser machines in North America.

25 years of Jenoptik

In Summer, Jenoptik employees all over the world celebrate the 25th anniversary.

Jenoptik Dome Theatre

At the US location in Jupiter, Florida, Jenoptik tests and demonstrates laser projection lenses in a new dome, the "Jenoptik Dome Theater". These lenses are needed in areas such as digital cinemas, planetariums and theme parks.

Power-generating units for Patriot

In the second half of the year, Jenoptik receives several orders for the Patriot missile defense system, and in coming years will supply power generating units, spare parts, test equipment and further devices to American manufacturer Raytheon.

Order for radome production

British company BAE Systems orders protective domes for 28 Eurofighter Typhoon aircraft from Jenoptik. The radomes are made from fiber glass-reinforced plastic and are used as a cover for the sensitive radar system behind it.

The Jenoptik Share

Stock Market

2016 was a highly eventful trading year. Alongside commodity price developments, the Brexit vote, the US presidential election and ongoing discussion surrounding interest rates dominated the stock markets. Further terrorist attacks also influenced developments in global politics and on the financial markets. All eyes were also on China, which ensured considerable disquiet thanks to weak economic figures, particularly in the first half-year. On the other hand, it was also Chinese investors who were using acquisitions to drive their own country's transformation from being a supplier to a home of technology. In this process, German companies were increasingly targeted in 2016 – especially the automotive and machinery engineering industries heavily dominated by medium-sized companies and representing two core areas of expertise in the German economy. The low interest rate policies of the European Central Bank (ECB) also created incentives for acquisitions. In North America, by contrast, 2016 was marked by higher interest rates, strengthening the dollar and weakening the euro.

In view of this, the German Dax and TecDax indices, in particular, developed in very different ways. On January 1, 2016, the Dax started the year with a closing quotation of 10,283 points. Already in the second week of trading, it had fallen below 10,000 and at times even dipped under the 9,000 mark. In 2016, the Dax sunk to its lowest level of 8,753 points on February 11. This was thus its weakest start in 25 years. Following this, it progressed steadily upward, with minor fluctuations occasioned by the ECB's cash injections. At 11,481 points, the Dax reached its highest value on the last trading day of 2016, thus ending the year with an increase of 11.6 percent. The German technology index developed considerably less favorably: the TecDax started the year with a closing quotation of 1,794 points. In the first six months, the index displayed a sideways trend and was predominantly around the 1,600 point mark. Only from the middle of the year did it record growth, resulting in an annual high of 1,819 points on October 4. The TecDax closed at 1,812 points on the last trading day of the year, equivalent to an increase of 1.0 percent.

Share Trends

Jenoptik began 2016 with a closing price of 14.59 euros on the first day of trading. In the weeks that followed, the share fell with the market and, on February 11, reached its lowest closing price of 11.14 euros in the year. The Jenoptik share then saw a stable upward trend, climbing to push past the 16 euro mark. At the end of the third quarter, the share reached its annual high on September 30 with a closing price of 16.65 euros. It slipped following the announcement that the President & CEO of JENOPTIK AG, Dr. Michael Mertin, would not be extending his service contract when it expires in June 2017. The share could not compensate for these losses up to the end of the year and ended trading at 16.43 euros on December 30, 2016, an increase of 12.6 percent (prior year 35.8 percent). Total shareholder return, i.e. share price appreciation accounting for dividends paid in the fiscal year, came to 14.1 percent in 2016 (prior year 37.6 percent).

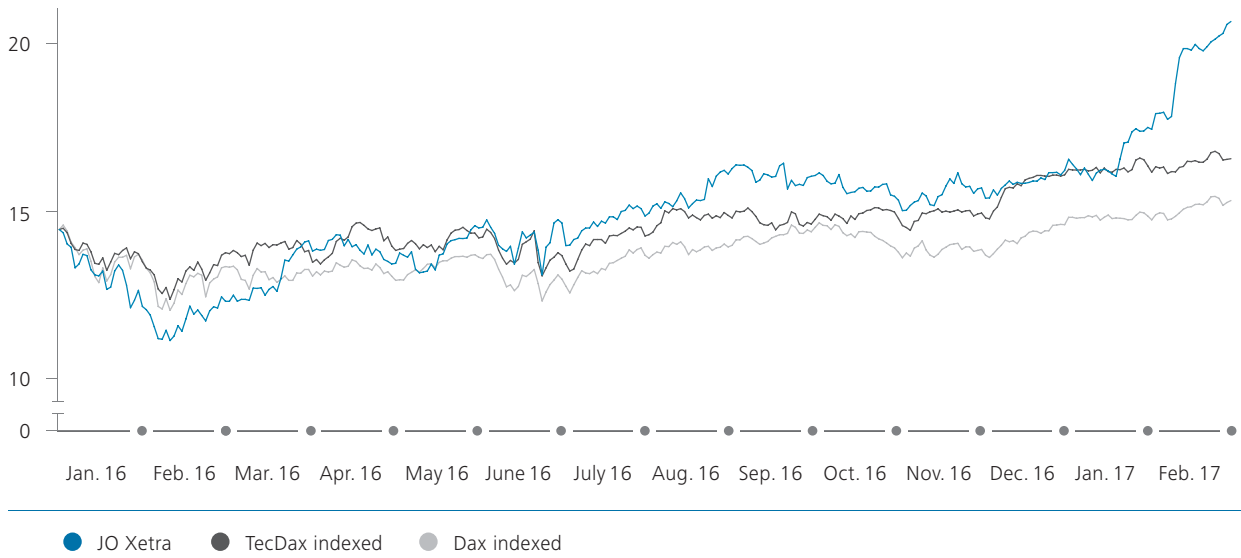
In January and February 2017, the mood on the international capital markets was still dominated by economic uncertainties and ongoing geopolitical events. Particularly at the start of the year, this resulted in volatile trading, such that key indices in part saw declines in value. At the beginning of the year the development of the Jenoptik share was very successful. The price rose constantly in the first two months of 2017, the share closed trading at 21.05 euros on February 28. All figures are Xetra closing prices. [G01](#) [G02](#)

Good share price performance in the 2016 fiscal year resulted in a concomitant rise in market capitalization of 116.4 million euros, based on the 57,238,115 issued shares, which came to 940.1 million euros at the end of the year (prior year 823.7 million euros). By February 28, 2017 the market capitalization increased to 1,204.9 billion euros.

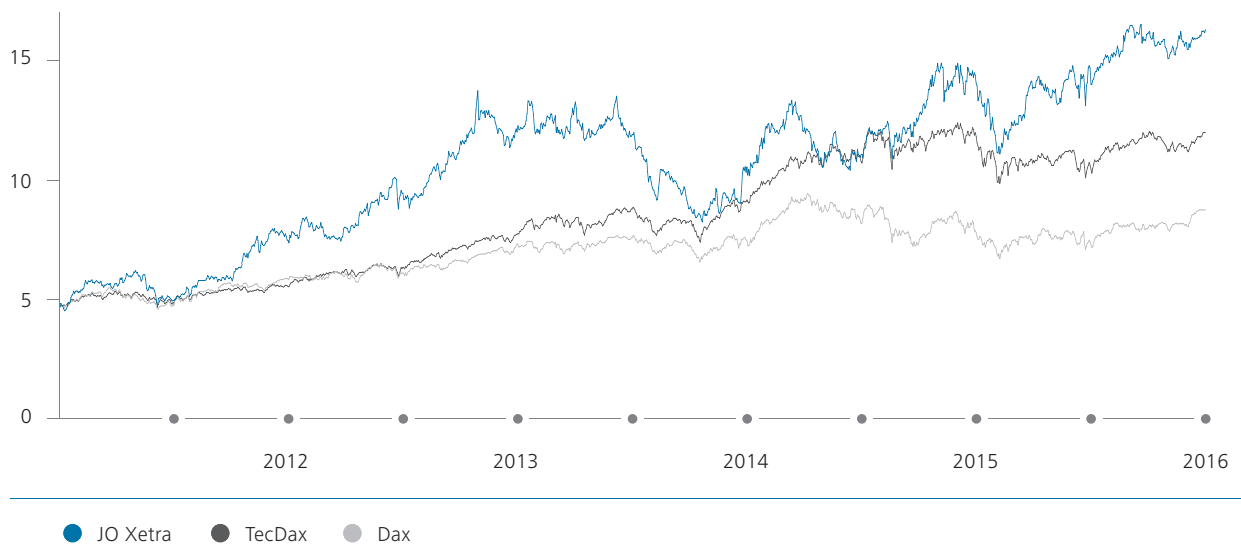


The latest information on the Jenoptik share and the development of the Jenoptik Group can be found on www.jenoptik.com or Twitter. Our financial reports can also be viewed using the "Jenoptik App for Corporate Publications".

G01 January 4, 2016 to February 28, 2017 (indexed, in euros)



G02 Jenoptik Share Price Development 2012 – 2016 (indexed, in euros)



The general decline in trading by institutional investors compared to the prior year was also reflected in the development of Jenoptik stock turnover in 2016. In 2016, the average number of Jenoptik shares traded per day on the Xetra, in floor trading and on Tradegate was 107,183. Trading volumes thus saw a considerable reduction of 52.3 percent (prior year 224,488 shares). In the TecDax ranking compiled by Deutsche Börse, the Jenoptik share fell three places to 26th position in terms of stock turnover. In terms of free float market capitalization, the company improved to 17th place, up from 18th. **T02**

Annual General Meeting

Over 350 shareholders, representing around 53 percent of nominal capital, and numerous guests were on hand for the JENOPTIK AG Annual General Meeting on June 8, 2016 in Weimar. The Executive Board reported on the 2015 fiscal year and gave an outlook for 2016 and the company's ongoing strategic development. By a large majority, the shareholders formally approved the actions of the Executive Board and Supervisory Board and agreed to payment of a dividend and all the agenda items put to the vote.

Shareholder Structure

At the end of the fiscal year, the company's free float share was unchanged at 89 percent.



Throughout 2016, we received several voting right notifications from institutional investors on the purchase or sale of larger long stock positions; these were published by the company. **G03**

For more information, see the Notes in the Equity chapter and the Investors/Share/Voting rights announcements section of www.jenoptik.com.

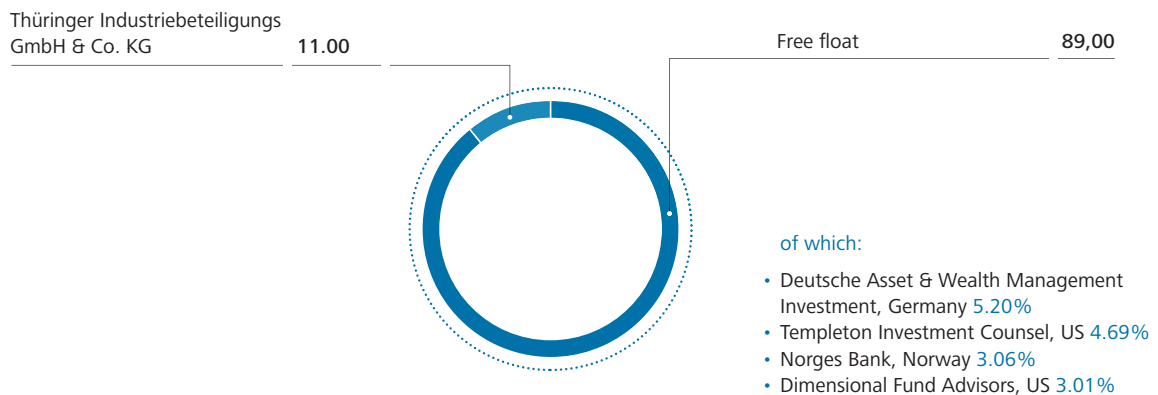
T01 Jenoptik Share Information

ISIN DE0006229107 – WKN 622910 – Ticker symbol JEN – Reuters Xetra JENG.DE – Bloomberg Xetra JEN GR

Listed in the following indices:

TecDax – CDax – HDax – Dax International Mid 100 – Prime All Share – Technology All Share – MIDCAP Market – different Dax sector and sub-sector indices

G03 Shareholder Structure (as of February 28, 2017) in %



Dividend

The Jenoptik management aspires to a policy of dividend reliability and continuity in which shareholders – as in the last five years – receive payment of a dividend in line with the company's success. At the same time, sufficient cash and cash equivalents to finance the operating business, a robust equity position and the use of acquisition opportunities to secure the lasting growth of the company are also in the interests of the shareholders. The Executive and Supervisory Boards of JENOPTIK AG therefore review their dividend recommendation with considerable prudence every year. In the past fiscal year, Jenoptik paid a dividend of 0.22 euros per share (prior year 0.20 euros)

to its shareholders for 2015. In the new year, too, the Executive Board and Supervisory Board will maintain their dividend policy. Particularly in view of very successful growth, the two boards will propose an increased payment of 0.25 euros per share to the 2017 Annual General Meeting. Subject to agreement at the Annual General Meeting, a dividend payment of 14.3 million euros will produce a payout ratio in relation to shareholder earnings of 24.9 percent (prior year 25.4 percent). **T03**

T02 Jenoptik Share Key Figures

	2016	2015	2014	2013	2012
Closing price (Xetra end-year) in euros	16.43	14.39	10.37	12.35	7.38
Highest/lowest price (Xetra) in euros	16.65/11.14	15.01/10.22	13.61/8.26	13.84/7.46	7.99/4.50
Performance absolute in euros/relative in percent	1.84/12.6	3.79/35.8	-1.83/-15.0	4.64/60.3	2.72/58.4
Issued no-par value bearer shares (31/12) in millions	57.24	57.24	57.24	57.24	57.24
Market capitalization (Xetra end-year) in million euros	940.1	823.7	593.6	706.9	422.5
Average daily trading volume (shares) ¹⁾	107,183	224,488	167,876	135,827	121,486
P/E ratio (based on highest price/based on lowest price)	16.7/11.1	17.3/11.8	18.6/11.3	16.9/9.1	9.1/5.1
Operating cash flow per share in euros	1.91	1.60	0.90	1.17	1.41
Group earnings per share in euros	1.00	0.87	0.73	0.82	0.88

Source: Deutsche Börse; takes into account trading on Xetra, in Frankfurt, Munich, Berlin, Düsseldorf, Hamburg, Hannover and Stuttgart as well as on Tradegate

T03 Key Dividend Figures

	2016	2015	2014	2013	2012
Dividend per share in euros	0.25	0.22	0.20	0.20	0.18
Payout amount in million euros	14.3	12.6	11.4	11.4	10.3
Dividend yield in % ¹⁾	1.5	1.5	1.9	1.6	2.4
Payout ratio in % ²⁾	24.9	25.4	27.5	24.3	20.5
Total Shareholder Return	14.1	37.6	-13.4	62.9	62.3

¹⁾ based on year-end-price

²⁾ based on group earnings attributable to shareholders

Capital Market Communications

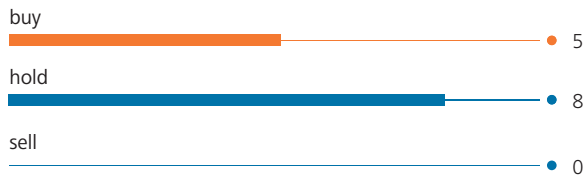
We provide all stakeholders with frank and reliable information as a matter of course. We publish comprehensive and up-to-date information on the development of our business, while also seeking an active exchange with others. One of our central concerns is to increase transparency and boost trust in the company by engaging in ongoing dialog.

In the 2016 fiscal year, we attended a total of nine (prior year 13) capital market conferences at international financial centers such as Frankfurt/Main, London, Zurich and other cities. The company also held 18 (prior year ten) roadshows in Austria, Denmark, Finland, France, Germany, Italy, Luxemburg, Switzerland, the UK and the US. Jenoptik held two analyst conferences in Frankfurt/Main to mark the reporting of its annual and half-year figures. During conference calls on the publication of the annual and quarterly financial statements and in numerous individual conversations, the Executive Board and the investor relations team explained the development of business, key

figures and strategy to institutional investors, analysts and journalists. An increasing number of investors also took the opportunity to tour Jenoptik's sites.

Fourteen analysts (prior year 16) published regular recommendations on the Jenoptik share in 2016: Baader Helvea, Bankhaus Lampe, Commerzbank, Deutsche Bank, DZ Bank, HSBC, Independent Research, Kepler Cheuvreux, LBBW, Bankhaus Metzler, M.M. Warburg, Montega, Oddo Seydler Bank and Steubing Equity. On December 31, 2016, the average target price of the Jenoptik share as assessed by analysts was 16.35 euros (prior year 14.72 euros). After publication of the preliminary figures 2016 some analysts increased their price target, so that the average target price came to 18.41 euros. **G04**

G04 Analyst Recommendations (as of February 28, 2017)



Corporate Governance

*part of the Combined Management Report

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We manage Jenoptik responsibly, transparently and with a focus on lasting value enhancement. In our eyes, good corporate governance is therefore a key basis of our business success. It boosts all stakeholders' trust in our company.




Corporate Governance Report

In the following Corporate Governance Report, the Executive Board and Supervisory Board are reporting in accordance with Point 3.10 of the German Corporate Governance Code ("Code") in the version dated May 5, 2015. We also consider the "Remuneration Report" (from page 47) to be a part of the Corporate Governance Report.



The Corporate Governance Statement as well as the current declaration of conformity, along with those of previous years, are permanently accessible on our website at www.jenoptik.com under the category Investors/Corporate Governance.

The [Corporate Governance Statement](#)  in accordance with § 289 a and § 315 (5) of the German Commercial Code (HGB) is an unaudited part of the Combined Management Report. It contains the declaration of conformity in accordance with § 161 of the German Stock Corporation Act (AktG), information on methods of corporate governance, a description of the functions of the Executive Board and Supervisory Board, the structure and function of the committees of the Supervisory Board, as well as the specification of the target figures for the proportion of women in the company.

Corporate Governance

The actions of the Executive and Supervisory Boards of JENOPTIK AG are determined by the principles of responsible and value-based corporate governance. The management and supervisory bodies see good corporate governance as the foundation for a sustained increase in the company value. This promotes trust in Jenoptik on the part of shareholders, business partners, employees and the general public, and allows for the appropriate management of risks. The President & CEO of JENOPTIK AG, Dr. Michael Mertin, has been a member of the Government Commission for the German Corporate Governance Code since 2013. As a member of the Commission, he places particular importance on intensive dialog with politicians and members of society as well as the management of other companies on topics of good corporate governance.

The Executive and Supervisory Boards structure their policies to adhere to the recognized standards. They support the recommendations of the Code and support the statement in its preamble that a well-founded deviation from a recommendation made by the Code may definitely be in the interest of good corporate governance.

The Executive and Supervisory Boards issued their declaration of conformity in adherence with § 161 of the German Stock Corporation Act (AktG) on December 14, 2016. Jenoptik has also followed the majority of the suggestions contained in the Code.

If changes should arise in the future, the declaration of conformity will be updated during the year.

Over the past fiscal year, the Executive Board and Supervisory Board have also been occupied with the further development of corporate governance, with particular reference to the alterations brought about by the European Commission's Market Abuse Regulation as well as the Statutory Auditor Reform Act (Abschlussprüferreformgesetz).

Declaration of Conformity by the Executive Board and Supervisory Board of JENOPTIK AG in the 2016 Fiscal Year

Under § 161 (1)(1) of the German Stock Corporation Act (AktG), the Executive and Supervisory Boards of a stock-listed company are required to issue a declaration once a year that the recommendations of the "Government Commission on the German Corporate Governance Code" as published by the Federal Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) have been and are complied with, or to indicate which recommendations have not been or are not applied and why not.

The Executive and Supervisory Boards of JENOPTIK AG support the recommendations of the "Government Commission on the German Corporate Governance Code" and state that pursuant to § 161 (1)(1) of the German Stock Corporation Act (AktG):

Since the last declaration of conformity on December 9, 2015, the recommendations of the "Government Commission on the German Corporate Governance Code" ("Code") in the version dated May 5, 2015 have been followed and will be followed in the future with the following exceptions stated under 1 to 4:

1. Under Point 4.2.3 (2)(6) of the Code, the remuneration of the Executive Board shall be capped both overall and in respect of its variable components.

This new recommendation, which was added to the Code dated May 13, 2013 has not been followed and will not be followed for the time being. However, it is planned to follow this recommendation when new contracts with members of the Executive Board will be concluded.

The system of variable remuneration for the members of the Jenoptik Executive Board is described in the Remuneration Report on pages 53 to 57 of the 2015 Annual Report. The variable remuneration is capped. To ensure a long-term incentivizing effect, half is payable in the form of virtual shares, which are only paid out after a holding period of four years. This ensures that it is highly consistent with the interests of the shareholders in a sustainable development of the company and the share price. The conversion of the portion of the variable remuneration granted in the form of virtual shares is based on the volume-weighted average price of the Jenoptik share over the last quarter of the year before last. Therefore, in the event of a rise in the share price, there is a theoretical possibility that, on the allocation date, the value of the total variable remuneration will exceed the cap. However, as a rule, this will require a high level of target attainment and a positive development of the share price. A negative share price development results in the opposite effect. The Executive and Supervisory Boards are of the opinion that applying a price from the year before last is appropriate as this price is the basis for measuring the share price development of the subsequent year relevant for remuneration. In this respect, the Executive Board also participates in share price development like each shareholder. There is no cap on the payment of virtual shares. The Executive and Supervisory Boards are of the opinion that by applying a volume-weighted average annual rate, "windfall profits" are avoided when determining the amount to be paid.

2. In accordance with Point 4.2.3. (4) of the Code, care should be taken in concluding Executive Board contracts to ensure that payments made to a member of the Executive Board upon premature termination of his/her contract including fringe benefits do not exceed the value of two years' compensation (severance payment cap) and compensate for no more than the remaining term of the contract. The severance payment cap shall be calculated on the basis of the total remuneration for the past full fiscal year and, if appropriate, the expected total remuneration for the current fiscal year as well.

This recommendation has not been followed with respect to the President & CEO, Dr. Michael Mertin, who has served as a member of the Executive Boards since October 1, 2006; in this respect, the status quo was upheld. Dr. Mertin will not extend his Executive Board contract of employment so this will expire in mid 2017 as scheduled. In the contract of employment for the Chief Financial Officer, this recommendation has been and will be followed in the future. It is planned to also comply with this recommendation when concluding contracts with new members of the Executive Board, therefore will be complied with in the future. Regarding the explanation for the previous deviation, we therefore refer to the declarations of conformity of the previous years.

3. In accordance with Point 5.4.6. (2)(2) of the Code, the remuneration of the members of the Supervisory Board shall be oriented towards sustainable growth of the enterprise if they are promised performance-related remuneration.

This recommendation has not been followed and will not be followed in the future. The Executive Board and Supervisory Boards take the view that the performance-related remuneration as stipulated in the Articles of Association is appropriate. Accordingly, members of the Supervisory Board will only receive performance-related remuneration in the amount of 10,000 euros or 20,000 euros if group earnings before tax exceed 10 percent or 15 percent of the group equity at the end of the fiscal year. If the return on equity is lower than 10 percent, there is no entitlement to remuneration beyond the fixed remuneration.

The Code does not define what is meant by sustainable corporate development. If the term was to be interpreted according to § 87 (1)(2) and (3) of the German Stock Corporation Act (AktG), performance-related remuneration components for Supervisory Board members should always have a calculation base which is several years in length. As this is not the case at Jenoptik, and due to the lack of clarity of the definition, we disclose a deviation from Point 5.4.6 (2)(2) of the Code as a precautionary measure. The members of the Supervisory Board are obliged to serve exclusively the interests of the company and are not affected in their decision-making process by the opportunity for variable remuneration and its amount. Just as for the members of the Executive Board, employees and shareholders, they profit from a generally sustainable development of the

company. The return on equity of 10 percent or 15 percent respectively which triggers payment of the variable remuneration is ambitious enough and was decided by the Annual General Meeting in June 2012 with almost 98 percent of the votes.

4. In accordance with Point 5.4.1. (2)(1) of the Code, the Supervisory Board shall specify a regular limit of length of membership in the Supervisory Board when naming specific targets regarding its composition.

This recommendation has not been followed not and will not be followed in the future. The Supervisory Board has decided not to specify a regular limit regarding the length of membership in the Supervisory Board. It is not consistently compatible with the procedure for elections of employee representatives to the Supervisory Board as stipulated in the Co-Determination Act.

December 14, 2016
JENOPTIK AG

On behalf of the Executive Board



Dr. Michael Mertin, President & CEO

On behalf of the Supervisory Board




Matthias Wierlacher, Chairman of the Supervisory Board

Shareholders and the Annual General Meeting

JENOPTIK AG shareholders exercise their rights at the Annual General Meeting which takes place at least once a year. They may either participate directly in the Annual General Meeting, or exercise their voting rights via a company-nominated proxy who is bound by the shareholder's instructions, via postal voting, or by authorizing a person of their choice. The shareholders are adequately supported by the company in this process. Each JENOPTIK AG share is accorded one vote. The reports, other documents and information required by law on the Annual General Meeting are available for inspection at the company's premises or on our website www.jenoptik.com in the Investors/Annual General Meeting category. Following the Annual General Meeting, the attendance figures, voting results and the speech by a representative of the Executive Board will also be published on the Internet.

Transparent Information

In its communication with the participants in the capital market as well as the general public, Jenoptik pursues the principle of providing them with equal, continual, prompt and comprehensive information in order to guarantee as much transparency as possible. The annual and interim reports are used to explain the Group's earnings, assets and finances in detail. In addition, important events and current developments are reported in ad-hoc announcements and press releases. These documents and further information are also available in German and English on the Jenoptik website at www.jenoptik.com. Shortly after the publication of the financial reports, conference calls are hosted with journalists, analysts and investors. Analyst conferences are also held to mark the publishing of our annual and half-yearly financial statements as well as an annual balance sheet press conference. 


In accordance with the statutory requirements of the Regulation on Market Abuse, inside information is published immediately insofar as JENOPTIK AG is not, in individual cases, exempt from this obligation. A working group established for this purpose evaluates individual facts for their ad-hoc relevance on a monthly basis and in event of specific concerns. This will ensure that any potential inside information is identified in good time and handled according to the statutory requirements. With the entry into force of the Market Abuse Regulation in the Summer of 2016, the internal Capital Markets Guideline, which regulates the essential obligations and responsibilities on the part of




For further information on the investor relations activities please refer to the section "The Jenoptik share"

board members and employees concerning inside information law, ad-hoc publicity, market manipulation and reportable securities transactions ("Directors' Dealings"), was adapted to the new statutory requirements.

Jenoptik immediately publishes major changes to its shareholder structure when it is informed that reportable voting rights thresholds have been reached, fallen below or exceeded. All publications are available on our website under the category Investors/Share/Voting rights announcements. Further information can also be found in the Notes in section 5.16 Equity.

Also published by Jenoptik are reportable securities transactions by the members of the Executive and Supervisory Boards in accordance with § 15 a of the German Securities Trading Act (WpHG) or, since July 3, 2016, Article 19 of the Regulation on Market Abuse. In the 2016 fiscal year, Ms Brigitte Ederer, member of the Supervisory Board, reported the purchase of 1000 shares. 

As of December 31, 2016, as in prior years, the Jenoptik Group maintained securities-oriented incentive plans in the form of virtual shares for the members of the Executive Board and parts of senior management. The principles of the system for allocation and issue of the virtual shares are chiefly identical for the beneficiaries and are described in the Remuneration Report  for the Executive Board.

As of December 31, 2016, the members of the Executive and Supervisory Boards held a combined total of 42,507 shares or derived financial instruments and thus less than 1 percent of the shares issued by the company.

Accounting and Auditing


The Consolidated Financial Statements as well as all consolidated interim financial statements are compiled in accordance with the International Financial Reporting Standards (IFRS), and the supplementary commercial regulations applicable under § 315a (1) German Commercial Code (HGB) as they are to be used in the European Union. JENOPTIK AG's financial statements are compiled in accordance with the requirements of the German Commercial Code (HGB). The Consolidated Financial Statements and the Financial Statements, including the Combined Management Report, are examined by the auditor. On June 8, 2016, the Annual General Meeting elected Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart ("Ernst & Young") as the auditor for the 2016 fiscal year on the recom-

mendation of the Supervisory Board. The election proposal was preceded by a tender for the appointment of auditors, on the basis of which the Audit Committee presented the recommendation to the Supervisory Board on the change of auditor. Ernst & Young took over auditing of the Annual and Consolidated Financial Statements for the first time in the 2016 fiscal year.

The auditors inform the Supervisory Board Chairman of any grounds for bias or disqualification, as well as of all important events and findings that emerge during the audit. This includes occasions when inaccuracies are established during the audit in the declaration of conformity submitted by the Executive Board and Supervisory Board in accordance with § 161 of the German Stock Corporation Act (AktG).

Before submitting the proposal for the election of the firm to the Annual General Meeting, the Supervisory Board received a declaration of independence from the auditing firm, stating that there were no employment, financial, personal or other links between Ernst & Young, its board members and audit managers on the one side and the company and its board members on the other, that could give rise to doubts about the independence of the auditor. Ernst & Young also reported in its declaration on the degree to which non-audit services have been provided for Jenoptik over the past fiscal year or which have been contractually agreed for the current year. In the summer of 2016, the Audit Committee defined a catalog of non-audit services for which it has given its pre-approval. This catalog is checked regularly. The position of responsible auditor for the auditing of the Consolidated Financial Statements and the Financial Statements as well as the Combined Management Report was taken over by Michael Blesch in 2016.

Internal Auditing, Risk and Opportunity Management, Compliance

With the objective of improving business processes, Internal Auditing at Jenoptik provides objective auditing and consulting services for the Executive Board and the Supervisory Board. 

The continual and responsible evaluation of opportunities and risks which may result from entrepreneurial activity is, for Jenoptik, one of the basic principles of responsible company management. The goal of our opportunity and risk management is to formulate a strategy or define measures for creating an optimum balance between growth and return targets on the one side and the associated risks on the other.



Directors' Dealings reports from prior years can be found at www.jenoptik.com under the category Investors / Corporate Governance / Directors' Dealings



Further information on the remuneration system can be found in the Remuneration Report and Notes.




Detailed information on opportunity and risk management and on internal auditing can be found in the Risk and Opportunity Report.

Compliance with national and internationally recognized compliance requirements is an integral part of risk prevention and the processes of Jenoptik's risk and compliance management system. In order to improve employee awareness, special online training courses and classroom events on subjects relevant to compliance, such as anti-corruption, anti-trust law and our code of conduct, are regularly held at both the German and foreign business units. The aim of this is to achieve company-wide uniform understanding of our compliance standard. To date, more than 3,000 employees around the world have already taken part in online courses on the principles of compliance and the Jenoptik Code of Conduct. The target audience of the training courses is adapted in line with the respective content of the training courses. Employees may direct all questions relating to risk or compliance issues at Jenoptik to the central Risk and Compliance Management department or use a help desk on the intranet.




Further information on compliance and supplier management can also be found in the section "Sustainability".

In accordance with international standards, a supplier code of conduct  requires Jenoptik's suppliers to comply with a number of different compliance requirements. This ensures that Jenoptik only cooperates with those business partners who meet all of these requirements.

The corporate guidelines implemented within the Jenoptik Group with regard to important company processes are continually being reexamined, expanded and updated. They are published on the intranet. This gives Jenoptik a system of processes and controls which enables it to identify any possible deficits in the company and to minimize or eliminate them using appropriate measures at an early stage.

Code of Conduct

Jenoptik views the pursuit of sustainable economic and social activity while observing prevailing legislature as a top priority and a major part of its corporate culture. Trust, respect, fairness, honesty and integrity in all its dealings with employees, business partners, shareholders and the general public are therefore essential criteria. The most important principles of conduct are compiled in a Code of Conduct.  This is equally binding for all employees of the Jenoptik Group, setting minimum stan-



For the Code of Conduct see www.jenoptik.com, in the category Investors / Corporate Governance.

dards and serving as a yardstick to ensure a high level of integrity, as well as guaranteeing ethical and legal standards within our company.

Furthermore, each employee receives a copy of the Code of Conduct when hired and may lodge a personal complaint or draw attention to circumstances which are indicative of violations of the code of conduct or of statutes and guidelines. In the interests of the company and all its employees any possible violations are investigated and their causes eliminated. In addition, our six corporate values – performance, responsibility, change, integrity, trust and openness – form the basis for the further development of a uniform and strong Jenoptik corporate culture across the Group.

Objectives for Composition of the Supervisory Board

In accordance with Point 5.4.1 of the German Corporate Governance Code, the Supervisory Board of JENOPTIK AG is composed in such a way that, as a whole, it is endowed with the knowledge, ability and experience necessary to carry out its tasks in an orderly manner. Taking into consideration the size and purpose of the company as well as the international orientation of the Jenoptik Group, the Supervisory Board has also laid down objectives for its composition which take into consideration the idea of diversity.

So the board will ensure that, at all times, it includes members who particularly fulfill the criterion of internationality, such as foreign citizens or those with relevant experience abroad. In addition, the members of the Supervisory Board will play neither an advisory nor an executive role with customers, suppliers, creditors or other business partners of JENOPTIK AG, inasmuch as this is the basis of a significant and not merely temporary conflict of interest. One of the objectives for the composition of the Supervisory Board is also that at least half of the shareholder representatives on the Supervisory Board have an independent status. No persons are to be considered who, at the time of the election, have already reached the age of 70.


The Supervisory Board will also ensure that at least four seats are held by women, thereby fulfilling the quota required by the Act for Equal Participation of Women and Men in Management Positions in the Private Sector and Public Sector.

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With regard to the length of membership on the Supervisory Board, the Board has decided not to establish a regular limit applicable to all members as it is not consistently compatible with the process provided by the Codetermination Act for election of employee representatives to the Supervisory Board.

The composition of the Supervisory Board on December 31, 2016 is in line with the previously described objectives. There are currently four female members of the Supervisory Board. At least four members of the board can call on extensive international experience. The Supervisory Board is also characterized by a wide variety of professional expertise, reflecting the broad scope of its members' career backgrounds. It is the view of the board that all current shareholder representatives are independent in the sense of the regulations of the Code.  However, individual members do exercise an executive role at other companies with which Jenoptik has a business relationship. However, in Jenoptik's opinion, all of these cases were no significant transactions conducted under the same conditions as would have been maintained with a third-party company. Consequently, it is the belief of the Supervisory Board that they do not affect the independence of the members. The rules relating to retirement age are taken into consideration.

The Supervisory Board will recommend the best possible candidates, from its point of view, to the Annual General Meeting, taking into account their expertise and personal integrity. At the end of the Annual General Meeting on June 7, 2017, the terms of office for both the elected employee and shareholder repre-

sentatives on the Supervisory Board will end. The principle of joint fulfillment was vetoed, so that in the future at least two women must be represented on both the shareholder and the employee sides. Prior to preparation for the election of the shareholder  representatives at the Annual General Meeting, the Nomination Committee of the Supervisory Board convened and adopted a requirements profile for the candidates for the election by the Annual General Meeting, taking into account the targets approved by the Supervisory Board for its composition.

Additional information on the Executive Board and Supervisory Board, especially on their work procedures and their members' other responsibilities, on D & O liability insurance and on the specification of target figures for the quota of women can be found in the Supervisory Board Report, in the Notes and in the Corporate Governance Statement published on the Internet.



More detailed information on the specification of target figures for the quota of women can be found at www.jenoptik.com in the category Investors / Corporate Governance. in the Corporate Governance Statement



For more detailed information on the Supervisory Board see Note 11.2

Information and Notes relating to Takeover Law

Explanatory report in accordance with § 176 (1)(1) of the Stock Corporation Act (AktG) and reporting on § 289 (4) and § 315 (4) of the German Commercial Code (HGB) in Accordance with the Takeover Directive Implementation Act

This information is part of the Combined Management Report.

Composition of the Share Capital

As of the balance sheet date on December 31, 2016, the subscribed capital totaled 148,819,000 euros (prior year 148,819,000 euros). It is divided into 57,238,115 no-par value bearer shares (prior year 57,238,115). Each share is therefore worth 2.60 euros of the nominal capital.

The same rights and obligations apply to all the shares of the company. Each share represents one vote in the Annual General Meeting and is the determining factor for the shareholders' proportion of company profits (§ 58 (4), § 60 of the Stock Corporation Act). The shareholders' rights also include the subscription right to shares in the event of increases in capital (§ 186 of the Stock Corporation Act). In addition, the shareholders are entitled to administrative rights, e.g. the right to participate in the Annual General Meeting and the authority to put forward questions and motions and to exercise their right to vote. The shareholders' additional rights and duties are defined in the Stock Corporation Act, in particular in § 12, 53 et seq., 118 et seq. Under § 4 (3) of the Articles of Association, any claim by a shareholder to the securitization of his/her shares is excluded.

Restrictions relating to Voting Rights or the Transfer of Shares

In accordance with § 136 (1) of the Stock Corporation Act, legal restrictions affecting voting rights exist with respect to votes for annual approval regarding shares which are held directly or indirectly by members of the Executive and/or Supervisory Boards. Violations of reporting obligations as specified in § 21 (1) or (1 a) and § 25 (1) or § 25 a (1) of the Securities Trading Act (WpHG) may result in a loss of voting rights, at least temporarily, in accordance with § 28 of the Act.

Direct or Indirect Participations in the Capital Exceeding 10 Percent of the Voting Rights

Information on direct or indirect investments in capital which exceed 10 percent of the voting rights can be found in the Group Notes under item 5.12, "Equity", from page 157 on.

Holders of Shares with Special Rights Conferring Controlling Powers

There are no shares of JENOPTIK AG that entail special rights.

Form of Controlling Voting Rights if Employees Own Shares and do not Directly Exercise their Control Rights

There are no employee shareholdings and therefore no resultant control of voting rights.

Statutory Regulations and Provisions of the Articles of Association relating to the Appointment and Dismissal of Executive Board Members and Changes to the Articles of Association

The appointment and dismissal of Executive Board members is carried out exclusively in accordance with the statutory regulations of § 84 and § 85 of the Stock Corporation Act and § 31 of the Codetermination Act (MitbestG). In accordance with this, the Articles of Association stipulate in § 6 (2) that the appointment of members to the Executive Board, the revocation of their appointment and the conclusion, modification and termination of contracts for services with members of the Executive Board shall be carried out by the Supervisory Board. In accordance with § 31 (2) of the Codetermination Act, a majority of at least two thirds of the members of the Supervisory Board is required for the appointment of Executive Board members. Revocation of appointment as a member of the Executive Board is only possible for serious due cause (§ 84 (3) of the Stock Corporation Act).

§ 6 (1)(1) of the Articles of Association stipulates that the Executive Board of JENOPTIK AG must comprise at least two members. In the absence of a required Executive Board member, in urgent cases the court must appoint the member on the application of a stakeholder (§ 85 (1)(1) of the Stock Corporation Act). The Supervisory Board can appoint a Chairman of or Spokesperson for the Executive Board (§ 84 (2) of the Stock Corporation Act, § 6 (2)(2) of the Articles of Association). In accordance with § 119 (1)(5), § 179 (1)(1) of the Stock Corporation Act,

changes to the content of the Articles of Association are passed by the Annual General Meeting. However, changes relating purely to the wording of the Articles of Association can be passed by the Supervisory Board in accordance with § 179 (1)(2) of the Stock Corporation Act and § 28 of the Articles of Association. This also includes the corresponding change to the Articles of Association following the utilization of the Authorized Capital 2015 and of the Conditional Capital 2013. Under § 24 (1) of the Articles of Association, resolutions by the Annual General Meeting require a simple majority of the votes cast unless stipulated otherwise by law. In those cases in which the law requires a majority of the nominal capital represented for a resolution to be passed, a simple majority of the nominal capital represented is sufficient, unless specified otherwise by the law.

Authority of the Executive Board to Issue and Buy Back Shares

In accordance with § 4 (5) of the Articles of Association, the Executive Board is authorized until June 2, 2020 to increase the nominal capital of the company by up to 44.0 million euros through one or multiple issues of new, no-par value bearer shares against cash contributions or contributions in kind ("Authorized Capital 2015") with the consent of the Supervisory Board. The Executive Board is authorized, with the approval of the Supervisory Board, to exclude the subscription rights of shareholders (a) for fractional amounts; b) in the event of capital increases against contributions in kind, in particular also as part of corporate mergers or for the acquisition of companies, parts of companies or investments in companies (including an increase in existing investment holdings) or other depositable assets related to such an acquisition project, including receivables from the company; (c) in the event of capital increases in return for cash contributions, to the extent that the portion of the nominal capital attributable to the new shares, taking into account resolutions at the Annual General Meeting and/or the utilization of other authorizations to exclude the subscription right in direct or corresponding application of § 186 (3) (4) of the Stock Corporation Act since the date on which such authorization becomes effective, neither exceeds a total of ten percent of the nominal capital as of the date of registration for such authorized capital, nor exceeds a total of ten percent of the nominal capital in existence as of the date of issuance of the new shares and the issue price of new shares is not significantly below the stock exchange price; (d) for the issuance to employees of the company and of companies in which Jenoptik has a majority interest.

All aforementioned authorizations to exclude subscription rights are limited to a total of 20 percent of the nominal capital available at the effective date of this authorization – or, if this value is lower, to 20 percent of the nominal capital at the time this authorization is exercised. This limit of 20 percent includes shares that (i) are sold for the purpose of servicing option and/or convertible bonds that were or could still be issued during the period of validity of authorized capital to the exclusion of subscription rights or (ii) are sold by the company as treasury shares during the period of validity of authorized capital to the exclusion of subscription rights. Decisions on the details of the issuance of new shares, in particular their conditions and the content of rights of the new shares, are taken by the Executive Board, with the consent of the Supervisory Board.

In accordance with § 4 (6) of the Articles of Association, the share capital of the entity will be conditionally raised by up to 28.6 million euros through issuance of up to 11,000,000 new no-par value bearer shares ("Conditional Capital 2013"). The conditional capital increase will be implemented only to the extent that

- the creditors/owners of option certificates or conversion rights issued up to June 3, 2018 by the company or a domestic or foreign company in which the company has a direct or indirect majority interest, pursuant to the resolution of the Annual General Meeting dated June 4, 2013, exercise their options or conversion rights and/or
- the creditors of the issued convertible bonds obliged to exercise their conversion rights which were issued by the company or a domestic or foreign company in which the company has a direct or indirect majority stake, on the basis of the resolution of the Annual General Meeting on June 4, 2013, fulfill their conversion rights by June 3, 2018

and neither treasury shares are used nor is payment made in cash. Because a mutual offset with other authorizations to exclude subscription rights was not yet provided for in the resolution regarding authorization to issue option and/or convertible bonds at the 2013 Annual General Meeting, the Executive Board and the Supervisory Board undertook a voluntary commitment in 2015 to the effect that any use of the authorization to issue option and/or convertible bonds to the exclusion of subscription rights be subject to the 20-percent limit applicable to the authorized capital, such that, in the event of the issue of option and/or

convertible bonds without subscription rights, any shares created without subscription rights from the Authorized Capital 2015 are to be taken into account. The Executive Board is authorized to determine additional details on the issuance of the conditional capital increase.

Under a resolution passed by the Annual General Meeting on June 12, 2014, the Executive Board is authorized up to June 11, 2019 to purchase treasury no-par value bearer shares not exceeding a proportion of 10 percent of the nominal capital at the time of the resolution for purposes other than trading in its own shares. The purchased treasury shares together with treasury shares that the entity had already purchased and still holds (including the attributable shares in accordance with §§ 71a et seq. of the Stock Corporation Act) may not exceed 10 percent of the share capital of the entity. The authorization may be exercised in whole or in part, on a one-off or repeat basis and for one or more authorized purposes. The purchase and sales of treasury shares may be exercised by the company or, for specific authorized purposes, by dependent companies, by companies in which the company holds a majority interest, or by third parties for its or their account. At the decision of the Executive Board, acquisition is by purchase, subject to compliance with the principle of equal treatment (§ 53 a of the Stock Corporation Act), on the stock exchange or by means of a public offering or a public invitation to the shareholders to submit an offer for sale. Further details regarding the buyback of shares are described in the invitation to the Annual General Meeting 2014, accessible on our website at www.jenoptik.com in the category Investors/Annual General Meeting. As of December 31, 2016, the company had no treasury shares.

Key Agreements in the Event of a Change of Control Resulting from a Takeover Bid

Clauses in contracts concluded by JENOPTIK AG, which apply in the event of a change of control within the ownership structure of JENOPTIK AG following a change of control, exist for various financing agreements with a total utilized volume of approximately 125.7 million euros (prior year 138.6 million euros).




Detailed information on the compensation schemes agreed in this case can be found in the Remuneration Report.

The conditions for accepting a change of control are formulated differently in each of the loan agreements. For the debenture loan with a total utilized volume of 114 million euros, a change in control gives the lenders the right to special termination of the loans in the amount corresponding to their share of the loan and to demand the immediate repayment of this sum plus the interest accumulated up to the repayment date. For one installment of these debenture loans with a total utilized volume of 11 million euros, a change of control applies if one or more persons acting in concert, with the exception of the existing main shareholders on the date the contract is concluded, acquire more than 30 percent of the outstanding nominal capital or more than 30 percent of the voting rights, directly or indirectly at any time. Regarding the other installments of the debenture loans, this is only the case if the figure exceeds 50 percent of the nominal capital or voting rights.

Under the revolving syndicated loan, every change in the current shareholder base of JENOPTIK AG, under which at least 50 percent of the shares or voting rights are held by one or several persons acting in concert as described in § 2 (5) of the Securities Acquisition and Takeover Act (WpÜG), results in the possibility of refusing further disbursements and immediate termination of loan commitments in full or in part within up to 15 banking days following notification of the change of control and any disbursements executed becoming due, in full or in part, with an execution period of 16 banking days, including subsidiary credit lines and accrued interest. The syndicated loan has a total volume of 230 million euros, of which 11.7 million euros had been utilized by December 31, 2016 (prior year 13.6 million euros).

Compensation Agreements by the Company with Executive Board Members or Employees in the Event of a Change of Control

In the event of a change of control, the members of the Executive Board are authorized to terminate their contract of service through acquisition of at least 30 percent of voting rights by a third party.  There are no comparable agreements with employees of the company.

Remuneration Report

Remuneration for the Executive Board

The Remuneration Report below sets out the basic principles of the remuneration system for the members of the Executive Board and Supervisory Board and gives details of the total remuneration for the individual members.

This information is part of the Combined Management Report.

Executive Board Remuneration System

The remuneration for the Executive Board of Jenoptik consists of non-performance-related and performance-related components. The non-performance-related components include the fixed remuneration, fringe benefits and pension benefits. Half of the performance-related bonus is paid in cash, the other half in the form of virtual shares. The long-term incentive component (LTI), based on virtual shares, incentivizes the long-term approach and supports orientation of the actions of the Executive Board towards a sustained increase in the company value without encouraging unnecessary risks to be taken.

The criteria for defining the appropriateness of the remuneration for the Executive Board of Jenoptik are primarily the tasks of the members of the Executive Board, their personal performance, the economic situation, the success of the company and its future prospects. Standard practice within the comparative environment and in relation to established comparative groups within the company is another factor in the remuneration.

Following preparation by the Personnel Committee, the Supervisory Board is responsible for defining the structure of the remuneration system and the composition of the remuneration for the individual Executive Board members. The contractual provisions of the contracts of employment with both members of the Executive Board are essentially identical, unless specified otherwise below. The contracts of employment with the two members include an agreement for a regular review of the total remuneration.

Fixed remuneration. The non-performance-related basic salary is paid on a pro rata basis each month. It is currently 600 thousand euros p.a. for Dr. Michael Mertin and 400 thousand euros p.a. for Hans-Dieter Schumacher, payable respectively in twelve equal installments at month-end.

Performance-related variable remuneration (bonus). The performance-related bonus is based on personal target agreements concluded in the first quarter of each calendar year by JENOPTIK AG, represented by the Supervisory Board, and the respective member of the Executive Board, and is settled in the following year. The target agreement is oriented towards the company's sustainable business development. The bases for this are:

- a) the group EBIT, free cash flow of the Group, group net income for the year
- b) share price-related, strategic and operating targets for the corresponding year and of a long-term nature as well as
- c) an individual performance assessment.

50 percent of the total bonus is linked to financial targets, 25 percent to short and medium-term operational targets and 25 percent to medium and long-term strategic objectives.

The variable remuneration has an upper limit of 150 percent of target attainment.

Half of the bonus is paid in cash, the other half in the form of virtual shares, which are only paid out as a long-term incentive at the end of the fourth subsequent year after allocation. The half of the variable remuneration payable in cash is due on adoption of the respective financial statements of JENOPTIK AG and the final auditing and approval of the consolidated financial statements by the Supervisory Board.

The virtual shares are allocated within the context of determining the level of target attainment. Their number is based on the volume-weighted average closing price of the Jenoptik share in the fourth quarter of the calendar year before last ("allotment rate"). The allotment rate for the virtual shares allocated for 2016 is 14.118 euros.

Payment is made at the end of the fourth subsequent year. The subsequent year is the calendar year following the calendar year for which the target agreement was concluded. The payment amount is calculated on the basis of the volume-weighted average closing price of the Jenoptik share at the end of the full fourth subsequent year. This means that, in 2017, a member of the Executive Board will receive payment for the virtual shares allocated to him in 2013 for 2012 on the basis of the volume-weighted average price of the Jenoptik share in 2016. Throughout the entire four-year period, the virtual shares participate in positive and negative share price developments, so that poor company development can still reduce the value of the variable remuneration earned in one year up to four years later; for example, if the average rate of the fourth full year relevant for the payment is below the allotment price, it is in economic terms a retroactive reduction in remuneration. This ensures that the interests of the members of the Executive Board and the shareholders are aligned for the sustained successful development of the Jenoptik Group and its value.

The calculation of the bonus is not linked to the amount or payment of the dividend, however, dividend payments made to shareholders of JENOPTIK AG are taken into account by additional virtual shares being granted in the equal amount of the dividends in the interest of equality between virtual and real shares.

Under Point 4.2.3 (2) (6) of the German Corporate Governance Code ("Code"), there are to be maximum limits to the total remuneration for the members of the Executive Board and in

respect of their variable portions. In the declaration of conformity dated December 14, 2016, Jenoptik gave an explanation for a deviation from these recommendations with reference to possible effects from calculating the number of virtual shares and their value development; this explanation and the reasons for it are given on page 38 ff. of the Annual Report.

The employment contracts of the members of the Executive Board contain provisions for the potential consequences of certain circumstances, in particular conversion and capital measures on the virtual shares granted.

In the year in which the contract of employment with the member of the Executive Board expires, the bonus is paid pro rata temporis, based on the actual target attainment and without division into cash bonus and virtual shares. Payment for virtual shares allocated at the time of the termination of employment, for which the fourth subsequent year has not yet expired, is made at the value based on the average share price over the last twelve months prior to the date of termination of employment.

Agreements relating to [occupational retirement benefits](#) were concluded with both members of the Executive Board. The pension commitment is based on a pension fund reinsured by a life insurance policy. This is a defined contribution scheme within the framework of a provident fund. The annual and the long-term costs for Jenoptik are clearly defined. On reaching retirement age, the payments will no longer affect Jenoptik. The contributions for the provident fund in 2016 totaled 240 thousand euros for Dr. Michael Mertin and 160 thousand euros for Hans-Dieter Schumacher.

[Fringe benefits](#) exist in the form of an occupational indemnity insurance for Dr. Michael Mertin and accident insurance for both Dr. Mertin and Hans-Dieter Schumacher. The Executive Board members are also entitled to the private use of a company vehicle. There is a third party financial loss-liability insurance for

the members of the Executive Board. This comprises the contractual obligation to pay a deductible amounting to 10 percent of the loss per claim, however up to a maximum sum of 150 percent of the fixed salary of the Executive Board member in question.

In the event of a [change of control](#) at JENOPTIK AG, a change-of-control clause will come into force for the members of the Executive Board with effect from the acquisition of a controlling interest in accordance with §§ 29, 35 (1) (1) of the Securities Acquisition and Takeover Act (Wertpapiererwerbs- und Übernahmegesetz [WpÜG]), i.e. an acquisition of at least 30 percent of the voting rights in JENOPTIK AG, granting them the right to give notice of termination within a specified period following the change of control. In the event of termination, the Executive Board member shall be entitled to payment of a settlement up to a maximum of 36 (Dr. Michael Mertin) or 24 (Hans-Dieter Schumacher) months' salary, plus the variable remuneration on a pro rata basis, but equivalent to no more than the maximum remuneration for the residual period of his or her contract of employment. In addition, pension contributions will continue to be paid up until the normal expiry of the respective contract of employment, limited to three (Dr. Michael Mertin) or two (Hans-Dieter Schumacher) years.

A [non-competition clause](#) for a period of one year following the end of his contract of employment was agreed with Dr. Michael Mertin. As compensation for the non-competition clause, Dr. Michael Mertin will be paid 50 percent of his annual salary; this compensation is offset against an interim payment to be paid.

Prior to the end of his contract of employment, Jenoptik is also entitled to waive the post-contractual non-competition clause by means of a written declaration. On September 20, 2016, Dr. Michael Mertin decided not to seek any further extension to his term on the Executive Board. Consequently, an [agreement regarding the details of his departure](#) was concluded with Dr. Michael Mertin, according to which the variable remuneration for 2016 will be paid entirely in cash. The variable remuneration for the first half-year of 2017 will be calculated on the

basis of the average target attainment levels for 2015 and 2016 and will also be paid out in cash. Allocated but not yet paid out virtual shares will be settled at the end of July 2017, taking into account the average price over the last 12 months preceding the date on which Dr. Michael Mertin will leave his post. The bandwidth for the average share price has upper and lower limits. Provisions were set up in the amount of the anticipated payment amounts incurred as at the balance sheet date, which are set out in the Notes under Note 5.20 from page 163 on. The actual amount is determined only on the day of Dr. Michael Mertin's departure. The details will be reported in the 2017 Annual Report.

Under the terms of his contract of employment, for a period of 12 months from July 1, 2017, Dr. Michael Mertin is entitled to receive [bridging payments](#), to be paid monthly, which amount to a total of 80 percent of his annual salary as well as the continued payment of his pension contributions. The annual salary comprises the fixed remuneration, the bonus and the non-cash benefits for private use of the company car, where the monthly bonus corresponds to one-sixth of the bonus calculated for the first half of 2017. In addition, payment of the pension contributions will continue. Emoluments resulting from freelance and/or employed activity, in particular as a member of a management and supervisory body of another company, as well as any compensation for a non-competition clause, will be offset against the payments. Provisions were established for the bridging payments which are set out in the Notes under Note 5.20 from page 163 on.

Total Remuneration for the Individual Members of the Executive Board

The tables contain a list of the remuneration components granted to the members of the Executive Board, Dr. Michael Mertin and Hans-Dieter Schumacher, in the fiscal year just past. The summaries differentiate between five components – the fixed remuneration, fringe benefits, one-year variable remuneration, multi-year variable remuneration and the pension contributions.

Following agreement with the Personnel Committee, but subject to the consent of the Supervisory Board, Dr. Michael Mertin's variable remuneration for the 2016 fiscal year comes to 1,330.2 thousand euros in cash and for Hans-Dieter Schumacher 256.0 thousand euros in cash and 18,134 virtual shares. Further details on the share-based remuneration in the form of virtual shares can be found in Note 5.21 in the Notes from page 164 on. We also consider this to be an integral part of this Remuneration Report.

Remuneration System for the Supervisory Board

The remuneration for the Supervisory Board comprises a fixed and a performance-related component. The fixed annual remuneration is 20 thousand euros. The Chairman of the Supervisory Board receives double and his deputy one-and-a-half times this amount. The fixed remuneration is payable on expiry of the fiscal year. In addition, each member of a committee receives an annual remuneration in the sum of 5 thousand euros per year. The chairman of the committee receives double this amount. The annual remuneration for members of the Audit Committee, whose duties are particularly labor- and time-intensive, is 10 thousand euros. The Chairman of the Audit Committee receives double and his deputy one-and-a-half times this amount. Members of committees which have not met during the fiscal year receive no remuneration. Members of the Supervisory Board who have only served on the Supervisory Board or a committee for part of the fiscal year receive a pro rata payment.

T05 Remuneration of the Executive Board – Benefits Granted (in thousand euros)

	2015	Dr. Michael Mertin (President & CEO)			
		Actual	Minimum	100 %	2016 Maximum
Fixed remuneration	600.0	600.0	600.0	600.0	600.0
Fringe benefits	46.7	46.7	46.7	46.7	46.7
Total	646.7	646.7	646.7	646.7	646.7
One-year variable remuneration*	631.2	1,330.2	0.0	1,000.0	1,500.0
Multi-year variable remuneration**	682.0	61.3	61.3	61.3	61.3
Thereof LTI 2016 (term until 2021)**	0.0	0.0	0.0	0.0	0.0
Thereof LTI 2015 (term until 2020)**	631.2	0.0	0.0	0.0	0.0
Thereof dividends on LTI tranches outstanding	50.8	61.3	61.3	61.3	61.3
Total*	1,959.9	2,038.3	708.1	1,708.1	2,208.1
Retirement benefits	240.0	240.0	240.0	240.0	240.0
Total remuneration*	2,199.9	2,278.3	948.1	1,948.1	2,448.1

*includes for Dr. Michael Mertin also a portion which in 2016 will be paid in cash instead of in the form of virtual shares in accordance with the termination agreement

**each plus development of value of the newly granted LTI compared to the share price taken as basis for allocation:

	2015	2016	2017	2018	2019
Development of share price LTI 2016	0.0	0.0	0.0	0.0	0.0
Development of share price LTI 2015	230.9	0.0	0.0	0.0	0.0

T04 Remuneration of the Executive Board – Inflow (in thousand euros)

	Dr. Michael Mertin (President & CEO)		Hans-Dieter Schumacher (Member of the Executive Board)	
	2015	2016	Apr. – Dec. 2015	2016
Fixed remuneration	600.0	600.0	300.0	400.0
Fringe benefits	46.7	46.7	8.2	13.8
Total	646.7	646.7	308.2	413.8
One-year variable remuneration	529.0	631.2	0.0	194.0
Multi-year variable remuneration	471.4	611.6	0.0	0
Thereof LTI 2015 (term until 2020)	0.0	0	0.0	0
Thereof LTI 2014 (term until 2019)	0.0	0	0.0	0
Thereof LTI 2013 (term until 2018)	0.0	0	0.0	0
Thereof LTI 2012 (term until 2017)	0.0	0	0.0	0
Thereof LTI 2011 (term until 2016)	0.0	611.6	0.0	0
Thereof LTI 2010 (term until 2015)	471.4	0	0.0	0
Total	1,647.1	1,889.5	308.2	607.8
Retirement benefits	240.0	240.0	120.0	160.0
Total remuneration	1,887.1	2,129.5	428.2	767.8

T06 Remuneration of the Executive Board – Benefits granted (in thousand euros)

	Apr. – Dec. 2015	Hans-Dieter Schumacher (Member of the Executive Board)			
		Actual	Minimum	100%	2016 Maximum
Fixed remuneration	300.0	400.0	400.0	400.0	400.0
Fringe benefits	8.2	13.8	13.8	13.8	13.8
Total	308.2	413.8	413.8	413.8	413.8
One-year variable remuneration	194.0	256.0	0.0	200.0	300.0
Multi-year variable remuneration***	194.0	260.7	4.7	204.7	304.7
Thereof LTI 2016 (term until 2021)**	0.0	256.0	0.0	200.0	300.0
Thereof LTI 2015 (term until 2020)**	194.0	0.0	0.0	0.0	0.0
Thereof dividends on LTI tranches outstanding	0.0	4.7	4.7	4.7	4.7
Total*	696.1	930.6	418.5	818.5	1,018.5
Retirement benefits	120.0	160.0	160.0	160.0	160.0
Total remuneration*	816.1	1,090.6	578.5	978.5	1,178.5

**each plus development of value of the newly granted LTI compared to the share price taken as basis for allocation:

Development of share price LTI 2016	0.0	5.5	0.0	4.3	6.4
Development of share price LTI 2015	71.0	0.0	0.0	0.0	0.0

If group earnings before tax exceed 10 percent of group equity at the end of the fiscal year, each member of the Supervisory Board will receive a performance-related annual payment of 10 thousand euros. The performance-related annual payment is increased to 20 thousand euros, provided that group earnings before tax exceed 15 percent of group equity at the end of the fiscal year. The Chairman of the Supervisory Board receives double and his deputy one-and-a-half times this amount. The consolidated financial statements for the corresponding fiscal year are definitive for the calculation of earnings before tax and equity. The annual performance-related remuneration is payable after the Annual General Meeting which ratifies the actions of the Supervisory Board for the past fiscal year, i.e. normally after the Annual General Meeting of the following fiscal year.

Group earnings before tax for the year 2015 exceeded the above mentioned figure of 10 percent of group equity at the end of the fiscal year 2015, consequently the members of the Supervisory Board each received a performance-related remuneration payment following the Annual General Meeting in June 2016. There is also a performance-related remuneration payment for 2016, which will be paid after the 2017 Annual General Meeting.

The members of the Supervisory Board are paid a meeting allowance of 1 thousand euros for attending a meeting. Half of the agreed meeting allowance is paid on participation in conference calls. The same applies from the second meeting on any day on which several meetings are convened. Verified expenses incurred in connection with the meeting are reimbursed in addition to the meeting allowance; the reimbursement for travel and overnight accommodation costs in connection with a meeting held in Germany is limited to 0.6 thousand euros. JENOPTIK AG also reimburses the members of the Supervisory Board for any sales tax applicable to the payment of their expenses.

In the 2016 fiscal year, 382.2 thousand euros (net) was set aside as a provision for the fixed remuneration of the Supervisory Board and its committees, to be paid in January 2017, and 135.0 thousand euros (net) for the variable remuneration to be paid after the Annual General Meeting in June 2017. Jenoptik did not pay any other remuneration or benefits to the members of the Supervisory Board for services rendered personally by them, in particular consulting and intermediary services.

Information on the total remuneration for individual members of the Supervisory Board can be found in the Group Notes on page 184.

Combined Management Report

The Remuneration Report and the Information and Notes relating to Takeover Law (in the chapter "Corporate Governance") are part of the Combined Management Report.

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Jenoptik remains on course for growth: in 2016, we achieved new records in revenue and earnings, in order intake and in cash flow. We want to continue to grow in 2017 – organically and with acquisitions. Here, we can build on a strong order backlog, a good asset position and a viable financing structure.

General Group Information

Group Structure

Legal and Organizational Structure

As the holding company and corporate center of the Group, JENOPTIK AG, based in Jena, performs top-level functions for the entire Group including strategic corporate development and innovation management as well as key tasks in control and finance, real estate, internal auditing, investor relations, mergers and acquisitions, human resources, accounting, legal, risk and compliance management, treasury, taxes, corporate communications and corporate marketing.

Since the realignment of the Group's structure in January 2016, its operating business has been focused more strongly on growth markets and megatrends, and is divided into the three Optics & Life Science, Mobility and Defense & Civil Systems segments. The segment reporting reflects the Group's organizational structure. Within the three segments, the operating business is spread over five divisions. The underlying cornerstone is the Shared Service Center (SSC), in which the central functions IT, human resources, purchasing, safety, occupational health and safety, environmental protection and building management are organized. **G05**

On establishing the new group structure in early 2016, Jenoptik merged its business with laser beam sources and laser systems with the Optoelectronic Systems business unit in the new Healthcare & Industry division. In the Automotive division, all activities involving laser machines and industrial metrology for the automotive and machines construction industry were combined.

Jenoptik has significantly expanded its international structures in the last few years. The US holding company at the Jupiter location in Florida, US, has led coordination of the overall strategy, financial activities and shared services for the American market. An Asian holding company in Singapore consolidates all business in Asia to centrally support the development of business in the region and provide resources for top-level processes such as shared services, business development, finance and marketing. The operating business in Europe is coordinated at the main locations in Germany.

Key Locations

Jenoptik is represented in over 80 countries worldwide, with a direct presence in 18 of them, e.g. through its own companies, investments or affiliated firms. The majority of the Group's products are manufactured in Germany, followed by the US. At the Rochester Hills, Michigan, location in the US, Jenoptik is investing in its own technology campus for metrology and laser machines for the North American automotive industry. The Jena headquarters is primarily home to optoelectronic operations, covering all aspects of Optics & Life Science. Other major sites in Germany are at Wedel near Hamburg, Essen and Altenstadt (Defense & Civil Systems), Monheim near Düsseldorf (Traffic Solutions), Villingen-Schwenningen (Automotive), Triptis and Dresden (Optical Systems) as well as Berlin (Healthcare & Industry). Outside Germany, Jenoptik maintains production and assembly sites in the US, France, the UK, China and Switzerland. In addition, the Group is represented by subsidiaries and affiliated firms in Algeria, Australia, Brazil, the Czech Republic, India, Japan, Korea, Malaysia, Mexico, the Netherlands and Singapore. **G06**



See list of shareholdings page 185

G05 New Structure of the Jenoptik Group since January 1, 2016

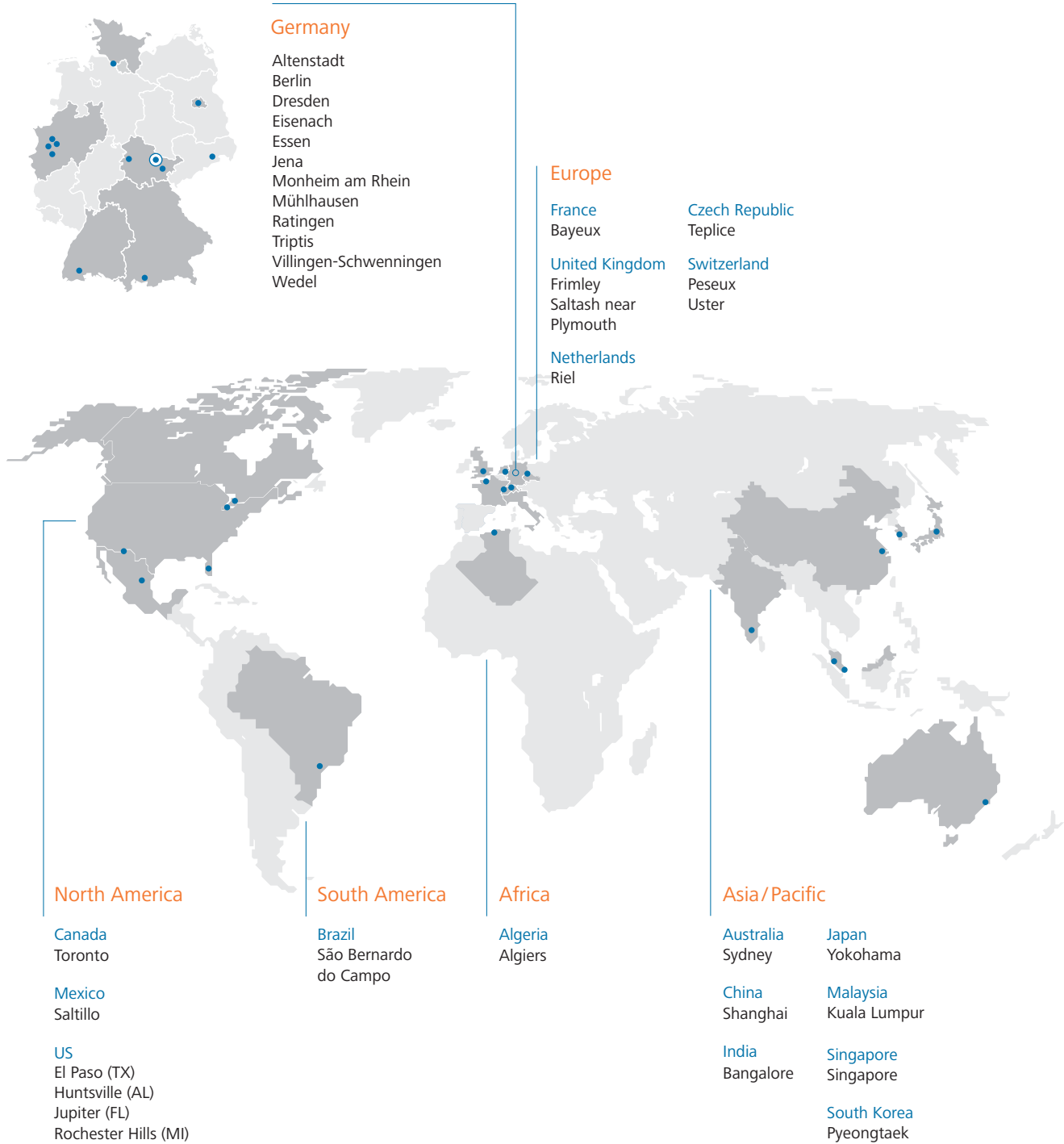
Corporate Center

Segment	Optics & Life Science		Mobility		Defense & Civil Systems
Division	Optical Systems	Healthcare & Industry	Automotive	Traffic Solutions	Defense & Civil Systems

Shared Service Center

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G06 Jenoptik: Key Locations




Business Model and Markets

Jenoptik is a globally operating integrated photonics group that devotes the majority of its work to the photonics market. Photonics are understood as the basics and areas of use of optical methods and technologies that address the transmission, storage and processing of information by light and in the process use the special physical properties of light quanta (photons) in place of electrons and also combine optics and electronics.

As a supplier of premium, innovative capital goods, the Group is primarily a partner to industrial companies. Its customers also include the public sector, in part indirectly via system integrators. Our range of products comprises OEM or standard components, modules and subsystems through to complex systems and production lines for numerous sectors. It further includes total solutions and full-service operator models.

Jenoptik competes with a wide range of internationally operating companies that not uncommonly specialize in only one or a few of the product areas listed above. Differing service ranges and highly limited comparability thus make it difficult to provide definite market share estimates. Research and development occupy a key position in Jenoptik's work, and cooperations arrangements and developments on behalf of customers are often the beginning of partnerships and business relationships along the value chain.

Jenoptik operates in the three segments of Optics & Life Science, Mobility and Defense & Civil Systems. 



Optics & Life Science

This segment pools the work in the Healthcare & Industry and Optical Systems businesses. Jenoptik is a key development and cooperation partner for optical and micro-optical systems and precision components that satisfy the highest quality demands. The product portfolio includes optoelectronic semiconductors, lasers, polymer optics, electronics and software. Based on its core expertise in laser and LED-based beam sources, optical components and modules, sensors, digital imaging and system integration, Jenoptik is a leader in the development of OEM system solutions and products. It possesses superb expertise and thus also an excellent market position in the development and manufacture of micro-optics for beam shaping used in the semiconductor equipment industry and for laser materials processing. Solutions for optical information and communication technologies and for security and defense technology complete the portfolio. The market addressed by Optical Systems is highly fragmented. The companies often specialize only in individual products groups or niches. With the stronger focus on systems

solutions the Jenoptik Group has been able to further expand its market position in the last years.

In this segment, Jenoptik also develops and manufactures specific OEM solutions for customers in the healthcare sector, with a focus on systems for the medical technology and life science industries, for example analysis and treatment systems for research, clinical use and patient self-diagnosis. Jenoptik also holds a leading position in the field of high-power diode and thin-disk lasers for ophthalmology and supplies both national and international medical technology companies. For the industry, Jenoptik supplies high-power components and modules as well as integrated solutions for material processing, automotive and consumer electronic applications, e.g. innovative components for head-up displays, special lenses for driver assistance systems and polymer optics for machine vision or augmented reality applications as well as LED lighting systems. The company also manufactures beam sources and application solutions for laser material processing is a globally acknowledged quality supplier of lasers.

Key sales regions in the segment are in Europe and North America, and increasingly also in Asia. Core markets are the semiconductor equipment, medical technology, information and communication technology, show and entertainment, automotive as well as defense and security technology industries. Jenoptik serves numerous niches within these heavily fragmented markets, where it occupies leading market positions.

Mobility

The Mobility segment pools all work in the automotive and traffic safety markets. Jenoptik is a leading manufacturer of measurement technology and laser machines for production processes in the automotive industry. The Metrology portfolio includes high-precision measurement technology for tactile, optical and pneumatic inspection of roughness, contour, shape and the determination of dimensions at every stage of the production process and in the inspection room. A wide range of services such as consultation, training, service and long-term maintenance agreements are also all provided. In its laser processing business, Jenoptik develops 3D laser processing machines that are integrated into customer production lines as part of process optimization and automation. There, they are used to machine plastics, metals and leather with maximum efficiency, precision and safety. The product portfolio is complemented by energy efficient and environmentally friendly exhaust air cleaning systems for laser machining and other industrial processes.

See Segment Report for detailed information on the course of business in the segments

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In its traffic safety business, Jenoptik develops, manufactures and sells components, systems and service that are making the world's roads safer. Its product portfolio includes comprehensive systems covering all aspects of road traffic, such as speed and red light monitoring systems and custom solutions for identifying other traffic violations. Further expertise relates to the measurement of average speeds (section control) and automatic number plate recognition (ANPR). Jenoptik's services in the segment cover the entire supporting process chain – from system development, construction and installation of the monitoring infrastructure, to capturing images of traffic violations and their automated processing. Since 2016, the company has supported the further technical development of toll payment systems, particularly in Germany. For these applications, the Group markets innovative toll payment monitoring pillars that combine various digital sensor technologies such as stereo image processing and axle number detection in a single system.

The Mobility segment has a greater international focus than any other within the Jenoptik Group. Its regional areas of focus are primarily determined by customers. In the Automotive area, these are the centers of the global automotive and automotive supplier industries in Europe, North America and Asia. As a leading company for applications involving optical production metrology and 3D laser processing systems, we are a global partner of our customers. Companies such as Marposs, Mahr and Mitytoyo compete with Jenoptik's metrology activities in the automotive area – one of our growth markets. In Traffic Solutions, Jenoptik is a leading supplier of photographic monitoring equipment, with more than 30,000 devices in the market around the world. Competitors include, e.g. Redflex, the Sensys Gatso Group and Vitronic. The market served by the Traffic Solutions division is increasingly characterized by major projects. Traffic safety systems in Germany are tested and certified by the Physikalisch-Technische Bundesanstalt (PTB) in Braunschweig. Foreign deliveries are subject to controls by national institutes, although various countries also partially or fully recognize the German PTB test certificate or licenses from other leading European licensing authorities. These procedures represent a considerable barrier to market entry for potential suppliers and demonstrate the measuring accuracy of the systems used.

Defense & Civil Systems

The Defense & Civil Systems segment develops, manufactures and markets mechatronic and sensor products for civil and military markets. Its portfolio ranges from individual assemblies for customers to integrate in their systems to turnkey solutions and final products. The segment specializes in energy systems, optical sensor systems, stabilization systems, aviation subsystems, radomes and composites. Efficient customer service ensures that customers receive support for the service life of the products, which in most cases is a very long time. Mechatronic products include diesel-electric generating units, electrical machinery such as generators, electric motors and converters, power electronics, heating systems and controllers, lift systems and rescue hoists. They are used in drive, stabilization and energy systems for military and civil vehicle, rail and aircraft equipment. Sensor products cover infrared camera systems and laser rangefinders, which are used in automation technology, security technology and military reconnaissance.

The segment supplies equipment to major systems companies such as Krauss-Maffei Wegmann and Rheinmetall in Germany, Airbus (France), BAE Systems (UK) and American company Raytheon; it also supplies government customers directly. Its business is predominantly geared toward the long-term. Many of the components and subsystems are developed specially on behalf of customers. In addition, the Group often competes with other markets participants just in the area of individual product groups. In the area of defense and security technology as well as aviation and rail equipment, Jenoptik is a business partner to national and international customers, with end products also being exported worldwide by the systems companies it supplies. The business is subject to strict security, certification and export requirements to which Jenoptik stringently adheres.



See the Forecast Report for information on future developments and strategy

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Combined Management Report

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Targets and Strategies

Strategic Orientation of the Group




See Forecast Report for further information

As noted in the chapter “Business Model and Markets”, the majority of services offered by the Jenoptik Group concern the photonics market. As so called enabling technologies, the extremely precise and flexible manufacturing and measuring techniques used in photonics exert a great economic leverage effect and will thus enjoy an increasing share in industrial value creation. The solutions we create all contribute to increasing energy efficiency, precision and improved environmental compatibility.

Sustained profitable growth remains the focus of Jenoptik’s strategic development. To achieve it, we have aligned our new structure more consistently towards growth markets and benefit from the global megatrends of the digital world, health, mobility & efficiency, infrastructure and security. The company focuses primarily on internationalization, innovation and operational excellence. Jenoptik is increasingly establishing itself as a strategic systems partner for international customers and together with them helping to shape forward-looking solutions related to megatrends. In addition, we place stronger focus on forward integration and systems solutions in the process of further developing the Group.



See the chapter Business Model and Markets for more information on the new structure

With the new organizational structure  that entered into force on January 1, 2016, we aim to further improve our market and customer orientation. For this purpose business operations within and between the segments were reorganized and better targeted at growth markets, such as the automotive, semiconductor equipment, consumer electronics, information and communication technology as well as medical technology sectors. This has helped us to be closer to the customer and open up better opportunities for growth.

We see our strategic orientation as a **global, integrated photonics group** as offering advantages over our competitors, many of whom only operate in one market, are in part smaller, or have only a local or regional presence. With its broad technology platform, Jenoptik serves a range of markets and is set to expand its reach in the future. The Group targets different markets and is therefore less heavily dependent on the cycles in individual sectors; this means it is better able to compensate for fluctuations in the market and achieve a higher degree of stability. This assumes the harmonization and integration of business processes with synergy potential, something Jenoptik has worked hard to achieve on a range of projects.

By the year 2018, the Jenoptik Group plans to achieve an average in EBIT margin of around 10 percent over the market cycles. Including smaller acquisitions, revenue is due to rise to approximately 800 million euros. In order to achieve these goals , the company is aiming for exceptional growth abroad, particularly in the Americas and Asia/Pacific. The aim by 2018 is for these growth regions to account for a joint share of revenue above 40 percent (2016: 34.4 percent). In the medium term, too, the Group aims to continue growing both organically and inorganically, and improve its profitability.

We are working to achieve our growth strategy by

- realigning our segments consistently towards growth markets and megatrends and, therefore, strengthening our business through targeted and accretive acquisitions,
- continuing to work on our process of internationalization, together with greater vertical integration and customer reach in the growth regions of the Americas and Asia/Pacific,
- expanding our systems and applications expertise while looking to broaden our forward-integrated business models,
- extending our excellence program into new areas and
- boosting our financial strength.

Value Levers

Our continuing growth is guided by five value levers:

- profitable growth
- internationalization
- market and customer orientation
- employees and management
- operational excellence

As an innovative high-technology company, identifying future customer needs and general trends early on, aligning our strategic actions and business activities with them and determining appropriate technology and product developments is of critical importance to Jenoptik. We will maintain a high level of investment in research and development and thus strengthen our position as one of the world’s leading suppliers of photonic products and solutions. Uniform group standards for preparing development and technology roadmaps are a key prerequisite to managing the innovation process in line with market and customer needs throughout the company. In addition, we will push ahead with the cross-divisional synergetic expansion of our technology platforms. Our planned **profitable growth** will further be supported by efficiency measures and increasingly by the expansion of the systems and service businesses and economies of scale.

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Issues relevant to the strategy and the development of business are discussed in the course of a group-wide rolling strategy process, focusing on detailed technology, market and competitor analyses, the results of which are correlated with the company's own skills and expertise. The outcomes are used to identify and prioritize future areas of growth and develop solutions to grow our business fields. These form the basis of strategic decisions which then give rise to specific activities.

To better leverage synergy, we will continue to integrate supporting cross-section functions, particularly at the Shared Service Center and the holding company, in a global group structure. The use of the "Jenoptik" brand will be stepped up at all business units to promote awareness and acceptance of the Group, in particular internationally.


We want to enhance our organic growth with acquisitions. In this context, we examine the possibilities of implementing our group and growth strategies with the aid of M&A activities. By purchasing companies or parts of companies, we plan to boost our market and customer reach, not only in Europe but particularly in the focus regions of the Americas and Asia/Pacific, or otherwise add to our business portfolio with forward integration and/or additional systems expertise. Any acquisition must satisfy the criteria of increasing the value of the company and the ability of the acquisition to be integrated.

Jenoptik sees particularly great growth potential in the regions of the Americas and Asia/Pacific, in part due to growing industrial production and demographic developments, and is therefore concentrating on [internationalization](#) in these markets. JENOPTIK Asia-Pacific Pte. Ltd. and JENOPTIK North America Inc. steer the business, structural and organizational development in these two regions, identify opportunities for growth and coordinate related actions. Jenoptik is rigorously expanding its global sales and service network. We aim to create additional value added such as production, local product developments as well as research and development. In this way, we will be able to offer local customers products and solutions together with service developed in situ to meet their various needs.

In improving its [market and customer orientation](#), Jenoptik is driven by two key aspects. On the one hand, we develop and

manufacture products and solutions specifically geared toward market trends and customer needs. To this end, internal structures now more strongly reflect individual market requirements and proximity to customers. In the process of growing the business, the Group's own, direct distribution channels are given preference over dealership structures. In the future, too, the company will further invest in developing new and existing sales and service structures, particularly in our focus regions. At the Rochester Hills, Michigan, location in the US, for example, a new, modern technology campus for metrology and laser machines for the North American automotive industry has been under construction since mid-2016. Other Jenoptik divisions will in future also expand their businesses in North America from this location.

As a systems partner, we also seek out new solutions together with our customers, thereby cementing long-term strategic partnerships. Wherever possible, our customers are already involved in the early stages of development processes. In addition, there are also potential customers who consult with us at very early stages of product realization and commission Jenoptik to deliver relevant solutions in line with our expertise. This allows us to strengthen our customer relationships and boost value creation.

Securing qualified and capable [employees](#)  and ensuring their loyalty to the company remains the key topic in strategic HR work. Structured HR planning is necessary to achieve this in an environment which is becoming increasingly demanding from the demographic aspect. Now and in the future, Jenoptik aims to utilize targeted HR marketing activities to maintain its position as an attractive employer. Personnel development measures and improved framework conditions help to strengthen employees' loyalty to the company.


Active support of the corporate values is another key issue within HR work. The six corporate values of performance, responsibility, change, integrity, trust and openness are implemented on the basis of the "Jenoptik vision" and the "aspiration statements". These help to boost Jenoptik's growth across various culture and legal systems and form the basis for a uniform corporate culture.



See the chapters [Employees and Sustainability](#) for more information on this topic



More information
can be found in
the chapter
Sustainability

All processes in the Group are subject to regular scrutiny in order to increase their efficiency, harmonize them and optimize costs. In both the operating business and commercial processes, initiatives for creating harmonized and **excellent processes**  are rigorously pursued to cement the basis for profitable future growth. These initiatives essentially comprise programs such as the group-wide Jenoptik Excellence Program (JEP), which includes Go-Lean and Global Sourcing, the Market Excellence Program and the Jenoptik One ERP project (JOE).

The Go-Lean program is geared toward integrated process improvements and an increase in operational performance. The JOE project focuses on the efficient standardization of internal processes and the accounting systems that will in future employ SAP, and covers all organizational units in the Group. The project is due to be completed by the end of 2019. The Market Excellence Program focuses on adapting the sales and service organization and activities in line with strategic markets and customers.

Strategic Orientation of the Operating Business



See the Segment
Report and chapter
Business Model and
Markets for more
information on the
segments

Jenoptik's **three segments**  are interlinked in diverse ways. The Optics & Life Science segment, in particular, provides technologies and expertise for the other two segments. Infrastructures and cross-section functions are also increasingly used jointly, for example for global procurement or in the expansion of the international sales network. The segments' joint locations enable Jenoptik to quickly achieve critical mass in important regions around the world. At present, Jenoptik is investing in a modern technology campus for the engineering, production, sale and service of metrology and laser machines for the automotive industry in North America. Other Jenoptik divisions will in future also expand their businesses in the US from this location. The common use of infrastructure facilitates market entry and helps to optimize our cost base through the leverage of synergy. Cost benefits are realized and currency risks minimized through global sourcing and production.

In the **Optics & Life Science** segment, we are continuing to sharpen our focus on the "digital world" megatrend with our optical systems. On the basis of our strengths in optical and

micro-optical solutions, we aim to access further digital world markets in addition to the semiconductor equipment sector. Jenoptik will in future thus boost its position on these growth markets with optical information and communication technologies. Ongoing internationalization, the expansion of the systems business and a focus on key customers form the basis for lastingly profitable growth, to which the use of economies of scale and both customer and technology synergies will additionally contribute.

In addition, we focus on the "health" megatrend in the area of Healthcare & Industry. Based on beam sources that use lasers and LEDs, precision optics and digital imaging and innovative software solutions, we want to increasingly position ourselves as a leading, sustainably profitable partner for the development of system solutions and products for diagnostics, analysis, medical screening and therapy in the healthcare and life science industries. On the other hand, we are also participating in the "mobility & efficiency" megatrend with innovative industrial applications. One business focus is on expanding volume business with optoelectronic and polymer optical high-performance components and modules. Employing our core areas of expertise, we also pursue promising growth options in innovative applications such as driver assistance systems or technologies for autonomous driving. In these fields, too, we want to become an internationally operating supplier of application solutions.

We target the megatrend of "mobility & efficiency" in the **Mobility** segment. With our production metrology and laser machines for the automotive industry, we support the manufacture of sustainable and resource-efficient products. Jenoptik's use of optical, tactile and pneumatic production metrology puts it in a position to focus on issues to reduce fuel consumption and CO₂ emissions, as well as on hybridization. The aim, in particular, is to expand its position as a leading company in the area of production metrology for engine and gear parts, as well as for new applications. A concentration on automated plastic and metal processing will support further growth in the field of laser machines. At regional level, we intend to grow our business primarily in Asia and North America.

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“Infrastructure” is another megatrend of the future. As a globally leading supplier of traffic monitoring systems, our Traffic Solutions business remains committed to supporting our customers in achieving their targets to improve traffic safety with complete solutions. With the global trends toward increasing mobility, urbanization and security, particularly in newly industrialized countries, Jenoptik is also tapping into new sales regions. A trend can be seen toward major projects in the global traffic safety technology market with a combination of the equipment business and services, known as Traffic Service Provision. That’s why Jenoptik is focusing on strengthening this profitable service business. Following successful entry into a new market with a major order for toll monitoring systems in 2016, Jenoptik plans to place more emphasis on this business in the future. Our growing reach into international markets, selected cooperation arrangements and a focus on innovative and competitive products are aimed at securing future growth and boosting our position as a leading supplier.

The **Defense & Civil Systems** segment remains positioned as a partner for systems companies and customers who have a need for individual solutions that meet the stringent requirements of the aviation, rail and defense technology markets. We see opportunities for further growth in the global megatrends, the growing need for security, mobility & efficiency and increasing electrification in military and civil sectors. As a result, the segment is focused on the high-growth business areas of energy systems and optical sensor systems. Beyond this, it is looking to increase the share of systems used in civilian fields such as railway engineering. Customer relations with OEMs and end customers will be stepped up around the world. The segment is also seeking to expand its service business and international sales and service structures, especially in North America and Asia.

Control System

The company control system is geared toward the long-term corporate strategy. It is also consistently aligned with the Group’s short to medium-term objectives. The Executive Board is responsible for overall planning and thus for achieving the stated objectives as part of the strategic corporate development.

Jenoptik controls the business units on both the strategic and operational levels. As part of a rolling strategy process, the Executive Board and the Executive Management Board (EMB), with the support of a central project management office, steer the development of the business units and monitor the implementation of defined measures using project maps with specific targets for each project. On the basis of global megatrends, growth paths are defined, opportunities and risks are evaluated, portfolio decisions are made and the focuses of in-house research and development are determined using technology roadmaps at strategy and results meetings held twice a year.

A planning forecast for the coming year and a five-year period is created annually on the basis of the long-term corporate strategy, summarizing the proposed economic development. In the course of a fiscal year, the planning for that year is updated in several forecast cycles. Planning follows the bottom up/top down principle in the new segment structure in force since January 1, 2016. The starting point for this is formed by the harmonized strategic plans from the segments and operational business units that are geared towards market requirements. Possible larger acquisitions are not included in the planning process.

The group-wide introduction of the “LucaNet” software solution at the beginning of the 2016 fiscal year improved the efficiency of the planning process, forecasting reliability – also thanks to a rolling forecast –, analysis of business development and reporting. Now global financial information can be recorded and evaluated automatically.

Monthly results meetings are used for operational control. At these meetings, the division heads report to the Executive Board on the economic situation, the development of customer relationships, the competitive situation and any special business events. They employ standardized reporting methods largely involving performance indicators, information parameters and qualitative assessments, which can then be used to define further operating and strategic measures to achieve the objectives in the event of planning deviations. The internal reports for the monthly Executive Board meetings provide financial



Further information
 see chapter Forecast

information aggregated by segment, which is used as the basis for Executive Board resolutions, global management of the Group and targeted resource allocation.

The indicator system used in internal reports and, for example, to manage the business units in 2016 comprises high-priority performance indicators (“key performance indicators”) and other financial and non-financial information parameters. All the indicators chiefly focus on shareholder value, the requirements of the capital market and the strategy of profitable growth. The key indicators are shown in the diagram below. A rolling forecast is used to plan and control the company’s development. **G07**

In the 2016 fiscal year, the control system underwent further development that resulted in a greater focus of the indicator base to better foreground the performance indicators relevant to the company control system from 2017 on. In the current fiscal year 2017, too, the Jenoptik Group is committed to the continuous improvement of its processes. Key aspects of this are the implementation of an SAP business warehouse and the further development of the treasury management system. This will allow us to better reflect the markets’ dynamic growth and thus obtain important control information both faster and more efficiently.

G07 Performance Indicators for Corporate Management in 2016

Key performance indicators	Growth	Revenue, order intake	Growth	Number of employees
	Profitability	Group operating result (EBIT) earnings before tax (EBT), EBITDA		
Information parameters	Liquidity	Free cash flow, net debt		
	Return	EBIT margin, return on capital employed (ROCE)		
	Growth	Order backlog, frame contracts	HR management	Training, fluctuation, sick days
	Liquidity	Working capital	Process Control	Throughput times, reject quotes quality management
	Financial indicators		Non-financial indicators	

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Research and Development

As a technology group, research and development (R+D) is of key importance to Jenoptik and it is crucial to the company's future performance and thus its economic success. Our key strategic aim is to acquire, secure and expand our position as an innovation leader in the areas relevant to us. We also strive to develop market-oriented products and platforms with unique selling points and protect them by means of industrial property rights. For our positioning in the B2B business, this means helping to make our industry clients more efficient and consequently increasing their own earnings capacity.

Innovation Process

A strategic analysis of global megatrends and the requirements of our customers are first used to identify potential opportunities for growth. These then become innovation projects aligned with our core competencies and often in direct cooperation with key customers.

The Jenoptik Group's innovation process is multi-stage and follows the procedural guidelines set by the central innovation management. Strategic development projects are planned in R+D roadmaps on the basis of corresponding milestones. This applies to product, technology and process innovations.

To further increase our innovative power, we must not only develop technologies and products. In particular, new digital business models based on our already existing technologies and expertise are huge growth levers. The most recent example and also the winner of the Jenoptik Innovation Award 2016 was the toll project in the Mobility segment. Its toll monitoring pillar will enable Jenoptik to be a partner in the future for the truck tolls charged on German federal highways. In 2016, it secured a contract in the mid double-digit million euros range in a new market segment. The reason for this success was that we were able to combine our outstanding technology and product base with our expertise in software and data processing.

T07 Employees in R+D

	2016	2015
Number of employees in R+D	426	425
Percentage of overall workforce	11.7	11.7

Employees in Research and Development

The experience and expertise of our employees are a key factor in the success of our research and development work, and the qualification standards we expect of them are correspondingly demanding. Their knowledge is used both for segment-specific tasks and across all segments in corresponding development projects. T07

The **Scientific Advisory Council**  is a committee of experts available to Jenoptik which supports the Group in the monitoring and evaluation of long-term technology trends. In 2016, the Advisory Council was adapted in line with the current technological and market-related orientation of the company, with some new members. Its first meeting in its new form saw the generation of a large number of ideas and these are currently being worked on with the intention that they will lead to innovative new products in the future.

Cooperation Arrangements and Associations

The Group procures external expertise with the help of targeted cooperation arrangements. The objectives of research cooperation arrangements range from the market-driven realization of joint projects to reductions in development time frames through to the successful organization of specialist expertise. Jenoptik works together with both universities and non-university institutions – and also with industrial partners and key customers.

In 2016, Jenoptik was active in the following cooperation arrangements, among other things: A group of ten partners (including the Fraunhofer Institute for Applied Optics and Precision Engineering (IOF) Jena and the Friedrich-Schiller University Jena) working on the **fo+ Project** laid the basis for a manufacturing chain for the manufacture of freeform optics from the basic design to installation in a system. Freeform optics offer advantages over spherical or aspherical optics, in particular with respect to flexibility, weight and robustness, but their manufacture is much more costly. The project was funded partly by the German Federal Ministry of Education and Research (BMBF) as a growth center and was successfully completed on time at the end of 2016, having achieved all the planned results.



Information can be found on page 191

The **InnRet Project** is aimed at developing a demonstrator of a wireless and tamper-proof radio control for the next generation of helicopter rescue winches. This will enable the winch to be operated by the winchman in person, thus significantly improving the level of safety. Work on the InnRet Project is being carried out in conjunction with the German Aerospace Center and the Airbus Group, and is funded in part by the German Federal Ministry for Economic Affairs and Energy (BMWi) within the scope of the Aerospace Research Program (LuFo). Once completed, the results will be used to develop and offer a radio control as an additional piece of equipment.

In everyday traffic, pedestrians and cyclists are particularly vulnerable as so-called weak road users. The aim of the **XCYCLE Project** is to predict the likelihood of a collision between cyclists and motorized road users at intersections using a combination of different sensor data and to use appropriate measures to prevent such a collision. As part of the "Horizon 2020" project, funded in part by the EU, Jenoptik cooperated with the German Aerospace Center, Volvo and other project partners in 2016 to develop the hardware and software required for this project, testing and demonstrating its operational capability at a research intersection in Braunschweig.

Jenoptik also strongly advocates an environment that encourages innovation, promotes the image of photonic technologies and plays an active role in numerous sector and technology-oriented associations. The German Industry Association for Optical, Medical and Mechatronical Technologies e.V. (SPECTARIS) or the European Technology Platform Photonics21 are just two examples of this.

Development Output

The **R+D output** of the Jenoptik Group, including developments on behalf of customers, totaled 57.4 million euros in 2016 (prior year 53.1 million euros). Development costs in connection with customer orders are apportioned to the cost of sales. **T08**

R+D output is distributed among the segments as follows: **T09**

R+D output in the **Optics & Life Science segment** includes development costs on behalf of customers worth 7.6 million euros (prior year 5.9 million euros), as key development projects are frequently carried out together with customers. R+D expenses in 2016 totaled 14.3 million euros (prior year 15.0 million euros).

T08 R+D Output (in million euros)

	2016	2015	2014	2013	2012
R+D expenses	42.3	41.8	39.4	39.8	36.0
Capitalized development costs	0.1	0.4	0.5	0.2	1.2
Developments on behalf of customers	15.0	10.9	10.5	12.2	13.3
R+D output	57.4	53.1	50.4	52.2	50.6
R+D ratio 1 (R+D output/revenue) in %	8.4	7.9	8.5	8.7	8.6
R+D ratio 2 (R+D expenses/revenue) in %	6.2	6.2	6.7	6.6	6.2

T09 R+D Output by Segment (in million euros)

Group	2016	2015	Change in %
Group	57.4	53.1	8.2
Optics & Life Science	21.9	21.0	4.5
Mobility	24.5	24.5	0.0
Defense & Civil Systems	10.6	7.5	42.4
Other, incl. consolidation	0.3	0.1	234.8

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The R+D output of the **Mobility segment** included developments on behalf of customers totaling 4.2 million euros (prior year 3.2 million euros). The segment’s R+D expenses came to 20.3 million euros (prior year 21.0 million euros).

In 2016, developments directly on behalf of customers in the **Defense & Civil Systems segment** came to 3.3 million euros (prior year 1.8 million euros). The segment is also a long-term partner for large systems companies and develops platform technologies in conjunction with its customers. The segment’s R+D expenses totaled 7.4 million euros (prior year 5.6 million euros).

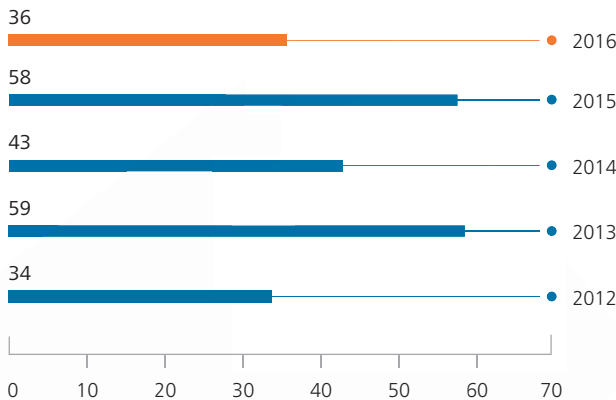
Patents

Our R+D capital expenditure is protected via central IP management in close cooperation with the operating areas. We accord particular importance to patent applications in dynamic growth markets such as China, Korea and the US. A total of 36 patents were filed in 2016 (prior year 58). Alongside numerous patent registrations in the field of “optical components” and “optical modules”, particular growth was seen in the patent portfolio for “surface metrology” and “traffic safety systems”.

G08

The number of patents does not include registered designs, utility models or brand registrations. For competition reasons, Jenoptik does not publish information on the receipt and issue of licenses.

G08 Number of Patent Registrations



Key Projects and Results

Our aim is to offer our customers the very best solutions. We do this by combining our all-round expertise with a broad wealth of experience in managing innovation in photonic technologies to the benefit of our customers. The following solutions are some of those developed and brought to the market by Jenoptik in 2016:

2016 saw the further development of microoptical solutions for the **semiconductor equipment industry** along with the optimization of technologies for microstructuring, the expansion of system integration options and the creation of new product platforms. Particularly for manufacturing and test equipment used in consumer electronics manufacturing, it has been possible to introduce to the market new products such as encapsulated transmission gratings with maximum efficiency or precise beam-shaping elements. The new applications also expand the activities in information and communication technology.

In the area of **optical systems for laser material processing**, Jenoptik was able to significantly expand its market position in 2016 thanks to a very successful further development of the catalog range of F-Theta lenses and beam expander optics. Our developments in the field of high-performance laser applications as well as for micro material processing are characterized by unique precision and thermal stability. Optics for processing with ultrashort pulse lasers are supplied with special certification and convince customers with their particularly long service life. These products are targeted, for example, at the automotive/machine construction and medical technology growth markets.

For our customers in **medical technology** and for scientific applications, 2016 saw the launch of several new microscope cameras in the PROGRES GRYPHAX product range. Combined with the further developed application software, it was once again possible to significantly increase the quality of the digital image processing. The new cameras are used, for example, in life science research, for routine microscopy, e.g. in material inspection or in forensics. Especially in scientific applications with difficult light conditions, the cameras provide an outstand-

ing image quality with brilliant colors, extremely low noise and consequently high richness of detail. Thanks to the video speed of 30 frames per second, there is absolutely no delay in the display of the live images. Positioning and focusing on the sample to be examined is now also even more time-saving.

In order to be able to offer powerful and innovative system solutions for imaging techniques and diagnostic applications in the healthcare market, Jenoptik expanded its technology portfolio in the past fiscal year to include next generation laser beam sources and image processing systems. The Group also participated in the growing market for aesthetic laser treatments, for which more integrated solutions will be offered from 2017 onwards. Instead of the existing laser modules, Jenoptik will in the future supply application-specific assemblies which will facilitate more efficient treatment.

Jenoptik has also developed numerous new products for the [automotive industry](#) over the past fiscal year. In the JENOPTIK-VOTAN A product family, for example, the JENOPTIK-VOTAN A Scan laser machine has been further developed to also enable perforation of leather-covered dashboards for passenger airbags. In the US state of Michigan, Jenoptik, along with US automotive supplier Magna Exterior Inc. and automotive manufacturer GM, received the "SPE Automotive Innovation Award" in the "Processes, Production & Key Technologies" category. The excellent laser cutting and welding machines optimize the machining of bumpers in the plastics sector. Environment detection sensors have been developed for driver assistance systems. In future these may also be used in driverless cars.

Maximum precision and measuring speed ensure the high production quality demanded by the global automotive industry. In order to respond more effectively to the future requirements of customers, our developers modernized the measuring machines used for the final inspections of crankshafts and camshafts. The "TOLARIS Shaft" software designed for this purpose and newly launched in 2016, improves the measurement and control electronics of these machines. Our "TOLARIS" software product portfolio now offers software for all application areas of dimensional metrology. It has uniform interfaces to customer QA systems and standardized internal data formats.

In order to meet the needs of its customers to an optimal extent, Jenoptik offers "wavemove" modular, fully-automated measuring systems, which are used worldwide to measure the roughness of components in the car and truck powertrain. The technology was simultaneously transferred to the USA, thereby enabling the business units there to generate local added value in this important growth market.

Parallel to the individual product developments, our R + D team also intensively examines the effects of Industry 4.0 and digitization so that these can be incorporated into the specifications for future developments. The automation, flexibility and shortening of measurement times to improve process efficiency for customers are already the focus of the product requirement for current developments.

In the [Traffic Solutions](#) area, Jenoptik successfully entered the market for truck toll payment systems in 2016, offering a unique solution for recording and classifying trucks on federal highways through the digital combination of different sensor technologies. The new system is connected to the nationwide top-level control system of the toll company Toll Collect, combining modern sensor technology with stereo image processing and side-view cameras. This facilitates axle detection together with recording of the dimensions. This means that the toll payment systems can be installed on the side of federal highways, making the comprehensive installation of control bridges unnecessary. This limits interference in the environment.

Since 2016, the Jenoptik TraffiSection system has been tested in a pilot project for the traffic monitoring market aimed at determining average speed, taking into account the German data protection regulations and with the inclusion of the Physikalisch-Technische Bundesanstalt (PTB) regulatory authority.

Over the past fiscal year, the development of the laser range-finder product line has been one of the key development topics in the area of [security](#). The new DLEM SR High Precision is char-

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acterized by a significant increase in range and precision combined with a lower weight, smaller form factor and reduced manufacturing costs. A new distance measuring module for installation in military monitoring systems – a lightweight unit weighing 33 grams and the size of a matchbox – was introduced to the market. It measures distances up to several kilometers away to an accuracy of just a few centimeters. It is the smallest and lightest of its kind in the world. The prototypes have proved themselves in practical use. Selected key customers were given the first test devices for field tests under realistic conditions.

In the **aviation** area, the prototype of the new “SkyHoist 800” civilian electric rescue winch for helicopters, which is used to rescue people, for example, was presented to the international market during a trade fair in 2016. The rescue hoist is being developed in cooperation with external partners and its expected launch is in 2018. A number of different innovations should make it a success: the new electric drive concept, a completely new operating concept with radio remote control and a new maintenance concept, which facilitates scheduled maintenance and repairs. Another innovative product is a new fault current sensor for use in airplanes for the early detection of fault currents in heating elements, for example in floor panels, ensuring their safe shutdown before damage can occur. This component can also be retrofitted and works in conjunction with the Ice Protection Control Unit (IPCU) from Jenoptik.

Employees

Development of Employee Numbers

At 3,539, the number of Jenoptik employees (incl. trainees) was almost unchanged as at December 31, 2016 (31/12/2015: 3,512) – increase of 0.8 percent. The Group’s internationalization strategy has led the number of Jenoptik employees abroad to increase by 9.1 percent to 686 employees (31/12/2015: 629). Thus the proportion of employees abroad increased to 19.4 percent (31/12/2015: 17.9 percent). **T10**

The expansion of the Shared Service Center structures into the growth regions of the Americas and Asia/Pacific has resulted in an increase in the number of employees in the Other segment. This was primarily due to the transfer of employees from the segments due to the centralization of tasks. **T11**

Temporary workers are employed to cover short-term peaks in production. On December 31, 2016, 64 temporary workers were employed in the Group (31/12/2015: 101).

At 246.1 million euros, personnel expenses in 2016 (wages, salaries, social security deductions, costs for retirement provision) were up 2.7 percent compared with the prior year’s figure of 239.6 million euros. Reasons for this include the slight increase in the number of employees and the new collective agreements.

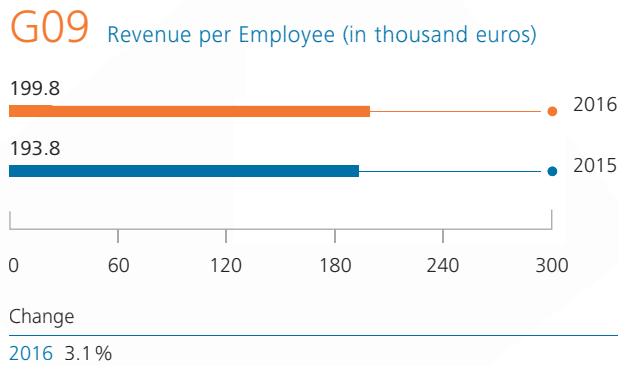
T10 Employees as of December 31 by Segment (incl. trainees and academy students)

	2016	2015	Change in %
Group	3,539	3,512	0.8
Optics & Life Science	1,123	1,144	-1.9
Mobility	1,229	1,207	1.8
Defense & Civil Systems	881	881	0
Other	306	280	9.3

T11 Employees as of December 31 by Region (incl. trainees and academy students)

	2016	2015	Change in %
Germany	2,853	2,883	-1.1
Abroad	686	629	9.1
Europe (excl. Germany)	174	163	6.7
Americas	285	260	9.6
Asia/Pacific	227	206	10.2

Revenue per employee increased by 3.1 percent to 199.8 thousand euros. The positive change compared with the prior year (193.8 thousand euros) was due to the disproportionate increase in revenue. **G09**



As at December 31, 2016, the proportion of women in the Group (in Germany and abroad) was 27.0 percent, remaining almost unchanged in the past year (31/12//2015: 26.9 percent).

The employee age distribution, as can be seen in the table below, is balanced and corresponds as far as possible to the figures of the prior year. **T12**

T12 Employee Age Distribution (in percent)

Under 30 years old	30–39 years old	40–49 years old	50–59 years old	60–65 years old	More than 65 years old
12.99	26.07	23.08	25.63	11.49	0.74

The absenteeism rate among Jenoptik employees in Germany decreased slightly from 5.6 percent in the prior year to 5.4 percent in 2016. The employee turnover rate has increased slightly, from 3.6 to 4.2 percent.

Training

As of December 31, 2016, the Group had 123 trainees and career academy students (31/12/2015: 125), of which 39 new trainees were taken on at the European Jenoptik sites in the year covered by the report. At the same time, 30 apprentices and students of the dual university at the European sites successfully completed their apprenticeship in the year under review and took up positions in the Group.

At the Wedel, Villingen-Schwenningen, Jena and Triptis sites, the new trainees receive job-specific training for optical, precision engineering, electronic and business occupations at training centers. Jenaer Bildungszentrum gGmbH – Schott, Zeiss, Jenoptik – in which Jenoptik is a partner, has also established itself as a training center for optics and photonics at a national level.

Human Resources Development

In 2016, Jenoptik invested around 1.8 million euros (prior year 1.6 million euros) in training and professional development, benefiting 1,832 employees (prior year 1,601 employees) in the year covered by the report. HR development requirements are reviewed once a year as part of an analysis of training needs.



Further information can be found in the Sustainability chapter on page 90

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Economic Report

Macro-economic and Sectoral Developments

The **global economy** developed moderately in 2016: The International Monetary Fund (IMF) noted in its “World Economic Outlook” subdued trading dynamics in the first half of the year and moderate industrial production, slightly mitigated by growth in the last months. The sluggish momentum was chiefly caused by weakness in the industrialized nations, especially the US, in the first half of the year. By contrast, the market reaction to the Brexit decision – apart from a noticeable drop in the value of the British pound – has been largely modest. Investments were weaker in the newly industrialized countries due to the low oil prices. **T13**

In various press releases the US Department of Commerce informed about the development of the **US economy**, which began to improve again from the Autumn, although it was once again mostly driven by consumer spending. The third quarter was the strongest for two years, recording an increase of 3.5 percent in the gross domestic product (GDP). However, momentum fell sharply again in the final quarter, with the result that the economic output increased by just 1.6 percent in 2016. This was the lowest growth recorded in five years, due primarily to recent weak exports.

T13 Change in Gross Domestic Product (in percent)

	2016	2015
World	3.1	3.2
USA	1.6	2.6
Euro zone	1.7	2.0
Germany	1.7	1.5
China	6.7	6.9
India	6.6	7.6
Newly industrialized countries	4.1	4.1

Source: International Monetary Fund, World Economic Outlook, January 2017

China's economy in 2016 grew at a slower pace than at any time in the past 26 years, although it was sustained in the second half of the year by a real estate boom, credit growth and massive public investment in infrastructure. According to data in a press release of the Beijing Municipal Bureau of Statistics, the GDP increased by 6.7 percent. Exports declined significantly by 7.7 per cent and imports by 5.5 percent. The IMF warned that growth in China is still heavily dependent on state investment and is burdened by high corporate debt.

The economy in the **euro zone** remained on a moderate growth path in 2016. According to a preliminary estimate published in a press release by the statistical office Eurostat, GDP increased by 1.7 percent compared with the prior year. By the end of the year, industrial production, order intake and purchasing managers' indices had in part improved significantly.

Despite a weak 3rd quarter, the **German economy** grew more strongly than expected in 2016. According to the German Federal Statistics Office, the 2016 GDP increased by 1.9 percent compared with the previous year. This was mainly due to consumer spending, government spending, which rose by 4.2 percent, as well as to the continuing real estate boom. Capital expenditure on machinery and vehicles increased by 1.7 percent. New record values were achieved in foreign trade: goods worth more than 1.2 trillion euros were exported; the value of imports totaled 954.6 billion euros. Although, at the end of the year, German companies, particularly in the industrial sector, recorded the strongest production slump for almost eight years, industrial orders and the Business Climate Index of the Ifo institute for the current situation indicated an upturn into the new year.

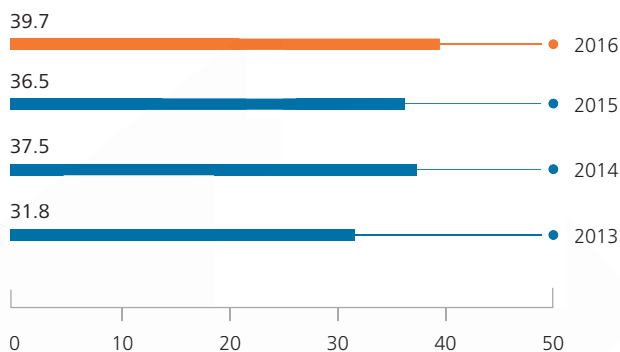
Revenue in the **semiconductor equipment industry** increased globally in 2016 by 8.7 percent to 39.7 billion US dollars (prior year 36.5 billion US dollars), according to provisional calculations by the Semiconductor Equipment and Materials International (SEMI) trade association published in a press release. According to a press release of the Semiconductor Industry Association (SIA), the **semiconductor** industry achieved a record revenue of almost 339 billion US dollars in 2016, 1.1 percent above the figure for the prior year. After a poor start, momen-

tum improved from midway through the year, driven primarily by macroeconomic factors, industry trends and the increasing use of semiconductor technology in communications, production and healthcare applications. On a regional basis, revenue increased only in China and Japan, falling in the remaining APAC countries, Europe and America compared to the prior year. IT analyst Gartner calculated industry revenue of just under 340 billion US dollars, which was 1.5 percent higher than in 2015. **G10**

According to a press release of the **German Engineering Federation** (VDMA) published at the beginning of the year, the industry suffered as a result of the weak global economy and due to political uncertainties in 2016. Demand for capital goods remained globally weak in 2016 and without growth. Production and revenue from German machine tool manufacturers stagnated in comparison with the prior year, the order intake fell by 2 percent throughout the year.

According to a press release of the **Association of German Machine Tool Manufacturers**, VDW, German manufacturers received 7 percent more orders in 2016 than in the prior year. Orders from abroad rose by 10 percent, while domestic orders remained at the prior year's level. According to the VDW, the German machine tool industry benefited primarily from large-volume and automotive-driven project business worldwide. At 15.2 billion euros, the production value reached a new record.

G10 Semiconductor Equipment: Global Revenue (in billion US dollars)



Source: Semiconductor Equipment and Materials International (SEMI)

Despite the scandal surrounding manipulated emissions testing data, the major markets in the **automotive industry** once again showed positive development in 2016 as stated by VDA, the German industry association, in various press releases: In Western Europe, the number of new registrations rose to 14.0 million passenger cars – the highest level since 2007. The US market for light vehicles (cars and vans) increased only modestly to 17.5 million vehicles, also a new record. In China, tax incentives helped car sales to increase by almost 18 percent to 23.7 million new vehicles sold by the Autumn of 2016. The market in India also saw positive development, while sales in Brazil and Russia declined by double digits. In Germany, the number of new registrations rose for the third time in succession, thus reaching the highest volume this decade. Exports from Germany remained at the same level as the previous year. According to the VDA, the world market for heavy commercial vehicles grew further in 2016. 2.9 million trucks were sold worldwide, 6 percent up on 2015. The main drivers were China and Western Europe, while as expected, business in the US and Brazil declined significantly. Regarding the US market, the VDA reported that the German car manufacturers and suppliers have quadrupled their US production since 2009, with the number of locations tripling over the past 20 years.

In the **traffic safety** sector, the German Federal Statistical Office's preliminary accident statistics indicate that the number of road deaths in Germany fell in 2016 compared with the prior year. Using the figures until December as a base, it is estimated that around 3,200 people died on the roads throughout the year, 7.1 percent less than in the prior year. According to the World Health Organization, more than 3,400 people are killed every day worldwide. In the US, the number has risen for two years and last year, for the first time since 2007, the figure exceeded 40,000 as reported by the National Safety Council (NSC) in a press release. Together with injuries and property damage, the estimated costs amounted to more than 430 billion US dollars, a 12 percent increase on 2015, as stated by the NSC. Regarding traffic monitoring, a decision was made in Germany that is important for Jenoptik: the German government decided to extend the truck toll to around 40,000 kilometers of federal highways with the aim of improving the infrastructure and its financing.

The German **railway industry** recorded record revenue in the first half of 2016: according to a press release of the German Railway Industry Association (VDB), revenue increased by 5.8 percent to 5.5 billion euros in comparison with the same period

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last year. However, the order intake fell by almost a quarter in the first six months, with orders from abroad alone falling by a good 46 percent. According to the VDB, this is not yet a warning indicator in light of the high order backlog from the prior year. However, at the industry trade fair Innotrans in the Autumn of 2016, market analysts from SCI Verkehr and McKinsey reported in industry reports that the global railway technology sector is under pressure following a growth phase. It is suffering from considerable overcapacity, lower margins and high competitive pressure. Above all, the new market leader among the Chinese railway companies was increasingly investing in exports, as investment in Chinese rail projects is declining, and is thereby undermining established railway technology manufacturers.

In the [aviation](#) industry, aircraft manufacturer Airbus achieved a new record in delivery numbers in 2016, but with 688 aircraft once again trailed behind Boeing, which delivered 748 – as reported in group press releases at the beginning of 2017. The order intake situation was the other way round: although Airbus received 731 orders, significantly less than in the previous year (more than 1,000), it was ahead of its US competitor, which recorded 668 new orders. According to the most recent calculations from the International Air Transport Association (IATA) published in a press release, the international aviation industry achieved record profits in 2016 of 35.6 billion US dollars, somewhat lower than the association's June forecast. This was due primarily to weaker global economic growth and higher costs.

At the beginning of 2017, the German Federal Ministry for Economic Affairs and Energy published its provisional Armaments Export Report for the German [security and defense technology industry](#) for the prior year. As a result, fewer arms exports were approved in 2016: at 6.88 billion euros, the value of the individual export licenses permits was around one billion below the prior year's figure of 7.86 billion euros. This put the brakes on the trend from the first half of 2016, but according to the armaments companies this was also due to long testing and approval procedures. In a report published in the Autumn of 2016, the Federal Ministry of Defense drew up an interim report on the reform of military procurement. The documentation of the status and risks of current armament projects revealed some successes in modernization, but also increased costs and delays, for example in the new tactical air defense system (TLVS).

Legal framework conditions

The [legal framework conditions](#) governing business operations essentially remained constant in the fiscal year 2016 and therefore had no significant impact on the business development of the Jenoptik Group.

Earnings, Financial and Asset Position

Comparison of Actual and Forecast Course of Business

In January 2016 with the publication of the preliminary results, the Jenoptik Management predicted moderate organic growth in revenue and earnings in a first outlook for the current fiscal year. In March, the forecast for revenue was set at between 680 and 700 million euros. Growth was supposed to be achieved in the Optics & Life Science and Mobility segments. Following the strong increase in revenue and earnings in 2015, stable development was expected in the Defense & Civil Systems segment. The Group EBIT was also supposed to rise moderately and, depending on revenue, the EBIT margin to come in at between 9.0 and 9.5 percent. Acquisitions were not included in these forecasts but were not ruled out for the 2016 fiscal year.

In the light of a good development in the first nine months, the Executive Board then firmed up its projection for the EBIT margin in the nine-months report in mid November. This should then be at the upper end of the previous range of 9.0 to 9.5 percent. Group revenue was expected to be unchanged at between 680 and 700 million euros.

In the reporting year, the Jenoptik Group generated revenue of 684.8 million euros, falling within the forecast range.

The EBIT margin of 9.7 percent (including the EBIT from discontinued operations of 10.0 percent) is a value which exceeds that which was announced in November. Profitability thus significantly improved compared to the prior year.

The development of revenue and EBIT for the segments is shown in the following table. T14

EBITDA also saw an increase. However, since investments and depreciation were lower than planned, the growth was lower than in EBIT.

Due to several large orders received by the Group in 2016, the increase in order intake was significantly higher than that in revenue and thus also greater than expected.

The free cash flow developed better than predicted in the Spring of 2016; at 80.4 million euros at the end of 2016, it was significantly above the prior year's value.

As of December 31, 2016, the Jenoptik Group had completely eliminated the net debt; the cash and cash equivalents and current financial investments even exceeded the current and non-current financial debt. Since unchanged net debt had been assumed in the forecast of March 2016, the Group also showed better development here than originally expected.

Capital expenditure, at 27.5 million euros, remained below the planned figure, in part due to postponements and in individual business units due to changed business developments.

Our projection issued in the Management Report in March 2016 regarding other key indicators for the year as a whole proved to be generally accurate.

T14 Actual and Forecast Course of Business (in million euros/or as specified)


Indicator	Year-end 2015	Forecast 2016	Year-end 2016	Change in %
Revenue	668.6	January: Moderate organic growth March: Between 680 and 700 million euros	684.8	2.4
Optics & Life Science	213.7	March: Growth in the mid single-digit percentage range	221.5	3.7
Mobility	244.6	March: Growth in the mid single-digit percentage range	247.7	1.3
Defense & Civil Systems	211.4	March: Stable	218.3	3.2
EBITDA ¹⁾	88.8	March: Slightly stronger rise than EBIT	96.9	9.1
EBIT ¹⁾	61.2	January: Moderate rise March: Moderate increase	68.5	11.8
Optics & Life Science	19.7	March: Rise stronger than revenue	33.4	69.4
Mobility	27.0	March: Rise stronger than revenue November: EBIT slightly below prior-year level	24.4	-9.5
Defense & Civil Systems	17.9	March: Stable November: Slight rise in EBIT	19.1	6.8
EBIT margin ¹⁾ in %	9.2	March: EBIT margin between 9.0 and 9.5 % November: EBIT margin at upper end of the range from 9.0 to 9.5 %	10.0	
EBT ¹⁾	57.4	March: Development as EBIT	64.7	12.7
Order intake	636.7	March: Rise corresponding to moderate revenue growth	733.8	15.2
Net debt	43.9	March: Stable (without acquisitions)	-17.9	
Free cash flow	71.8	March: Considerably below 2015 figure	80.4	12.0
ROCE ¹⁾ in %	13.5	March: Around the 2015 level	16.1	
Capital expenditure ²⁾	24.7	March: 35 to 40 million euros	27.5	11.4
Employees (number)	3,512	March: Slight rise, at slower rate than business growth	3,539	0.8

¹⁾ incl. discontinued operations
²⁾ excluding company acquisitions

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Earnings Position

The tables in the Management Report, which show a breakdown of the key indicators by segment, include the Corporate Center, the Shared Service Center, real estate and consolidation effects under "Other."

In the 2016 fiscal year, the Jenoptik Group generated revenue of 684.8 million euros (prior year 668.6 million euros) and thus achieved growth of 2.4 percent compared to the prior year. At 192.2 million euros, the fourth quarter of 2016 was the strongest in both the past fiscal year and the years before. All the segments reported revenue growth in 2016. Reasons for this increase included higher demand for energy and sensor systems, an upswing in investment in the automotive industry, especially in the field of laser machines, and stronger demand for optical systems.  T15

On a regional basis, growth stimulus came mainly from the Asia/Pacific region and the Americas, but also from Germany. Compared with the previous year, revenue in the Asia/Pacific region increased by 11.3 percent to 100.2 million euros (prior year 90.0 million euros), chiefly due to the increased demand

for traffic safety products in Australia and for railway technology in Korea. Group revenue also saw a sharp rise of 5.3 percent in the Americas. The reasons for this include higher demand for optical systems and laser processing machines for the automotive industry. The share of revenue for both growth regions of the Americas and Asia/Pacific combined came to 34.4 percent of group revenue (prior year 32.7 percent). Revenue in the Middle East and Africa of 25.1 million euros was below that of the prior year (prior year 34.2 million euros), particularly due to a lack of investment by the oil-exporting countries. At 458.2 million euros, Jenoptik generated 66.9 percent of revenue abroad in the past fiscal year (prior year 450.8 million euros or 67.4 percent). Outside Germany, Europe remained the region with the highest revenue, accounting for 28.9 percent of group revenue, followed by the Americas with 19.7 percent. T16

In 2016, Jenoptik again generated its greatest share of revenue (31.1 percent) in the automotive/machine construction target market. The share of revenue in the security and defense technology sector fell to 21.4 percent (prior year 25.7 percent). Major orders had been settled here in 2015. Revenue in the aviation and traffic market rose significantly, above all due to greater revenue generated in the railway technology area. In



See the Segment Report for more information on the development of revenue in the segments

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T15 Revenue by Segment (in million euros)

	2016	2015	Change in %
Group	684.8	668.6	2.4
Optics & Life Science	221.5	213.7	3.7
Mobility	247.7	244.6	1.3
Defense & Civil Systems	218.3	211.4	3.2
Other	-2.7	-1.1	-160.4

T16 Revenue by Region (in million euros and in percent of total revenue)

Group	2016		2015	
	Revenue	% of Total	Revenue	% of Total
Group	684.8	100.0 %	668.6	100.0 %
Germany	226.5	33.1 %	217.8	32.6 %
Europe	197.8	28.9 %	198.1	29.6 %
Americas	135.2	19.7 %	128.4	19.2 %
Asia/Pacific	100.2	14.6 %	90.0	13.5 %
Middle East/Africa	25.1	3.7 %	34.2	5.1 %

2016, 16.3 percent of group revenue was attributable to the top three customers (prior year 13.8 percent). **T17**

The **cost of sales** rose by 1.0 percent to 446.9 million euros and at a slightly lower rate than revenue (prior year 442.5 million euros). The cost of sales includes expenses arising from developments directly on behalf of customers of 15.0 million euros (prior year 10.9 million euros), which were offset by corresponding revenues. **T18**

The gross profit correspondingly increased to 237.9 million euros (prior year 226.2 million euros). The **gross margin** rose to 34.7 percent (prior year 33.8 percent), due to a changed product mix. **G11**

Key factors in the Group's future performance and competitiveness are the **research and development expenses (R+D expenses)**. These increased slightly to 42.3 million euros (prior year 41.8 million euros). The share of R+D expenses as a

proportion of revenue remained constant at 6.2 percent due to increased developments on behalf of customers compared with the prior year. **G11**

The Jenoptik Group again pushed ahead with its internationalization strategy in the 2016 fiscal year. In the course of expanding international activities, **selling expenses** rose by 1.4 percent to 73.6 million euros in 2016. Selling expenses include personnel expenses and the cost of materials as well as sales-related depreciation. They also include the expenses for sales commissions as well as marketing and communication. At 10.7 percent, the selling expenses ratio was slightly down on the prior year level of 10.9 percent.

General and administrative expenses came to 57.6 million euros (prior year 54.0 million euros). These costs increased as expected due to the ongoing internationalization process, the expansion of global Shared Service Center structures as well as in connection with the change in the make-up of the Execu-



More detailed information on research and development can be found from page 63 on

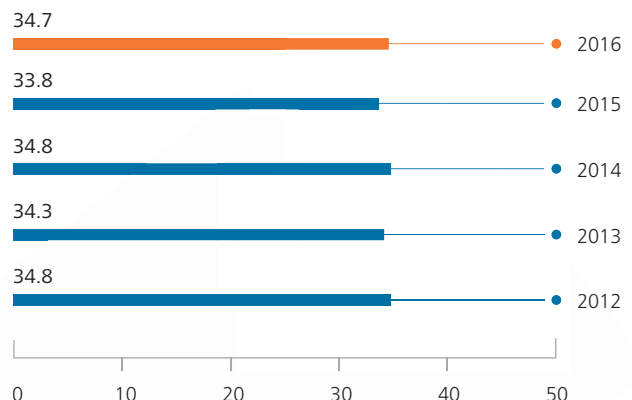
T17 Revenue by Target Market (in million euros and in percent of total revenue)

Group	2016		2015	
	Revenue (million euros)	% of total revenue	Revenue (million euros)	% of total revenue
Group	684.8	100.0%	668.6	100.0%
Automotive & machine construction	213.3	31.1%	177.2	26.5%
Security & defense technology	146.3	21.4%	171.9	25.7%
Aviation & traffic	142.3	20.8%	139.8	20.9%
Semiconductor equipment industry	91.8	13.4%	81.2	12.1%
Medical technology	42.1	6.1%	47.6	7.1%
Other	49.1	7.2%	51.0	7.6%

T18 Key Items in the Statement of Comprehensive Income (in million euros)

	2016	2015	Change in %
Cost of sales	446.9	442.5	1.0
R+D expenses	42.3	41.8	1.3
Selling expenses	73.6	72.6	1.4
Administrative expenses	57.6	54.0	6.6
Other operating income	23.4	27.0	-13.5
Other operating expenses	21.5	23.8	-9.4

G11 Development of the Gross Margin (in percent)



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tive Board. The administrative expenses ratio was at 8.4 percent above that of the prior year (prior year 8.1 percent).

Other operating income reduced to 23.4 million euros (prior year 27.0 million euros) and was primarily influenced by positive currency effects, income from impairments on receivables as well as from reversals of impairment losses on real estate and profit from the sale of an investment.

Other operating expenses, at 21.5 million euros, were also down the level of the prior year (prior year 23.8 million euros). They included currency losses, expenses for services and leasing, as well as costs for group projects such as Jenoptik One ERP (JOE).

Following a slow start to the year, Jenoptik also achieved a new record in its operating results over the 2016 fiscal year. The total **operating result (EBIT)** rose faster than revenue by

11.8 percent to a total of 68.5 million euros (prior year 61.2 million euros). This includes earnings of 2.3 million euros originating in the sale of a former business unit (prior year 0.2 million euros) and is disclosed as EBIT from discontinued operations. Overall, the EBIT margin improved correspondingly to 10.0 percent (prior year 9.2 percent) and was thus considerably above the target corridor for 2016. The EBIT in continuing operations came to 66.2 million euros in 2016, equating to an EBIT margin of 9.7 percent (prior year 61.0 million euros). While earnings in the Optics & Life Science and Defense & Civil Systems segments rose sharply, EBIT in the Mobility segment remained below the level of the prior year. **T19**

As a result of the revenue growth, a change in the revenue mix and consistently applied efficiency measures, the operating results rose significantly compared to revenue.

The **earnings before interest, taxes, depreciation and amortization (EBITDA)** including impairment losses and reversals of impairment losses also increased at a faster rate than revenue by 9.1 percent to a total of 96.9 million euros (prior year 88.8 million euros). The EBITDA for continuing operations came to 94.7 million euros in 2016 (prior year 88.6 million euros). **T20**

As of December 31, 2016, the **ROCE (Return on Capital Employed)** improved to in total 16.1 percent (prior year 13.5 percent), for the continuing operations to 15.6 percent, due to boosted earnings compared to tied operating capital. Jenoptik shows this indicator inclusive of goodwill and before taxes. The method of calculating ROCE is explained in the Financial Glossary on page 192, the calculation for the continuing operations is presented in the table below. **T21**

The **financial result** in total comprised the discontinued operations and at a total of minus 3.7 million euros was slightly above the value from the prior year (prior year minus 3.8 million



Detailed information on other operating income and expenses as well as the Statement of Comprehensive Income can be found in the Notes



Information on the segment EBIT can be found in the Segment Report from page 84 on

T19 EBIT (in million euros)

	2016	2015	Change in %
Optics & Life Science	33.4	19.7	69.4
Mobility	24.4	27.0	-9.5
Defense & Civil Systems	19.1	17.9	6.8
Other	-10.8	-3.6	-201.2
EBIT continuing operations	66.2	61.0	8.5
EBIT discontinued operations	2.3	0.2	-
EBIT	68.5	61.2	11.8

T20 EBITDA (in million euros)

	2016	2015	Change in %
Optics & Life Science	41.7	28.3	47.3
Mobility	32.3	35.7	-9.4
Defense & Civil Systems	23.8	23.1	2.7
Other	-3.1	1.5	-307.3
EBITDA continuing operations	94.7	88.6	6.8
EBITDA discontinued operations	2.3	0.2	-
EBITDA	96.9	88.8	9.1

T21 ROCE (in million euros)

	2016	2015
Long-term non-interest bearing assets	277.6	289.3
Short-term non-interest bearing assets	301.2	318.3
Non-interest bearing borrowings	-152.3	-154.4
Average tied capital	426.5	453.2
EBIT	66.2	61.0
ROCE (in percent)	15.6	13.5


euros). It was influenced by negative currency effects totaling minus 0.4 million euros (prior year 2.6 million euros). The interest income fell in comparison with the prior year to 0.4 million euros (prior year 0.5 million euros). The interest expenses also reduced to 4.9 million euros (prior year 7.2 million euros) due to the payment of liabilities. In addition, the financial result was impacted by the fair value assessment of the existing put options in connection with the acquisition of the outstanding shares in the Vysionics Group in the amount of 0.6 million euros. The financial result for continuing operations came to minus 5.2 million euros in 2016 (prior year minus 3.8 million euros). Despite dividend payments received, particularly due to impairments on issued loans to and shares in non-consolidated associated companies, the result from investments of 0.3 million euros was significantly down on the prior year's figure (prior year 1.6 million euros), which was characterized by a revaluation on an issued loan.

The sharp rise in EBIT was also reflected in the **earnings before tax**, which at a total of 64.7 million euros were 12.7 percent up on the prior year (prior year 57.4 million euros). The earnings before tax for continuing operations amounted to 61.0 million euros (prior year 57.3 million euros).


The current income taxes increased to in total 9.1 million euros (prior year 5.8 million euros), income taxes of the continuing

operations rose to 8.9 million euros. 5.0 million euros (prior year 3.0 million euros) were levied in Germany and 4.2 million euros (prior year 2.7 million euros) abroad. The increase is due in particular to the increasing tax burden abroad. In Germany, JENOPTIK AG's loss carried forward had the effect of reducing the tax burden.

The cash effective tax rate, the ratio of current income taxes and earnings before tax, remained with in total 14.1 percent (prior year 10.1 percent) at a relatively low level for a German company.

Non-cash deferred tax income came to 1.8 million euros in the past fiscal year (prior year deferred tax expenses 1.7 million euros). The change resulted in particular from the recognition of additional deferred tax assets on the domestic losses carried forward of JENOPTIK AG. 

In 2016, Jenoptik generated **earnings after tax** totaling 57.5 million euros (prior year 49.9 million euros). At 57.4 million euros, earnings attributable to shareholders were well above the prior year's figure of 49.6 million euros. **Earnings per share** therefore totaled 1.00 euros (prior year 0.87 euros). The earnings after tax for continuing operations amounted to 53.9 million euros (prior year 49.7 million euros), resulting in earnings per share of 0.94 euros (prior year 0.86 euros).

In the 2016 fiscal year, the group **order intake** rose by a total of 97.0 million euros to a new record high of 733.8 million euros (prior year 636.7 million euros). The major orders to equip the Patriot missile defense system and the major traffic safety orders announced are included in part. The order intake in 2016 was thus both above the prior-year value and above the revenue level.  The book-to-bill-ratio increased as a result of this to 1.07 (prior year 0.95). **T22 T24 G12**



See the Notes for detailed information on the subject of taxes

T22 Order Intake (in million euros)

	2016	2015	Change in %
Group	733.8	636.7	15.2
Optics & Life Science	236.6	206.7	14.5
Mobility	267.4	253.5	5.5
Defense & Civil Systems	231.6	177.8	30.2
Other	-1.8	-1.3	-39.8



See the Segment Report for detailed information on the order intake in the segments

T23 Order Backlog (in million euros)

	2016	2015	Change in %
Group	405.2	373.4	8.5
Optics & Life Science	80.7	73.7	9.5
Mobility	108.3	92.7	16.8
Defense & Civil Systems	217.8	209.7	3.9
Other	-1.6	-2.6	38.6

T24 Book-to-bill ratio (in percent)

	2016	2015
Group	1.07	0.95
Optics & Life Science	1.07	0.97
Mobility	1.08	1.04
Defense & Civil Systems	1.06	0.84

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The **order backlog** at the end of 2016 increased accordingly to 405.2 million euros (31/12/2015: 373.4 million euros). Of this order backlog, 71 percent will be converted to revenue in the current year. In conjunction with a well-filled project pipeline, this is a good basis for forecast growth in the 2017 fiscal year.

T23

There were also **frame contracts** worth 160.9 million euros (prior year 59.2 million euros). Frame contracts are contracts or framework agreements with customers, where the exact extent and probability of occurrence cannot yet be specified precisely.

T25

The increase in order sizes is essentially the result of stronger demand in the Mobility segment as well as in the defense industry.

Financial Position

Principles and Targets of Finance Management

The central Treasury department of JENOPTIK AG plans and controls the demand for and provision of liquid resources within the Group. The financial flexibility and financial solvency of the Group at any time is guaranteed on the basis of a multi-year financial plan and monthly rolling liquidity planning.

A cash pooling system also ensures the liquidity supply to the companies in the euro zone and limits their liquidity risk. In the 2016 fiscal year, the Dutch and French companies were integrated into the system, which now includes all major Jenoptik companies in the euro region. For the companies in North America, JENOPTIK North America, Inc. manages the cash pool which pools the liquidity of all major American Jenoptik companies.

As a result of the above measures, the existing syndicated loan, the outstanding debenture loans and the successively increased cash in hand, the Group's liquidity in the past fiscal year was sufficiently secured at any point.

T25 Frame Contracts (in million euros)

	2016	2015	Change in %
Group	160.9	59.2	172.1
Optics & Life Science	14.5	5.5	162.4
Mobility	79.1	11.5	586.7
Defense & Civil Systems	67.4	42.1	60.0

Primarily using currency forward transactions, Jenoptik hedges orders in foreign currencies, thereby reducing the consequences of exchange rate fluctuations on results and cash flow. Derivative financial instruments are used exclusively to hedge the operational business as well as financial transactions required for operational purposes.

Capital Structure and Financing Analysis

As early as 2015, Jenoptik secured further financial latitude as well as flexibility through the conclusion of new capital instruments to implement its medium to long-term international growth strategy, i.e. the financing of future organic growth and of acquisitions. With a sound equity ratio of 58.6 percent as at December 31, 2016, debenture loans as well as a syndicated loan, the Group has a viable financing structure.

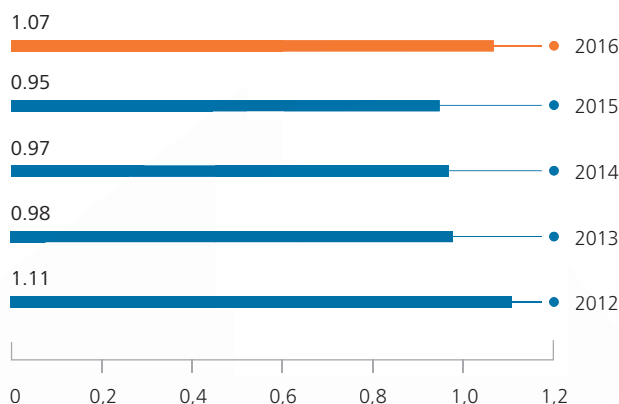
The debenture loans newly issued or converted in 2015, originally with a maturity of five or seven years and a total volume of 125.0 million euros, are subject to variable or fixed interest rates. With the issue of these debenture loans, Jenoptik also secured a medium and long-term financing structure. An installment of the non-exchanged debenture loans from 2011 of more than 11.0 million euros was paid back in due time in October 2016. In addition, a syndicated loan agreement for more than 230.0 million euros was concluded in 2015. This will enable Jenoptik to use a line of credit at attractive terms over five years. Jenoptik complied with the financial covenants that were agreed for the debenture loans and the syndicated loan.

In addition to cash and cash equivalents of 92.0 million euros and current financial investments of 50.5 million euros, the Group also has unused capacity from frame loan agreements



More information can be found in the Notes

G12 Development of the Book-to-Bill Ratio (in percent)



totaling 231.5 million euros to fall back on. This means that the company has more than 300 million euros available for corporate development measures.

A loan was taken out in association with the construction of the new technology campus at the US Rochester Hills site in Michigan. In 2016, the Group's **non-current financial debt** rose to 120.5 million euros (31/12/2015: 113.2 million euros). In 2016, the items in the statement of financial position comprised almost exclusively financial liabilities to banks in the amount of 120.4 million euros (31/12/2015: 113.2 million euros). At the end of 2016, non-current financial debt accounted for around 97 percent of Jenoptik's financial debt (31/12/2015: 88 percent).

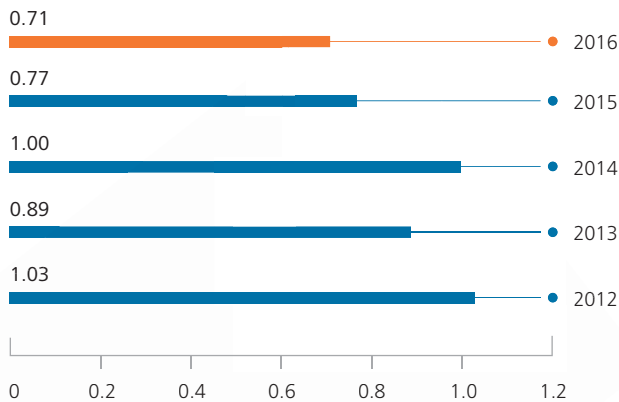
The **current financial debt** reduced to 4.1 million euros (31/12/2015: 14.9 million euros), due among other things to the scheduled repayment of the debenture loan installment due in October 2016.

As the equity posted at the end of 2016 increased by 41.2 million euros and the borrowing increased in comparison to the prior year by only 2.6 million euros, the **debt ratio** in the period covered by the report fell again to 0.71 (31/12/2015: 0.77). The debt ratio is defined as the ratio between borrowings (336.7 million euros) and equity (476.4 million euros). **G13**

At year-end the **net cash position** amounted to 138.4 million euros (31/12/2015: 69.4 million euros). It is defined as the total cash and cash equivalents and current financial investments in the amount of 142.5 million euros (31/12/2015: 84.2 million euros) less current financial debt in the sum of 4.1 million euros.

Thanks to a strong free cash flow, the **net debt** could be completely eliminated at the end of the 2016 fiscal year, amounting to minus 17.9 million euros on December 31, 2016 (31/12/2015: 43.9 million euros). The significant reduction was achieved despite the dividend payment in the amount of 12.6 million euros (prior year 11.4 million euros), simultaneous financing of the growth and the above-mentioned investment in Rochester Hills, Michigan. **T26**

G13 Debt to Equity Ratio (in percent)



Analysis of Capital Expenditure


The focus of capital expenditure is derived from the Group strategy and is in line with the planned growth targets and the asset structure of the Group. To ensure this, the central investment controlling systematically checks the individual investments on the basis of performance and financial indicators with respect to sustainability or their value contribution and thoroughly analyzes the opportunities and risks.

Areas of investment in 2016 included technical equipment and an expansion in production capacities, as well as the purchase of land and construction of a technology campus in Rochester Hills, Michigan in the US. Further investment was made in the continued expansion of sales structures and optimized internal procedures in order to support future growth. In total, the

T26 Net and Gross Debt (in million euros)

	2016	2015	2014	2013	2012
Non-current financial debt	120.5	113.2	156.8	115.2	115.8
Current financial debt	4.1	14.9	5.1	1.2	4.7
Gross debt	124.6	128.1	161.9	116.4	120.5
minus securities	50.5	0.4	0.3	0.7	0.6
minus cash and cash equivalents	92.0	83.8	69.5	71.6	45.4
Net debt	-17.9	43.9	92.1	44.1	74.5

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Group invested 27.5 million euros (prior year 24.7 million euros) in intangible assets and property, plant and equipment. The focus of **capital expenditure** in all three segments was on technical systems for customer projects as well as for an increase in efficiency and capacity. Areas of capital expenditure also included technological upgrades and increased capacities in the manufacturing infrastructure for optical and micro-optical precision components at various sites in the Optics & Life Science segment. The machinery in the Defense & Civil Systems segment was also modernized.  **T27**

At 24.5 million euros, once again the largest share of **capital expenditure was on property, plant and equipment** (prior year 20.4 million euros).

Capital expenditure on intangible assets of 3.0 million euros remained below the level of the prior year (prior year 4.3 million euros). The capital expenditure was within the scope of the JOE project as well as other group projects. No development costs were capitalized (prior year 0.4 million euros).

Scheduled **depreciation** of 27.6 million euros (prior year 28.8 million euros) was slightly down on the prior year. This was offset by impairment losses and reversals totaling minus 0.9 million euros (prior year 1.2 million euros).

Depreciation on property, plant and equipment was unchanged at 21.0 million euros (prior year 21.0 million euros) and was therefore below the figure for capital expenditure on property, plant and equipment.

Depreciation on intangible assets amounted to 6.5 million euros (prior year 7.4 million euros) and, as in the previous year, primarily included depreciation on patents, trademarks and software, capitalized development services as well as regular customers. Impairments on intangible assets within the scope of the impairment test were recorded only to an insignificant extent (prior year 0.3 million euros). **T28**

In the 2016 fiscal year, no **investment property** was sold (prior year 8.2 million euros).



Further information on capital expenditure by segment can be found in the segment report from page 84 or for future investment projects in the Forecast Report from page 111

T27 Capital Expenditure and Depreciation/Amortization (in million euros)

	2016	2015	Change in %
Capital expenditure	27.5	24.7	11.4
Intangible assets	3.0	4.3	-30.4
Property, plant and equipment	24.5	20.4	20.2
Depreciation/amortization/impairment losses and reversals	28.5	27.6	3.2
Intangible assets	6.5	7.8	-15.9
Property, plant and equipment	21.8	21.2	3.0
Investment properties	0.1	-1.4	106.8

T28 Capital Expenditure by Segment – Intangible Assets and Property, Plant and Equipment (in million euros)

	2016	2015	Change in %
Group	27.5	24.7	11.4
Optics & Life Science	6.0	8.3	-28.2
Mobility	13.8	6.3	121.6
Defense & Civil Systems	4.1	4.9	-16.0
Other	3.5	5.2	-32.1

Analysis of Cash Flows

In the year covered by the report, the **cash flows from operating activities** of 100.1 million euros significantly exceeded the level of the prior year (prior year 85.1 million euros) and at the same time were the best operating cash flows generated in recent years. Higher earnings before tax, but also the positive change in working capital, in particular through the reduction in inventories, as well as the change in provisions and other assets and liabilities, had a positive effect on cash flows. The change in provisions is set out in the Notes under the item "Other provisions" on page 163. **T29**

Cash flows from investing activities were negatively influenced in particular by payments due to cash investments in the amount of 49.7 million euros (prior year 0), which resulted from short-term financial investments, as well as higher capital expenditure for property, plant and equipment and intangible assets (see table from page 148 on). On the other hand, proceeds from the sale of financial investments had a positive effect along with proceeds from non-operating income from investments (dividend payment) as well as the interest received. In 2016, the outflow of funds for investing activities amounted to 71.3 million euros, significantly above the figure for the prior year (prior year 7.2 million euros).

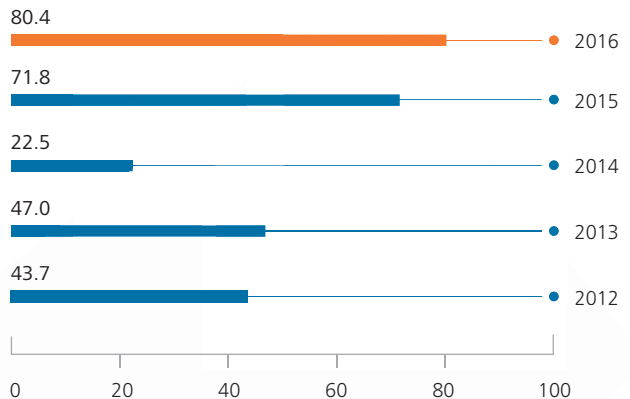
The **free cash flow** arises from the cash flows from operating activities before interest and taxes in the amount of 109.2 million euros (prior year 91.7 million euros) less the expenditure for operating investment activities in the amount of 28.8 million euros (prior year 19.9 million euros). During the period covered by the report, the free cash flow consequently improved to 80.4 million euros (prior year 71.8 million euros). As was the case with the operating cash flows, the best free cash flow of recent years was generated. **G14**

In the 2016 fiscal year, the **cash flows from financing activities** were minus 20.7 million euros (prior year minus 66.5 million euros) and were influenced by, among other things, the payment of a higher dividend of 12.6 million euros and the repayment of an installment of the debenture loans in the amount of 11.0 million euros. In the prior year, it was largely influenced by the issue and repayment of bonds and loans, together with changes in group financing, above all due to the payment made to the last remaining silent real estate investor.

Asset Position

The **total assets** of the Jenoptik Group as of December 31, 2016 increased to 813.1 million euros compared with year-end 2015 (31/12/2015: 769.2 million euros). The increase of 43.9 million euros is attributable, among other things, to


G14 Free Cash Flow (in million euros)



T29 Cash Flows (in million euros)

	2016	2015	2014	2013	2012
Cash flows from operating activities	100.1	85.1	46.3	60.6	66.6
Cash flows from investing activities	-71.3	-7.2	-37.6	-16.4	-33.8
Cash flows from financing activities	-20.7	-66.5	-13.8	-19.1	-36.1
Cash-effective change in cash and cash equivalents	8.0	11.4	-5.0	25.1	-3.4
Non-cash change in cash and cash equivalents	0.1	2.9	2.9	1.1	-0.1
Change in cash and cash equivalents	8.1	14.3	-2.1	26.2	-3.5
Cash and cash equivalents at the end of the fiscal year	92.0	83.8	69.5	71.6	45.5

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the increase in current financial investments and cash on the assets side, as well as to the increase in other reserves and the non-current financial debt on the liabilities side. By contrast, a decline was recorded in intangible assets and current financial debt in particular. 

The **non-current assets** fell overall by 10.9 million euros to 371.9 million euros, due primarily to the reduction in intangible assets. This resulted in particular from a reduction in the items patents, trademarks and software to 13.6 million euros (31/12/2015: 19.4 million euros), mainly due to scheduled depreciation. In addition, goodwill fell to 94.3 million euros (31/12/2015: 100.0 million euros) due to currency effects. Furthermore, the financial investments were reduced due, among other things, to payment receipts and impairment losses recognized.

As has been the case in previous years, the largest item in intangible assets  was goodwill valued at 94.3 million euros (31/12/2015: 100.0 million euros). The reduction compared with the prior year was exclusively the result of the conversion of foreign currency amounts on the reporting date.

Property, plant and equipment increased slightly to 157.9 million euros (31/12/2015: 155.7 million euros). The purchase of land

and construction of the technology campus at the US site Rochester Hills, Michigan, made a particular contribution to this increase.

There were only minor changes in the remaining items under non-current assets. **T30**

Due to the high levels of revenue at the end of the 4th quarter of 2016, the inventories fell to 159.3 million euros (31/12/2015: 167.1 million euros). At the same time, the trade accounts receivable from third parties increased slightly from 120.0 million euros to 129.0 million euros. Since short-term investments were made, the current financial investments increased from 0.4 million euros to 5.5 million euros. The significantly improved operating cash flows led to an increase in the cash and cash equivalents to 92.0 million euros (31/12/2015: 83.8 million euros). Overall, the **current assets** rose by 54.8 million euros to 441.2 million euros (31/12/2015: 386.3 million euros).

Due to improved inventory and receivables management, the **working capital** fell despite the revenue growth in the past year, amounting to 209.9 million euros (31/12/2015: 215.5 million euros) at the end of December. This was due mainly to the reduction in inventories as well as to higher trade accounts payable and liabilities from construction contracts. The working



More detailed information on the changes to the consolidated companies can be found in the Notes



More information on the intangible assets and property, plant and equipment can be found in the Notes, items 5.1 and 5.2

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T30 Composition of Non-Current Assets (in million euros and as percent of total value of non-current assets)

	2016		2015		Change in %
	Value	%	Value	%	
Intangible assets	111.4	29.9 %	122.7	32.1 %	-9.3
Property, plant and equipment incl. investment property	162.3	43.6 %	160.2	41.8 %	1.3
Financial investments	19.0	5.1 %	21.7	5.7 %	-12.5
Other non-current assets	5.0	1.3 %	4.5	1.2 %	9.0
Deferred taxes	74.2	20.0 %	73.6	19.2 %	0.8
Total	371.9	100.0 %	382.8	100.0 %	-2.9

T31 Elements of Working Capital (in million euros)

	2016	2015	Change in %
	Value	Value	
Inventories	159.3	167.1	-4.7
Trade accounts receivable from third parties and construction contracts	129.0	121.4	6.3
Trade accounts payable to third parties and construction contracts	49.0	47.8	2.5
Liabilities from advance payments received	29.5	25.2	17.1
Total	209.9	215.5	-2.6

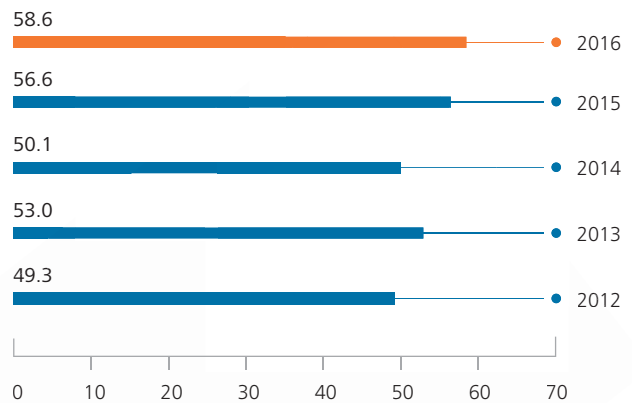
capital ratio, the proportion of working capital to revenue, improved compared with the previous year to 30.7 percent (31/12/2015: 32.2 percent). **T31**

The earnings after tax posted at the end of December 2016, reduced by the dividend payment, currency effects from the conversion of consolidated accounts as well as effects from the measurement of cash-flow hedges, resulted in an increase in **equity** including non-controlling interests by 41.2 million euros to 476.4 million euros (31/12/2015: 435.1 million euros). Despite the increase in total equity and liabilities, the **equity ratio**, the ratio between equity and total equity and liabilities, improved to 58.6 percent (31/12/2015: 56.6 percent). **G15**

At the end of 2016, the **non-current liabilities** increased to 175.4 million euros (31/12/2015: 169.5 million euros). The growth of 5.8 million euros is mainly due to higher non-current financial debt, which increased to 120.5 million euros (31/12/2015: 113.2 million euros). Among other things, a loan was taken out for the real estate and land financing in Rochester Hills. A key element of the non-current financial debt are the debenture loans totaling 114 million euros. The pension provisions increased to 37.6 million euros (31/12/2015: 36.1 million euros). Term-related transfers in current liabilities reduced the other non-current liabilities.

The **current liabilities** fell to 161.3 million euros (31/12/2015: 164.5 million euros). This is due in particular to the decline in current financial debt as a result of the scheduled repayment of a non-renewed installment of debenture loans of 11.0 million euros. The other current non-financial liabilities rose, mainly due to higher liabilities from advance payments received, to 53.6 million euros (31/12/2015: 45.1 million euros). At the end of 2016, the item contained trade accounts payable in the amount of 48.4 million euros (31/12/2015: 48.4 million euros)

G15 Equity Ratio (in percent)



T32 Financial Debt by Due Date (in million euros)

	Up to 1 year		1 to 5 years		More than 5 years		Total as at 31/12	
	2016	2015	2016	2015	2016	2015	2016	2015
Liabilities to banks	4.1	14.8	44.8	44.8	75.6	68.4	124.5	128.0
Liabilities from finance leases	0.0	0.0	0.0	0.1	0	0	0.1	0.1
Total	4.1	14.8	44.9	44.9	75.6	68.4	124.6	128.1

T33 Elements of Interest-Bearing Liabilities (in million euros)

	2016	2015	Change in %
Current			
Liabilities to banks	4.1	14.8	-72.2
Non-current			
Liabilities to banks	120.5	113.3	6.4
Liabilities from finance leases	120.4	113.2	6.4
	0.0	0.1	-35.3

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and additionally liabilities to third parties and a small amount of liabilities to unconsolidated associates and investments. The other current financial liabilities increased to 46.2 million euros (31/12/2015: 42.7 million euros), in part due to higher personnel provisions. [T32](#) [T33](#)

Values and Obligations Not Included in the Balance Sheet

The value of the [Jenoptik brand](#) is one of the main items not included in the balance sheet. A brand positioning has been drawn up in recent years in order to further strengthen the brand image, on the basis of which Jenoptik commenced a globally uniform brand image communication. In the course of internationalization, we are also increasingly anchoring the Jenoptik brand in our growth markets.

[Non-capitalized tax losses carried forward.](#) Tax losses carried forward arise from losses in the past which have not yet been offset against taxable profits. They represent potential future cash flow benefits, since actual tax payments can be reduced by these losses being offset against taxable profits.

For the remaining losses carried forward, no deferred tax assets have been accounted in the amount of 172.7 million euros (prior year 209.9 million euros) for the purposes of corporate income tax and in the amount of 330.9 million euros (prior year 369.6 million euros) for the purposes of trade tax as they will probably not be used within a determined planning time frame. Equally, no deferred tax assets were recognized for deductible timing differences in the amount of 9.4 million euros (prior year 14.4 million euros).

Jenoptik does not utilize any [off-balance sheet financing for the financial and asset position](#), such as sales of accounts receivable or asset-backed securities. For details on operating leases we refer to the Notes from page 153 on.

Information on [contingent assets and liabilities](#) can be found in the Notes from page 178 on.

[Clauses in contracts concluded by JENOPTIK AG, which apply in the event of a change of control](#) within the ownership structure of JENOPTIK AG following a takeover bid, exist for financing agreements with a total utilized volume of approximately 125.7 million euros (prior year 138.6 million euros). Further information can be found in the Corporate Governance Report from page 48 on as well as in the Information on Takeover Law from page 44 on.

General Statement by the Executive Board on the Development of Business

Jenoptik successfully continued on its growth path in the 2016 fiscal year. Group revenue increased, with all three segments contributing to this rise. Thanks to the continued internationalization, a more profitable revenue mix, the consistent implementation of the efficiency programs as well as the strategic realignment, we have been able to achieve an exceptional rise in EBIT to a new record level.

We also recorded a significant increase in the order intake, order backlog and frame contracts. We were able to secure several major international orders. As a result, we have created a very good basis on which to promote the further profitable growth of the Group.

Thanks to strong cash flows, we were able to finance both our operating growth as well as capital expenditure. In addition, we were able to fully offset the net debt. Our equity ratio rose again. We were able to improve our total assets as well as other financial indicators and items in the statement of financial position. These reflect the business model and development of our company.

The Executive Board is therefore of the opinion that business as a whole has developed very well.

Segment Report

The segments' range of services and competitive positioning are set out in greater detail in the "Business Model and Markets" chapter from page 56 on.

Information on the various markets can be found in the Sector Report from page 69 on, and on future developments in the Forecast Report from page 111 on.

Optics & Life Science Segment

In the 2016 fiscal year, the Jenoptik Group grew its role as a leading supplier of photonic system solutions in the Optics & Life Science segment, which stepped up its role as a development and production partner to numerous international market leaders and also managed to secure further key customers. The segment also boosted its value creation in the field of lithography and again made considerable progress in integrated solutions for semiconductor production. The past fiscal year also saw a focus on the medical technology and life science, and on the information and communication technology (ICT) markets. Improved market coverage and the production start-up of new optical products allowed us to successfully increase our international reach in the strategically relevant growth regions of the Americas and Asia/Pacific in 2016. **T34**

In the 2016 fiscal year, **revenue** in the Optics & Life Science segment rose by 3.7 percent to 221.5 million euros (prior year 213.7 million euros), with the segment particularly benefiting from good demand for solutions in the ICT market, the semiconductor equipment industry, and the medical technology sector. In total, around 79 percent of the segment's revenue was generated abroad in 2016 (prior year 76 percent), with Europe again enjoying the greatest share, followed by the Americas and Asia/Pacific.

The segment generated **EBIT** of 33.4 million euros. The operating results were accordingly 69.4 percent higher than in the prior year (prior year 19.7 million euros), primarily due to an improved product mix and one-off income of around 2.9 million euros resulting from a positive court of arbitration judgment in the third quarter. The EBIT margin increased sharply to 15.1 percent (prior year 9.2 percent).

At 236.6 million euros, the **order intake** exceeded the high prior-year level (prior year 206.7 million euros) by 14.5 percent. The good order intake, particularly in the areas of micro-optics and healthcare, was a key determinant of the segment's positive development of business in the past reporting year. Because the order intake grew at a greater rate than revenue, the book-to-bill ratio also rose, to 1.07 (prior year 0.97).

T34 Optics & Life Science Segment at a Glance (in million euros)


	2016	2015	Change in %
Revenue	221.5	213.7	3.7
EBITDA	41.7	28.3	47.3
EBITDA margin in %	18.8	13.3	
EBIT	33.4	19.7	69.4
EBIT margin in %	15.1	9.2	
Free cash flow	34.6	26.9	28.6
Order intake	236.6	206.7	14.5
Order backlog	80.7	73.7	9.5
Frame contracts	14.5	5.5	162.4
Employees	1,123	1,144	-1.8

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The **order backlog** in the segment increased by 7.0 million euros at the end of the year, to 80.7 million euros (31/12/2015: 73.7 million euros). The segment also has **frame contracts** worth 14.5 million euros (31/12/2015: 5.5 million euros).

With a **free cash flow** of 34.6 million euros (before interest and income taxes), the segment managed to far exceed the good level of the prior year (prior year 26.9 million euros). This was chiefly due to good earnings performance and the one-off income specified under EBIT. At 56.6 million euros, the segment's working capital was only marginally up on the prior year (prior year 56.2 million euros).

The Optics & Life Science segment employed a total of 1,123 **employees** as of December 31, 2016, 21 fewer than in the prior year. As at year-end 2016, the segment had 35 young people in trainee positions.

R+D expenses in 2016 totaled 14.3 million euros (prior year 15.0 million euros). Including development services on behalf of customers, the segment's **R+D output** came to 21.9 million euros, slightly above the level of the prior year (prior year 21.0 million euros). The share of total costs in segment revenue was 9.9 percent (prior year 9.8 percent). 

The segment's **capital expenditure** in property, plant and equipment and intangible assets came to 6.0 million euros (prior year 8.3 million euros). This was offset by depreciation in the sum of 8.2 million euros (prior year 8.3 million euros). Key areas of investment in the 2016 fiscal year included the technological upgrade and expansion of manufacturing capacity for optical and micro-optical precision components at the Jupiter (Florida) and Huntsville (Alabama) locations in the US, and in Jena and Dresden in Germany.

Production and organization. At the start of 2016, a new organizational structure for the divisions and thus a new seg-

ment structure was introduced. In the Optics & Life Science segment, the former Lasers and Optoelectronic Systems business units were consolidated to form a new Healthcare & Industry division. In addition to its expertise in digital imaging for new analysis and diagnostics procedures, its work is particularly focused on products and services for ophthalmology and dermatology. With their core businesses in micro-optics and high-performance optics, the remaining business units in the Optical Systems division are focused on the semiconductor equipment and information and communication technology markets.

Restructuring of the Laser business unit at the company headquarters in Jena was completed in 2016. This move represented the Group's response to intense competition and growing price pressure in the laser market. A program to secure the future viability of the business was carried out in the year covered by the report, streamlining the product portfolio and reducing costs in line with the unit's growth strategy.

Go-Lean activities continued in the past fiscal year, for example in the Lasers business unit, aiming to optimize and harmonize internal processes and thus lastingly boost productivity. A switchover to a paced assembly line for higher-volume products was successfully completed. A range of measures enabled tangible savings in assembly and production times, which in turn helped to keep costs down.

Alongside the Americas, Asia/Pacific is the key target market for Jenoptik's internationalization and ongoing growth. In the past reporting year, the segment therefore continued to optimize its sales and distribution infrastructure in Asia/Pacific. It focused on strategic developments in the field of medical technology. The Asian market for medical technology and life science will be subject to further analysis this year, with the aim of securing new key customers.



For more information on the key development topics, see the Research and Development chapter

Mobility Segment

Thanks to an improved range of services, the segment boosted its position in relevant markets such as the automotive, machine construction and traffic technology industries in 2016. In the light of current trends relating to Industry 4.0 and megatrends such as digitization and mobility, the Group is positioning itself to address customers' specific requirements for flexible, innovative concepts. The segment's new range of innovative technological solutions for toll payment monitoring also allowed it to successfully enter a new area of business in the 2016 fiscal year.

Revenue in the Mobility segment increased by 1.3 percent to 247.7 million euros in 2016 (prior year 244.6 million euros). Demand from the automotive industry, the key customer sector for industrial metrology, developed favorably in the fiscal year despite weaker demand in Europe and the enduring repercussions of the emissions scandal. The upswing in investment within the NAFTA region, particularly in the first half-year 2016, made a positive contribution to this development. In the Traffic Solutions business, by contrast, the reluctance to invest seen in the oil-exporting countries produced, as expected, weaker revenue growth in the Middle East and Africa region. At around 74 percent, the segment generated most of its revenue abroad (prior year approximately 78 percent). **T35**

The segment EBIT, at 24.4 million euros, was below the prior-year level (prior year 27.0 million euros). Due to restrained revenue development, a changed revenue mix and development services for major new traffic safety projects, the EBIT margin was below the prior year. EBITDA closely paralleled this development, falling 9.4 percent to 32.3 million euros (prior year 35.7 million euros).

The order intake in the segment increased by 5.5 percent in 2016 to 267.4 million euros (prior year 253.5 million euros). This growth was predominantly driven by the automotive industry, while major traffic technology projects secured in the 2016 fiscal year produced a significant increase in frame contracts. The Group was thus able to report the signing of long-term projects to increase road safety each valued in the mid double-digit million euros range, for example in the Province of Ontario, Canada, and in the Australian state of Western Australia and for new systems to monitor truck toll payments on Germany's federal highways. The segment's order intake exceeded the level of revenue in the year covered by the report, resulting in a book-to-bill ratio of 1.08 (prior year 1.04).

The order backlog increased by 16.8 percent, to 108.3 million euros at the end of the year (31/12/2015: 92.7 million euros). On the back of the aforementioned traffic safety projects, the value of frame contracts rose sharply to 79.1 million euros (31/12/2015: 11.5 million euros).


T35 Mobility Segment at a Glance (in million euros)

	2016	2015	Change in %
Revenue	247.7	244.6	1.3
EBITDA	32.3	35.7	-9.4
EBITDA margin in %	13.0	14.6	
EBIT	24.4	27.0	-9.5
EBIT margin in %	9.9	11.0	
Free cash flow	14.5	34.6	-58.0
Order intake	267.4	253.5	5.5
Order backlog	108.3	92.7	16.8
Frame contracts	79.1	11.5	586.7
Employees	1,229	1,207	1.8

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The **free cash flow** (before interest and income taxes) in the segment fell to 14.5 million euros (prior year 34.6 million euros), chiefly due to the earnings position and higher working capital. The working capital in the segment rose to 64.7 million euros (prior year 58.4 million euros), mainly due to an increase in trade receivables.

As of December 31, 2016, the Mobility segment had 1,229 **employees** (31/12/2015: 1,207 employees). As at the reporting date, 25 young people were in trainee positions (31/12/2015: 32 trainees).

The segment's **R+D output** totaled 24.5 million euros (prior year 24.5 million euros). This included developments on behalf of customers in the amount of 4.2 million euros (prior year 3.2 million euros). The R+D expenses came to 20.3 million euros (prior year 21.0 million euros). In 2016, the share of R+D output in total revenue in the Mobility segment was 9.9 percent (prior year 10.0 percent). 

The segment's **capital expenditure** in property, plant and equipment and intangible assets more than doubled in 2016, coming to a total of 13.8 million euros (prior year 6.3 million euros). The 121.6-percent increase in investment is due in part to the project status of major traffic safety orders. Over the past fiscal year, the Group also invested around 7.7 million euros in the construction of a new technology campus for metrology and laser machines at the Rochester Hills, Michigan, location in the US. Capital expenditure was offset by depreciation and impairment losses in the sum of 7.9 million euros (prior year 8.5 million euros).

Production and organization. As part of the strategic reorganization of the segment structure effective from January 2016, the Laser Machines unit was integrated in the Industrial Metrology business unit with the aim of serving customers in the automotive market from a single source in the future. There were no structural changes in the Traffic Solutions area.

In recent years, the Mobility segment has optimized its structures, chiefly guided by the twin pillars of internationalization in key sales markets and the expansion of business in the automotive industry. The major production and development locations in Germany and the US were further expanded. Work on the standardization of the product portfolio and on internationalization was continued in the Traffic Solutions business unit. In recent years, the Jenoptik Group thus has considerably strengthened its market position in the growth regions of Asia/Pacific and Europe.

In the past fiscal year, preparations were made to implement a new global sales structure in the Traffic Solutions business unit. Activities concentrated on the establishment of Regional Competence Centers (RCC) that aim to show a stronger presence in local markets, step up customer relations and respond faster to market trends. The five RCC, cover the following regions: North and South America, Western Europe and Africa, Central and Eastern Europe, the Middle East and Central Asia, and Asia/Pacific. The decentralized functional areas of sales, customer services, order handling, project management and regional product management have been consolidated at the operational RCCs since early 2017.

In January of 2017, Jenoptik reported its acquisition of ESSA Technology, based in Plymouth, England. The company specializes in software for traffic monitoring, particularly automatic number plate recognition applications for the police. This acquisition not only boosts Jenoptik's existing traffic technology product range but also marks a further important step in its development to become an integrated solution provider for public safety and future "smart cities".



For more information on the key development topics, see the Research and Development chapter

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Defense & Civil Systems Segment

2016 was again a year of record figures in the Defense & Civil Systems segment. In 2016, it further established itself as a partner for systems companies and customers with a need for individual solutions, and also launched a wide range of new products. Over the fiscal year, the segment pushed ahead to expand its international sales and service structures, particularly in North America and Asia, and boost technology and knowledge transfer to civilian fields. The fruits of these efforts are evident, for example, in the orders reported with international customers from the defense and railway industries.

Revenue rose to 218.3 million euros, 3.2 percent above that of the prior year (prior year 211.4 million euros). The increase is due in part to good business with energy and aviation systems as well as the completion of several major orders to equip the Patriot missile defense system. At approximately 47 percent and thus unchanged on the prior year, the share of revenue generated abroad was considerably lower than in the other two segments. The majority of products are still sold to German buyers, whose end customers, however, are largely active on the international sales market. The goal still remains to further expand the direct foreign share in the future. **T36**

The **segment's EBIT** climbed to 19.1 million euros, 6.8 percent up on the prior year (prior year 17.9 million euros). Alongside international growth in the core regions and a consistently market-oriented business focus in the segment, this improve-

ment is also attributable to better margins in the revenue mix. The EBIT margin in the segment improved to 8.8 percent (prior year 8.5 percent). EBITDA totaled 23.8 million euros, compared with 23.1 million euros in the prior year.

In 2016, the segment **order intake** came to 231.6 million euros, a sharp rise of 30.2 percent on the figure for the prior year (prior year 177.8 million euros). During the course of the year, Jenoptik received several major orders, including one to equip military ground vehicles in Poland worth around 22 million euros and another to produce components for the Patriot missile defense system worth over 50 million euros. The **book-to-bill ratio** in the segment consequently saw a sharp increase to 1.06 (prior year 0.84).

As of December 31, 2016, the **order backlog** of 217.8 million euros was higher than in the prior year (31/12/2015: 209.7 million euros). The segment also had **frame contracts** worth 67.4 million euros (31/12/2015: 42.1 million euros) which included agreements for the supply of spare parts for the Patriot missile defense system amounting to more than 30 million euros.

Alongside the growth in earnings, optimized inventory and receivables management was primarily responsible for the **free cash flow** (before interest and income tax) improving significantly from 14.6 million euros in the prior year to 33.5 million euros in the 2016 fiscal year. As of December 31, the working capital came to 93.5 million euros, down on the prior-year figure of 106.0 million euros.

T36 Defense & Civil Systems Segment at a Glance (in million euros)

	2016	2015	Change in %
Revenue	218.3	211.4	3.2
EBITDA	23.8	23.1	2.7
EBITDA margin in %	10.9	10.9	
EBIT	19.1	17.9	6.8
EBIT margin in %	8.8	8.5	
Free cash flow	33.5	14.6	130.5
Order intake	231.6	177.8	30.2
Order backlog	217.8	209.7	3.9
Frame contracts	67.4	42.1	60.0
Employees	881	881	0.0

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With a total of 881 employees, the number of people in the Defense & Civil Systems segment at the end of the year remained constant, despite the rise in revenue and earnings (31/12/2015: 881 employees). At the year end, the segment had a total of 60 young people in trainee positions (31/12/2015: 57 trainees).

The segment's R + D output rose to 10.6 million euros in 2016 (prior year 7.5 million euros). Developments directly on behalf of customers rose to 3.3 million euros (prior year 1.8 million euros). This figure is primarily due to joint development projects with systems companies. At 7.4 million euros, the segment's R + D expenses were higher than in the prior year (prior year 5.6 million euros).

The segment invested 4.1 million euros in property, plant and equipment and intangible assets (prior year 4.9 million euros). As a result, the level of capital expenditure was 16.0 percent lower than in the prior year. Key projects were the modernization of machinery at the Wedel and Altenstadt locations as well as of the infrastructure in Wedel. Capital expenditure was offset by depreciation and impairment losses in the sum of 4.7 million euros (prior year 5.2 million euros).

Cooperation, production and organization. In 2016, the segment signed a cooperation agreement with the Croatian railway engineering manufacturer Končar Electric Vehicles. The agreement aims to achieve closer cooperation in the global railway market, primarily in the modernization and refurbishment of existing rolling stock and the manufacture of new rolling stock. Jenoptik manufactures alternators and electric motors for the railway market, together with customized complete systems that supply on-board networks, traction motors or locomotives and power units with electricity independently of external power supply networks.

On its "FLEXPack" project, the segment developed a modular platform system for modern and powerful turret and weapons stabilization systems in 2016. The system's core components are standardized and can be expanded by modules defined in advance on the basis of an international market analysis. The concept will in future enable a rapid response to customer inquiries, thereby boosting the segment's global competitiveness.

Now for the fifth time, the segment received the Performance Excellence Award in the "Silver" category for its above-average quality and delivery reliability performance from aircraft manufacturer Boeing.

General Statement by the Executive Board on the Development of the Segments

With their different target markets and international reach, the Jenoptik Group's three operating segments developed well in 2016. All the segments achieved new record levels of revenue in a challenging global economic environment. The three segments succeeded in consistently taking advantage of the opportunities arising from the reorientation towards megatrends and markets and translating them into new orders and frame contracts. In addition, the share of total revenue generated abroad was successfully expanded in the past fiscal year, or, in the case of the defense area, at least maintained at a stable level.

Differing investment cycles, divergent patterns of demand and measures to boost efficiency influenced the operating areas' development of earnings over the year. In the past fiscal year, the EBIT margin in the Optics & Life Science segment was above the Group margin target corridor, even disregarding the one-off income in the third quarter. In the Mobility segment, the EBIT margin was at the upper end of our mid-term guidance. In addition to revenue, the Defense & Civil Systems segment also again improved its operating result and margin.

The Optics & Life Science as well as the Defense & Civil Systems segments also improved their ability to generate cash and cash equivalents, thus making a highly positive contribution to the increased free cash flow in the Group. Over the course of the past fiscal year, Jenoptik boosted its capital expenditure on expanding international sales structures, in efficient processes and the development of profitable cutting-edge products.

These measures, the successful entry into new areas of business and the stronger focus on megatrends allowed us to strengthen our position in international growth markets, establish a broader range of systems and secure both major international projects and new customers. This is also confirmed by the significant rise in order intakes and the frame contracts in all three segments.



For information on the key development topics, see the Research and Development chapter

Sustainability

Jenoptik sees entrepreneurial activity not purely as the pursuit and realization of commercial objectives but also something that brings with it an obligation to the environment and society. Corporate social responsibility (CSR) encompasses the sustainable and responsible orientation of our business activity, taking into account underlying economic, ecological and social conditions as well as the consequences of our economic activities.

Employee Issues

The principle of “Sharing Excellence” not only pertains to aspects of technology but also to our employees. By supporting, challenging and promoting the best minds in their particular areas of expertise, we are able to ensure the quality of our products and processes, our innovative potential and thus also our ability to create value in the long term.

We see the expertise and experience of our employees, and their efforts and commitment to the company, as key values. We conduct structured dialogs as a means of strengthening communications with employees. The low staff [fluctuation rate](#) of 4.2 percent itself reflects a high level of employee satisfaction with Jenoptik (prior year 3.6 percent).

Personnel Recruitment

Jenoptik’s personnel requirements are guided by the Group’s international growth strategy, resulting in a higher need in Asia and the US. The audiences addressed by recruitment and thus also HR marketing are primarily specialists and skilled workers in the fields of natural and engineering sciences as well as experts with business management and legal backgrounds.

Promoting New Talent

Specific support for [school students](#), [university students](#) and [graduates](#) forms part of the Group’s expertise strategy, ensuring early loyalty to the company and thus simplifying the recruitment process. In total, Jenoptik supported seven different career preparation projects at nine schools in 2016. Throughout the Group, 46 school students completed internships. To position itself as a potential employer and thus counteract the shortage

of skilled workers, Jenoptik cooperates with selected universities around the world and provides support to chosen students in the form of scholarships, degree theses and internships. Jenoptik also cooperates with the Abbe School of Photonics and actively works to promote training and professional development in various industry organizations. As one example, Jenoptik has been cooperating as a pilot partner with Ilmenau University of Technology on the BASICplus project – an open study platform for in-service training and professional development in the engineering disciplines. The qualification options for the so-called MINT professions (mathematics, IT, natural sciences and technology) have thus been significantly expanded, as has the range of individual training and professional development options for employees.

The [Jenoptik Junior Leadership Program](#) (J²LP) enables the targeted development and promotion of potential leaders within the Group. In addition to preparing management trainees for their future career paths, it aims to develop a uniform leadership culture and encourage cross-segmental networking among the participants. 2016 saw the successful completion of the tenth generation of this program. Jenoptik’s [leadership program](#) provides training to established managers in areas such as leadership and change management, helping to ensure a standardized understanding of management and the use of uniform management tools within the Group. This program was also successfully continued in the past fiscal year.

Healthcare and Family-Friendliness

Health and safety are firmly anchored priorities in the operating processes of Jenoptik. There are health and safety committee meetings at all Jenoptik companies each quarter. In addition, all employees are briefed on issues relating to [occupational safety and environmental protection](#) at least once a year. At all of the German locations, around ten percent of the workforce are trained as first-aiders. In 2016, the number of [workplace accidents](#) fell to 10.86 per 1,000 employees, placing Jenoptik well under the average of 15.8 in the ETEM trade association. In the interests of our employees’ health and performance, the Group offers regular medical examinations by a company physician, and in 2016 launched a [health day](#) for employees of all segments in Jena.

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Flexitime, part-time work and flexible parental leave all make it easier for Jenoptik's employees to strike their own balance between family and working life. In 2016, 167 employees made use of parental leave – 58.7 percent of whom were men. 6.8 percent of the workforce were on part-time contracts in 2016. One of the most important preconditions for **balancing career and family** is the availability of childcare. For several years, Jenoptik has been investing in daycare centers at the Jena, Wedel and Monheim locations, as well as flexible childcare models. This means that our employees are assured a fixed number of places at the daycare centers.

Environmental Issues

Environmental Management

Environmental management is an established part of our corporate activities; we hold ourselves, as well as our suppliers and contractual partners, responsible for complying with environmental laws. A number of Jenoptik companies are certified according to ISO 14001 environmental management standards, and one Jenoptik company holds an ISO 5000 energy management system certificate.

Jenoptik continued to implement statutory requirements relating to nature conservation and environmental protection for new buildings, extensions and the modernization of existing production facilities. For example, state-of-the-art technologies for saving resources and protecting the environment were applied when fitting out production facilities. On the basis of the energy certificates issued in prior years, cost-benefit analyses for all buildings in Germany continued in 2016. Building on this, the medium-term planning up to 2019 incorporates specific measures to increase energy efficiency. In 2016, for example, roof refurbishments were undertaken at buildings in Jena Göschwitz and the solar shading system at the technology center was replaced. In all construction activities undertaken in the past fiscal year, attention was focused more strongly on energy

efficiency, leading to a sustainably higher conservation of resources. Prime examples include the new production facility in Rochester Hills, Michigan, US, and the partial refurbishment of the building in Shanghai, China. The new building in Michigan was fitted with the latest sensor-controlled LED lighting for the offices and production environment, as well as special energy-saving heating and air-conditioning equipment. The insulation values are better than current requirements, which is attributable to the heat insulation used. Building refurbishment and the new build at the Wedel location, together with the refurbishment of buildings at the Jena location, was largely completed in the course of 2016. In addition, the machinery at all key locations was also modernized, taking into account the requirements of energy efficiency.

In the field of environmental management, a **CO₂ balance** was also drawn up for the German locations in 2016. This provides comparison values that allow for an assessment of the energy consumption levels as a ratio of revenue and consequently in relation to changing levels of energy efficiency in production. The consumption of resources increased more slowly than the expansion of business. The consumption of the various media (electricity, district heating, gas, heating oil, wood pellets) at all Jenoptik sites in Germany was used to calculate the CO₂ emissions, which came to 8,565 tons in 2016 (prior year 8,039 tons). The increase on the prior year is mainly due to the commissioning of a new production hall for the Defense & Civil Systems segment in Wedel, during which production in selected areas of manufacturing continued in the former building, and the expansion of clean room production facilities for the Optical Systems division in Dresden. Although all segments at the Jena location and the Healthcare & Industry division sites at the Triptis and Berlin locations use green electricity, it was not possible to fully compensate for the absolute increase of approximately 500 tons of CO₂. **T37**

Within all segments in Germany, types of waste are systematically recorded and the quantities calculated. The volume of hazardous **waste** in the 2016 reporting year fell marginally to

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T37 CO₂ Emissions of the Jenoptik Locations in Germany (in tons)

	2016	2015	2014
CO ₂	8,565	8,039	12,220

183 tons; this was disposed of through the transportation of hazardous goods to waste treatment/disposal plants (prior year 185 tons). By contrast, the quantity of non-hazardous waste increased to 620 tons (prior year 559 tons), primarily due to the move at the Wedel location.

As a technology company, Jenoptik is dependent on a wide range of raw materials. In the face of an increasing scarcity of resources and rising global prices, it is both an ecological imperative and good economic sense for the Group to make efficient use of the materials it requires. We comply with applicable regulations to ensure we use these materials in a responsible manner, for example the requirements of the European chemicals regulation REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) and the RoHS directive (Restriction of certain Hazardous Substances), and are fully involved on associated committees. **T38 T39**

Resource Management

Many of Jenoptik's innovative products make a contribution to the efficient and responsible use of resources. As a B2B provider, we are mostly involved in the areas where our customers' production processes and products can be made more efficient. The examples below from our three segments illustrate this:

Diode lasers are one of the most efficient light sources available, with an efficiency of up to 70 percent. With their excellent flexibility and efficiency, lasers are becoming increasingly important tools in production. As a provider of laser machines for a wide range of applications, Jenoptik offers its customers a durable and resource-saving alternative to conventional machining processes.

The efficient new generation of lighting for industrial applications, "JENOPTIK RayLance", not only offers high performance and a long service life; with its impressive **energy efficiency**, the light is also ideal for use in many situations, particularly high industrial spaces such as warehouses, logistics halls and production halls, and its light yield is about 40 percent greater than that of the previous generation.

The supply of electrical power is increasingly important in modern vehicles. Electric motors and generators, power electronics and complete assemblies are extremely efficient and feature a very good power to weight ratio, i. e. an improved ratio between the level of electrical or mechanical energy generated and the weight of the systems.

With continuing advances in development, optical technologies are increasingly opening up potential new areas of application that allow for simpler process design, the protection of resources

T38 Energy Consumption of the Jenoptik Locations in Germany (in megawatt hours)

	2016	2015	2014
Electricity	34,439	34,416	34,757
Gas	10,252	7,989	7,957
Wood pellets	772	1,250	1,326
District heating	10,621	9,633	9,103
Heating oil	264	199	387
Total energy consumption	56,348	53,487	53,530

T39 Water Consumption of the Jenoptik Locations in Germany (in cubic meters)

	2016	2015	2014
Water	54,953	57,229	57,084

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and a reduction in the size of crystalline structures in semiconductor production. Jenoptik also supplies optical systems for new communication technologies in the field of fiber coupling, optical diagnostic procedures, e.g. for endoscopy, and opto-electronic system solutions in life sciences.

Fuel and CO₂ savings as well as hybridization. One objective of the automotive industry is to reduce fuel consumption and both carbon and pollutant emissions. High-precision metrology systems and plants can be used for rapid and accurate testing of shapes and surfaces. The results are more precise surfaces on engine components and thus vehicles that require less fuel. The increasingly widespread use of hybrid drive units is leading to the use of ever more complex transmissions containing a large number of new components, in turn demanding greater use of metrology. For customers, this means longer life cycles and less service expenditure, equating to excellent product sustainability and reduced costs in the manufacturing process. But it's not only the automotive industry that is reaping these benefits: for example, Jenoptik also developed an innovative hybrid power generation system for the Patriot missile defense system, ensuring a more efficient supply of energy to the Patriot launching stations in the future.

Jenoptik's **traffic monitoring system** help to ensure compliance with applicable laws. They thus help to make road traffic safer,

reduce the probability of accidents and injuries and lower pollutant and noise emissions. For the first time, Jenoptik is also supplying truck toll payment monitoring systems for Germany's federal highways that, thanks to the digital combination of various sensor technologies, represents a unique solution on the market. The monitoring systems can be installed on the side of the highways, eliminating the need for monitoring gantries and thus limiting the impact on the environment.

Social Commitment

In addition to economic and ecological matters, Jenoptik's promotion of sustainability also focuses on social issues. Supporting young people in their education and scientific activities, as well as in social projects – this is at the heart of our social commitment. The Group supports a whole range of non-profit projects, organizations and initiatives and is actively involved in science, education and culture as well as in the area of social welfare and charity, primarily in Germany but increasingly also abroad. **G16**

Jenoptik's main concern is to achieve close, long-term partnerships, with the aim of providing not just financial but also personal assistance. The Group has long been pursuing this approach, e.g. since 1996 through its patronage of the

G16 Social Commitment – Examples of Projects in 2016

Social issues >	Jenoptik supports:	<ul style="list-style-type: none"> Easter Charity Concert by the International Youth Orchestra Academy for the Elterninitiative für krebskranke Kinder Jena e.V. "Habitat for Humanity"; Jupiter (FI) Fund-raising campaign on the occasion of the New Year's Eve Reception for the social work with children and young people in the church community in Bürgel Summer camp for children of employees and for the first time for children from recognized refugee families
Science and education >	Jenoptik has been a partner for many years for...	<ul style="list-style-type: none"> the Thuringian youth researchers competition "Jugend forscht" (since 1991) the competition of school students "Schüler experimentieren" (since 2012) long "Night of Sciences" in (since 2005) the workshops "BEGEGNUNGEN Kultur Technik Wirtschaft" for students of the Ernst-Abbe-Hochschule Jena
Art and culture >	Jenoptik focuses on promoting regional and young artists with its in-house "tangente" art exhibition	<ul style="list-style-type: none"> tangente "Sequences" – Susan Liebold tangente "Farbe Formen Räume" – Falko Bärenwald and together with partners the exhibition dedicated to the German-French artist Rotraut, organized by the Friedrich-Schiller-University Jena

“Elterninitiative für krebskranke Kinder Jena e.V.” (Adult Initiative for Children with Cancer Jena). Donations both made by Jenoptik and collected from partners as well as the organization of diverse events help to support children with cancer and their parents. Particularly worthy of note is the Easter Charity Concert given by the International Youth Orchestra Academy, the proceeds of which are donated to the initiative. In the US, employees at the Rochester Hills (Michigan) location provide education and career guidance to young people from financially disadvantaged families. Jenoptik employees in Jupiter (Florida) assist the “Habitat for Humanity” organization in championing affordable, decent housing, and help to build homes for families in need.

Further priorities of Jenoptik’s commitment to society have for many years included the [promotion of science, education, art and culture](#). Our work as a longstanding and reliable partner in the region is exemplified by our sponsorship of the Thuringian “Jugend forscht” (Young Researchers) state competition. The Group has also been supporting the “Schüler experimentieren” (School Students Experiment) competition since 2012, takes part in the Long Night of Sciences and works closely with universities and research institutes.

Since the company’s earliest days, Jenoptik has been enriching life in Jena with art and cultural projects. The in-house “tangente” art exhibition is a key part of this endeavor, but Jenoptik also supports other art projects in association with various partners. On the occasion of our 25th company anniversary, the highlight of 2016 was our support for the exhibition dedicated to the French-German artist Rotraut organized by the Friedrich Schiller University of Jena. Jenoptik offers students at Jena’s University of Applied Sciences an innovative type of cultural education through its workshop “BEGEGNUNGEN Kultur Technik Wirtschaft” (“ENCOUNTERS culture technology business”).

Together with numerous partners, the Group is also active as a member of the “Familienfreundliches Jena e.V.” (Family-Friendly Jena) support group for projects conducted by the “Jenaer Bündnis für Familie” (Jena Family Alliance) to improve general underlying conditions, the [work/life balance](#) and equal opportunities in education. Since 2014, Jenoptik has also held a summer camp for children of employees. Children from recognized refugee families also attended the camp for the first time in 2016, with financial support provided by Jenoptik.

Human Rights

Upholding human rights is one of Jenoptik’s key priorities – in its operating business as well as in the supply chain. All suppliers are obliged to respect the rights of their employees, for example the ban on forced or child labor, under Jenoptik’s code of conduct for suppliers. The aim of a current project is to develop further measures and checks within our business operations and supply chain to prevent any violations of human rights.

Anti-Corruption

Jenoptik fights all forms of active and passive corruption and expects all its business partners to do the same. Clear employee guidelines on dealing with gifts and donations as well as training on specific topics aim to ensure sufficient awareness and legal compliance. The purpose of a centralized business partner screening process is to ensure that Jenoptik cooperates only with those business partners that meet all of its compliance requirements. Obliging suppliers to comply with Jenoptik’s code of conduct and reviewing risky contractual arrangements is an essential part of preventing corruption. In accordance with international standards, the code of conduct requires our suppliers to comply with a number of different compliance requirements. A project for group-wide uniform handling of conflict minerals extends across the entire supply chain. Compliance with our group-wide standards is reviewed in the course of regular internal audits.

Other Non-financial Issues

Quality Management

Jenoptik’s success as a company rests on the quality of the products and solutions we offer our customers. 2016 therefore saw the continuation of efforts to comprehensively certify various group companies. All certifications are subject to annual review audits that were also successfully conducted in all areas in the past fiscal year. Almost all Jenoptik companies met the requirements of the ISO 9001 quality management standard.

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The recertification/surveillance audits were successfully completed in 2016 for all companies in the Optics & Life Science segment certified according to DIN EN ISO 9001:2008. Also in this segment, JENOPTIK Polymer Systems GmbH complied with the stringent medical technology standards of DIN EN ISO 13485:2012 as well as those for the automotive industry codified in DIN ISO/TS 16949:2009.

In the Mobility segment, JENOPTIK Robot GmbH at the Monheim location successfully passed a surveillance audit for data protection and security for order data processing. A surveillance audit according to DIN EN ISO 9001:2008, carried out by DEKRA and valid for all locations, was also passed. JENOPTIK Industrial Metrology Germany GmbH was one of the first providers to be awarded a license by the German Accreditation Agency DAkkS for the calibration of roughness, contours and shapes. The calibration laboratory of this Jenoptik business has been allowed to use the mark of the International Laboratory Accreditation Cooperation (ILAC) since 2012. Products and services thus gain a higher acceptance on an international level. Since June 2016, almost all global production locations in the Automotive unit have been certified according to DIN EN ISO 9001:2008. In the Defense & Civil Systems segment, all of the JENOPTIK Advanced Systems GmbH's locations are certified according to EN 9100, a quality management system specific to the demanding requirements of the aerospace and defense industries. At Wedel, the segment is also certified as a manufacturer for the European Aviation Safety Agency (EASA) and as a maintenance company under the respective regulations of the European, US, Canadian, and Chinese aviation authorities. At the Altenstadt site, the subsidiary JENOPTIK Power Systems GmbH is certified both in accordance with quality management certification (DIN EN ISO 9001:2008) and the International Railway Industry Standard (IRIS).

Customer Relationships

Jenoptik predominantly manufactures capital goods, provides a wide range of services and is both a supplier and partner of industrial companies. Our technology-intensive products and systems are often created in close collaboration with the customer. This requires confidence on both sides as well as knowledge of target audience requirements. That's why successful, longstanding collaborations with key customers are an important factor of success at Jenoptik. In part, good customer relationships are reflected in our high order backlog.

Procurement

In recent years, Jenoptik has managed to leverage significant opportunities in purchasing and thus contribute to an increase in operational excellence on the group level.

The strategic and operational purchasing structures were more closely interlinked in 2016 as part of the segment reorganization process and procurement responsibility was centralized. Operational purchasing is structured by product groups and is responsible for the segments' procurement processes. In the past fiscal year, operational purchasing successfully integrated the North American Alabama and Rochester Hills locations in procurement at the Shared Service Center (SSC) America. All key local procurement volumes in the US thus fall within the remit of the SSC, which has already produced a reduction in costs for bought-in parts in this region. Strategic purchasing is responsible for the group-wide material group and supplier strategy, as well as procurement processes in the Group. This ensures good access to the relevant markets and thus the creation of synergies.

T40 Certification within the Group (selection)

ISO 9001	Certification of quality management processes
EN 9100	Certification of quality management processes specific to the aerospace and defense industries
ISO 13485	Certification of comprehensive quality management systems for the design and manufacture of medical products
ISO 14001	Certification of the environmental management system
ISO/TS 16949	Certification for the automotive industry
EG 748/2012	Certification as a manufacturer for the civil aviation industry
EG 2042/2003	Certification as a maintenance company for the civil aviation industry
IRIS	International Railway Industry Standard
ILO-OSH-2001 / OHSAS 18001	Certification of occupational safety and health management

Key initiatives for achieving our objectives are the Global Sourcing Project, the Purchasing Academy and Material Group Purchasing, which was further centralized. Alongside on-schedule standard and project procurement, in 2016 the Group again focused on central bundling of material requirements and arranging further international sources of supply, particularly in Asia and North America. The share of sourcing in these regions was increased by a double-digit million amount. In addition, preferred strategic suppliers were selected for the various material groups, which are supported and coordinated with systematic supplier management. This process is managed by strategic purchasing together with the segments' quality management.

Processes

Jenoptik continued to invest in improving its structures and processes to achieve [organizational and procedural advantages](#). This included the continual international expansion of the Shared Service Center functions as well as the Jenoptik Excellence Program (JEP), which was prioritized and successfully continued.

Thanks to far-reaching JEP initiatives, including those supporting the organization of tasks in the new segment structure, internal processes were successfully synchronized and streamlined in 2016. This enabled a lasting reduction in complexity and an increase in the flexibility required by the market. The program thus again made a significant contribution to the growth in earnings achieved in the past fiscal year. We continue to focus on ever-increasing process performance, both nationally and internationally.



For information on changes to the organizational and production processes in the operating areas, see the Segment Report from page 84 on

To further improve the organization's consistent alignment with market requirements, the ongoing transformation of sales as part of the "Market Excellence Program" was another priority in the past fiscal year. It aims to increase market orientation throughout the Group, enabling the efficient generation of growth momentum. The integrated Market Excellence Program therefore focuses not only on strategy, organization, processes and performance in sales and service, but also explicitly on supporting business development, pricing and internationalization.

Across-the-board use of established tools shows that the lean methodology promoted by the Go Lean Program has now been successfully established in the Group, once again reducing operating costs, increasing flexibility and improving quality. Lean methodology is due to be rolled out further at Jenoptik in the years ahead. The first administrative areas have already received training and successfully begun implementing improvement projects, such that entire process chains are increasingly being organized along lean principles.

The most extensive group-wide project designed to bring about organizational and procedural advantages is the JOE project (Jenoptik One ERP). It has three objectives at its heart:

- to support international growth with harmonized processes and standardized IT systems
- to boost efficiency in the operating functions with the development of a standardized ERP system and
- to improve group controls with further method development in financial control and accounting.

The project chiefly addresses the key management, core and support processes in every one of the Group's organizational units worldwide. In the course of 2016, a standardized ERP system was established in the Traffic Solutions business unit, at the Shared Service Center and at JENOPTIK AG. Relevant software-assisted business processes within the Group are subject to identical models and thus simplify the centralized management of the company.

Reputation

The Jenoptik Group benefits from the reputation of our headquarters in Jena, which is highly renowned by both scientists and customers as an "Optical Valley". Jenoptik is conscious of this reputation and is involved in various activities aimed at sustainably improving the location.

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Management Report of JENOPTIK AG

(Abridged Version According to HGB)

Supplementary to the reports on the Jenoptik Group, the development of JENOPTIK AG is set out below.

JENOPTIK AG is the parent company of the Jenoptik Group and based in Jena. Its asset, financial and earnings position is fundamentally defined by its capacity as the holding company of the Jenoptik Group. In 2016, the operating activities of JENOPTIK AG, which primarily cover the subleasing of commercial premises, increased in significance on the prior year due to the accrual of LEUTRA SAALE Gewerbegrundstücksgesellschaft mbH & Co. KG., Grünwald and the merger of JORENT Techno GmbH, Jena, with JENOPTIK AG.

The Annual Financial Statements of JENOPTIK AG are prepared in accordance with German commercial law (HGB), incorporating the changes arising from the Accounting Law Modernization Act (BilRUG). The Consolidated Financial Statements are prepared according to the International Financial Reporting Standards (IFRS) valid on the reporting date and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC) whose application is mandatory within the European Union. This gives rise to differences in the accounting and valuation methods, chiefly concerning fixed assets, derivatives, provisions and deferred taxes.

Asset, Financial and Earnings Position

Earnings Position

Revenue increased by 25.6 million euros to 27.4 million euros on the prior year, primarily due to rental income worth 14.5 million euros from the merged subsidiary JORENT Techno GmbH, Jena, and the changed definition of revenue according to BilRUG equating to 10.8 million euros (of which 9.1 million euros holding company allocation to the group entities).

With the change in the composition of revenue, the cost of sales rose too, by 20.7 million euros. This was primarily attributable to costs of the merged JORENT Techno GmbH covered in the amount of 9.4 million euros due to the changed definition of revenue according to BilRUG.

As a result the gross profit improved from 0.5 million euros to 5.4 million euros of which earnings from the merged real estate firms accounted for 5.1 million euros.

The 2.4 million euros drop in administrative expenses compared to the prior year is, in the amount of minus 6.1 million euros, due to the adjustment of administrative expenses to match the new definition of revenue according to BilRUG. This was countered by higher expenses in the amount of 3.0 million euros, chiefly in conjunction with the changes to the Executive Board in the fiscal year 2017.

T41 Abbreviated Income Statement of JENOPTIK AG (in thousand euros)

	1/1 to 31/12/2016	1/1 to 31/12/2015
Revenue	27,407	1,820
Cost of sales	22,014	1,340
Gross profit	5,393	480
Selling expenses	861	1,840
General administrative expenses	15,409	17,848
Research and development expenses	304	596
Other operating result	4,034	10,521
Income and expenses from profit and loss transfer agreements and income from investment companies	53,505	40,274
Financial result	-2,287	1,587
Income taxes	4,682	2,765
Earnings after tax	39,388	29,812
Other taxes	1	18
Net profit	39,388	29,794
Transfer to revenue reserves	0	739
Retained profits from prior year	34,420	17,957
Accumulated profit*	73,808	47,012

* According to the proposal put forward by the Executive Board to the Supervisory Board regarding appropriation of profits

JENOPTIK AG reported research and development expenses amounting to 0.3 million euros (prior year 0.6 million euros), covering expenses for innovation management and the coordination of research and development work within the Jenoptik Group.

Selling expenses of 0.9 million euros (prior year 1.8 million euros) concerned communications and marketing, and also include expenses for advertising and sponsorship. The fall on the prior year was mainly due to the reclassification of selling expenses in the cost of sales effected in the course of changes to reflect BilRUG.

The other operating result includes other operating income of 11.4 million euros (prior year 25.1 million euros) and other operating expenses of 7.4 million euros (prior year 14.6 million euros).

Other operating income fell 13.7 million euros in the 2016 fiscal year, again primarily due to the new presentation required by BilRUG. 10.8 million euros were reclassified as revenue. Key elements in the year covered by the report were earnings from the reversal of provisions in the amount of 3.5 million euros, currency gains worth 2.9 million euros and internal group cost allocations of 1.6 million euros. During the reporting period, other operating expenses fell from 14.6 million euros to 7.4 million euros. The changes were due to a fall of 2.8 million euros in expenses arising from cost allocations, one-off expenses from the prior year arising from settlement obligations in the value of 2.8 million euros and lower currency losses. They include currency losses of 2.7 million euros, cost allocations to subsidiaries worth 1.6 million euros, unscheduled depreciation on intangible assets of 1.5 million euros and expenses for internal group optimization projects in the amount of 0.9 million euros.

The financial result of minus 2.3 million euros (prior year 1.6 million euros), consisting of earnings from securities and loans, depreciation on loans and the interest result, fell 3.9 million euros on the prior year. These changes result from lost interest income of 2.1 million euros due to the reduced loan volumes to unconsolidated associates as well as 2.3 million euros of higher depreciation on financial investments. By contrast, interest income arising from a settlement in connection with the sale of M+W Zander Holding AG in the 2005 fiscal year amounted to a gain of 1.5 million euros.

The increase in income taxes by 1.9 million euros to 4.7 million euros (prior year 2.8 million euros) is mainly due to higher income in the subsidiaries. This, however, was coun-

tered by tax effects from the sale of real estate and non-tax-effective earnings from discontinued operations. The comparatively low overall income taxes are attributable to the use of tax losses carried forward.

JENOPTIK AG's annual net profit increased by 9.6 million euros, or 32.2 percent, to 39.4 million euros (prior year 29.8 million euros). The company's earnings position was mainly influenced by the income generated by the accrual and merger of the real estate firms in the fiscal year, and by the subsidiaries' contributions to earnings that are then paid to JENOPTIK AG on the basis of existing control and profit and loss transfer agreements. The net earnings contribution of the subsidiaries increased on the prior year, by 13.2 million euros, to 53.5 million euros. In the details, however, the earnings contributions are composed differently: the Optics & Life Science segment further improved

T42 JENOPTIK AG Statement of Financial Position (in thousand euros)

	31/12/2016	31/12/2015
Assets		
Non-current assets	443,991	451,378
Inventories, trade receivables, securities and other assets	78,557	99,405
Cash on hand, bank balances	132,257	74,885
Current assets	210,814	174,290
Expenses and deferred charges	3,432	3,706
	658,237	629,374
Liabilities		
Share capital	148,819	148,819
(Conditional capital 28,600 thousand euros)		
Capital reserves	180,756	180,756
Revenue reserves *	74,410	74,410
Accumulated profit *	73,808	47,012
Equity	477,793	450,997
Pension provisions	2,921	4,402
Other provisions	18,042	13,059
Provisions	20,963	17,461
Liabilities to banks	114,002	125,000
Trade accounts payable	1,125	1,011
Other liabilities	44,355	34,905
Liabilities	159,481	160,916
	658,237	629,374

* According to the proposal put forward by the Executive Board to the Supervisory Board regarding appropriation of profits

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its contribution to earnings due its position as a leading supplier of photonic system solutions, and the Defense & Civil Systems segment also improved its contribution on the basis of good business with energy and aviation systems and various completed major orders.

Asset and Financial Position

At 658.2 million euros, JENOPTIK AG's total assets were 4.6 percent up on the figure for the prior year (prior year 629.3 million euros).

The asset side of the statement of financial position reflected JENOPTIK AG's status as a holding company. Alongside a large share of the fixed assets (67.5 percent) in total assets, of which 56.7 percent is attributable to financial investments and 10.8 percent to property, plant and equipment, total assets are also dominated by a high level of cash and cash equivalents (20.1 percent) and loans to unconsolidated associates (11.7 percent).

In the 2016 fiscal year, loans to unconsolidated associates, which form part of the financial investments, fell 61.6 million euros to 29.9 million euros (prior year 91.5 million euros). In addition to scheduled repayments of existing loans in the amount of 10.3 million euros, loan receivables worth 52.7 million euros were consolidated with the relevant liabilities of JENOPTIK AG by means of amalgamation, in the course of the accrual of LEUTRA SAALE Gewerbegrundstücksgesellschaft mbH & Co. KG, Grünwald. On the other hand, property, plant and equipment rose by 54.9 million euros due to the accrual of LEUTRA SAALE Gewerbegrundstücksgesellschaft mbH & Co. KG, Grünwald.

Receivables from unconsolidated associates fell by 21.1 million euros, and chiefly affected the settlement accounts for cash pool holdings of subsidiaries. The reduction was due to positive cash flow developments at subsidiaries.

The increase in liquid funds by 57.3 million euros to 132.3 million euros must be seen in connection with reduced settlement accounts and the subsidiaries' positive contributions to earnings.

Expenses and deferred charges were predominantly due to capitalized costs in connection with the expansion and extension of financial debt. These were distributed over the terms of the financing agreements.

In terms of liabilities, JENOPTIK AG's financing function as the holding company for the Jenoptik Group is of particular note. Equity came to 477.8 million euros, liabilities to banks 114.0 million euros (17.3 percent of the total equity and liabilities).

Thanks to the positive annual result of 39.4 million euros equity rose to 26.8 million euros. This was countered by the payment of dividends worth a total of 12.6 million euros for the 2015 fiscal year. The equity ratio grew from 71.7 percent to 72.6 percent.

The increase of 5.0 million euros in other provisions was in part due to a rise of 1.9 million euros in tax provisions and additions to personnel provisions worth 3.6 million euros, in particular arising from bonuses and expenses in connection with the pending changes to the Executive Board. On the other hand, provisions for onerous contracts reduced by 0.8 million euros.

Due to the scheduled repayment of a debenture loan installment, liabilities to banks fell by a total of 11.0 million euros in the fiscal year.

Other liabilities increased by 9.4 million euros, primarily due to the increase of settlement accounts for cashpool balances and a loan of a subsidiary. On the other hand, compensation obligations in connection with profit and loss transfer agreements reduced.

Over the reporting year, JENOPTIK AG's debt ratio fell due to the rise in equity from 39.6 percent to 37.8 percent.

As of December 31, 2016, JENOPTIK AG had 121 employees, of which 12 were temporary workers (prior year 119 employees, of which 14 temporary workers and 2 trainees).

Report on Post-Balance Sheet Events

Risks and Opportunities

Due to its function as a holding company, JENOPTIK AG's development of business is subject to the same risks and opportunities as the Jenoptik Group. It generally participates in the risks of equity holdings and subsidiaries in line with their equity interest. The risks and opportunities of the Group and the segments are set out in the Risk and Opportunity Report from page 108 on.

Forecast Report

The annual result of JENOPTIK AG in its capacity as a holding company is largely dependent on the development of contributions to earnings by the subsidiaries. On the basis of the development presented in the Forecast Report, JENOPTIK AG also expects to report growth in the 2017 fiscal year.

In the 2017 fiscal year rental income is expected at the same level as in 2016, holding company allocation are expected to be slightly lower on the basis of offsetable costs.

For a detailed presentation of the expected future development of the Jenoptik Group and its segments, we refer to the Forecast Report from page 114 on.

The Executive Board of JENOPTIK AG authorized that the present Consolidated Financial Statements may be passed on to the Supervisory Board on March 8, 2017. It is the task of the Supervisory Board to review and approve the Consolidated Financial Statements in its meeting on March 21, 2017.

Dividends. In compliance with the German Stock Corporation Act, the amount that can be paid as a dividend to shareholders is set on the basis of the accumulated profit of the parent company, JENOPTIK AG, which has been determined in accordance with German commercial law (HGB). For the 2016 fiscal year, the accumulated profit of JENOPTIK AG totaled 73,807,624.13 euros, comprising net profit for the 2016 fiscal year in the amount of 39,387,813.03 euros plus retained profits of 34,419,811.10 euros.

On the basis of the good annual result for the past fiscal year 2016, the Executive Board recommends that the Supervisory Board propose to the Annual General Meeting an increase of 14 percent, to 0.25 euros, in the dividend to be paid per qualifying no-par value share (prior year 0.22 euros). This means that an amount of 14,309,528.75 euros from JENOPTIK AG's accumulated profits in the 2016 fiscal year will be distributed and an amount of 59,498,095.38 euros will be carried forward.

Acquisition. In January 2017, the Jenoptik Group acquired all shares in the British company Domestic and Commercial Security Limited (ESSA Technology), Saltash, Great Britain. 

No further events of significance occurred after December 31, 2016.



For more information, we refer to the details in the chapter 2.4 Entities Acquired and Sold on page 132 f.

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Risk and Opportunity Report

Principles of Risk and Opportunity Management at Jenoptik

For Jenoptik, the responsible evaluation of risks and opportunities within the corporate environment is one of the principles of responsible corporate governance. To be able to ensure implementation of the strategy, it is necessary to identify risks and opportunities at an early stage, to evaluate them appropriately and control them efficiently. This is done by promoting an open risk culture and regularly examining the established risk management system. Jenoptik’s risk and opportunity management system has been the subject of continuous development in recent years. Reporting processes employ centrally available software.

Risks are defined as potential developments and events that may result in a negative divergence from objectives in the company or the forecast and involve uncertainty regarding the occurrence of an event. Operational risks are potential future developments or events that, with regard to business operations, may result in a negative divergence from operating targets in the company. Correspondingly, **opportunities** are events that can cause a positive divergence from our expected targets.

Jenoptik’s risks and opportunities are assessed with the help of the probability of occurrence and extent of damage factors using a key metric. On the basis of a standardized rating scale from 1 to 5, this produces a risk indicator of 1 to 25 for each event. The risks and opportunities described here are the result of the aggregation of locally identified risks and opportunities that were each allocated to defined categories. **G22**

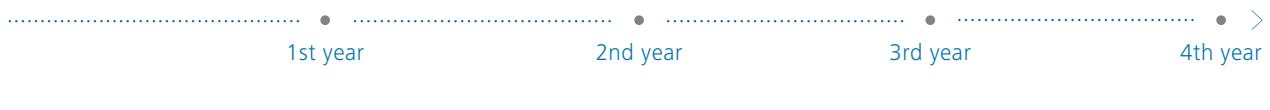
Organizational Integration of the Risk and Opportunity Management

Overall responsibility for the risk and opportunity management system in the Jenoptik Group lies with the Executive Board. The group-wide approach is set out in a risk manual.

The central Risk & Compliance Management department organizes and manages the system, working closely with the central departments and the risk officers in the divisions, who in turn are responsible for implementing the risk and opportunity management system in the risk reporting units. The risk reporting units are reporting units defined by the divisions that are employed to accurately identify and allocate risks and can represent both business units and individual subsidiaries.


G17 Risk and Opportunity Categories

Operational Risks/Opportunities	Strategic Risks / Opportunities
Supply Chain Management/Safety and Environmental Protection/ Production (incl. quality management)/Marketing & Sales/ Patents & IP rights/Human Resources Management/ IT (incl. implementation of JOE project)/Compliance/ Legal Affairs/Real Estate	Market Development/Product Development (incl. R+D)/ Corporate Development (Portfolio and Structure)/ Organizational Setup (Processes and Resources)
Financial Management Risks/Opportunities	
Accounting/Finance Management (Treasury)/ Controlling/Taxes	



Internal Auditing monitors the effectiveness of the risk management system as an internal authority, while the Audit Committee of the Supervisory Board takes up the external monitoring function for or in conjunction with the Supervisory Board.

On the Risk & Compliance Committee, all aggregated reporting results are consolidated to form a top-level evaluation of the Group's risk position. The committee comprises the members of the Executive Board and the heads of the central Legal, Internal Auditing and Risk & Compliance Management departments. **G18**

The consolidated companies exposed to risk correspond to those included in the consolidated balance sheet. 



For further information see Notes page 130

Structure and Processes of the Risk and Opportunity Management System

The Jenoptik risk management system is based on the standard ISO 31000.

The definition and ongoing development of the system takes place with the close cooperation of the Risk & Compliance Committee and the Audit Committee of the Supervisory Board. The Executive Board is responsible for the system and also approves it. The central Risk & Compliance Management department is the link between all involved parties. It communicates the requirements of the risk management system, advises on their efficient implementation and monitors the measures and results of the risk management processes.

One core process of risk management is the risk assessment. This takes place in a combination of top-down and bottom-up elements. In order to ensure the most in-depth risk identification and comparability possible within the company, a risk register was developed that supports management in the evalua-

G18 Process of Risk Reporting

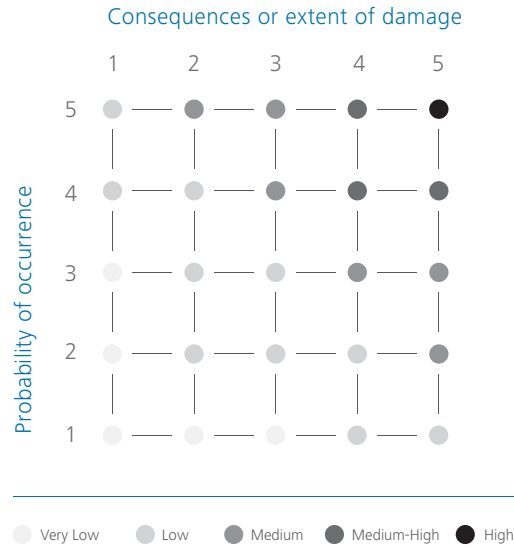
∨	Risk Officers in the Divisions and Central Departments	Assessment of single risks
	Central Functions	Review of aggregated risks
∨	Central Department Risk & Compliance Management	Review and analysis of group risks
	Risk & Compliance Committee	Analysis of group risks
∨	Executive Board	Final assessment of risks
	Audit Committee	Evaluation of group risks
∨	Supervisory Board	

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tion of risks. It comprises several specified categories to which potential risks are allocated by the risk reporting units. This is to ensure that each risk reporting unit deals with the entire risk landscape and that, simultaneously, an aggregation of the results is guaranteed across the specified categories. Within the scope of the risk analysis, the risk reporting units determine the risks and opportunities in order to be able to undertake a valid risk assessment in the next stage regarding the assessment methods (qualitative or quantitative) and the measures already taken or still required (risk management). This takes place in accordance with the net method, i.e. mitigating measures are already included in the assessment so that only the assessed residual risk is reported and aggregated. The assessment of a risk is the product of the probability of occurrence and the quantitative amount of loss or the qualitative extent of damage. The opportunities are evaluated in the same way. **G19**

There is a scale of 1 to 5 for both assessment factors mentioned (probability of occurrence and amount of loss), with 1 being the smallest and 25 the greatest possible risk score. **G20**

G20 Calculation of Risk Scores



G19 Risk Assessment

Metrics	Probability of occurrence	Consequences resp. extent of damage	
		Qualitative	Quantitative
5 = High	up to 50%	The goal of the Group or the division is jeopardized	or > 20% or 500,000 euros
4 = Medium-high	up to 40%	The goal of the Group or the division has to be adapted immediately	or > 15 to 20%
3 = Medium	up to 30%	The goal of the Group or the division has to be adapted in the medium term	or > 10 to 15%
2 = Low	up to 20%	Further measures are necessary in order to achieve the goals of the Group or the division	or > 5 to 10%
1 = Very low	up to 10%	Minor consequences	or > 0 to 5%

Every six months, the results of the risk assessments are requested by the central Risk & Compliance Management department via the Chief Risk & Compliance Officer at the risk reporting units and aggregated to the Group Risk Report. The central departments of the Corporate Center and the Shared Service Center can then undertake a comprehensive evaluation before the results are discussed at the Risk & Compliance Committee and a comprehensive evaluation is recommended to the Executive Board along with other measures if necessary. Once the Executive Board has approved the Group Risk Report, it is presented and discussed at the Audit Committee of the Supervisory Board before being submitted to the Supervisory Board.

In addition, any risks identified during the year which have a high probability of occurrence and significant potential for damage, are communicated without delay to the Chief Risk & Compliance Officer and the Executive Board. Following joint analysis with the technical departments, they decide on further measures to be taken and, if necessary, the required communication.

The abovementioned reporting instruments also form the basis for the risk early warning system. This is reviewed within the framework of the audit of the financial statements by the auditor in order to ensure that the system is appropriate for promptly recording, evaluating and communicating all risks that could potentially jeopardize the Group's existence.


Risk Prevention and Ensuring Compliance

Risk prevention is a key element of the risk management system, and an integral part of regular business operations and committee work.

It essentially comprises risk monitoring at regularly scheduled meetings and special approval procedures. Consequently, risks and opportunities as well as their impact on the company are discussed during the monthly meetings of the Executive Board, meetings of the Executive Management Board as well as at strategy and results meetings. In addition to the Executive Board and the heads of Group Controlling, Strategy and the operating units, the Chief Risk & Compliance Officer also participates in the six-monthly strategy meetings, the purpose of which is to be able to evaluate the impact of risks identified throughout the year on the strategic goals of the Group. At the same time, potential risks to achieving the strategic goals can be considered directly in the strategy development process and minimized by taking suitable measures.

Jenoptik's Group Guidelines represent a further risk prevention measure. The "Transactions with particular characteristics" guideline is used particularly for risk prevention. If a contract which is to be concluded or an obligation to be entered into meets one of the criteria defined in this guideline identifying the transaction as deviating from the norm (for example, a high order value, special financing conditions, regulations on knowledge transfer or strategic aspects), a special control process is started, involving the respective central group departments and the Chief Risk & Compliance Officer. All opinions are submitted to the Executive Board prior to the possible approval being granted, so that the final decision regarding such a transaction can always be made after consideration of all identified potential risks and opportunities.

Compliance with national and international compliance requirements is an integral part of risk prevention and of the processes of Jenoptik's risk management system. In order to improve employee awareness and achieve company-wide uniform understanding of our compliance standards, regular training is provided on subjects relevant to compliance, such as anti-corruption or anti-trust law. Web-based online training on key compliance issues is obligatory for all employees. A help desk is available on the intranet to assist employees on any risk or compliance issues they may have. The corporate guidelines implemented within the Group with regard to important company processes are continually being reexamined, expanded and updated. They are published on the intranet.

In accordance with international standards, a supplier code of conduct requires Jenoptik's suppliers to comply with a number of different compliance requirements. 

Central business partner screening (third-party due diligence) is used to check whether cooperation with a business partner is viable from a compliance perspective.

Jenoptik therefore has a system of regulations, processes and controls that enable it to identify any possible deficits in the company and to minimize them using appropriate measures at an early stage.

Alongside the risk management and compliance management systems, the **Internal Control System (ICS)** is a key element of corporate governance. It covers technical and organizational regulations and control steps that serve to ensure compliance with guidelines and prevent losses as well as clear responsibilities and division of functions in adherence to the cross-check



For further information on compliance see Corporate Governance Report

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principle. In particular, its intention is to ensure the security and efficiency of businesses as well as the reliability of financial reporting, and it is regularly reviewed by Internal Auditing. The ICS and compliance self-assessments established in 2015, to be completed by the management of all subsidiaries and JENOPTIK AG in the form of questionnaires, were also carried out in the past fiscal year. Monitoring and assessment of the completed questionnaires is carried out by the central departments of Accounting, Controlling, Internal Auditing as well as Risk & Compliance. Reported deficits are analyzed and appropriate countermeasures are defined to ensure they are lastingly eliminated.

Internal Auditing is permanently incorporated into the ongoing further development of the internal monitoring and risk management system through process-independent audits. As a staff department, it reports directly to the Chairman of the Executive Board. Internal Auditing conducts audits in the form of so-called independent Jenaudits. This involves the organizational units of the Jenoptik Group being analyzed and audited on the basis of a risk-oriented audit plan. The compliance with and proper implementation of the applicable guidelines form integral parts of the audit. This not only identifies errors or process weaknesses but also potential process improvements in the sense of a "best practice approach". The recommendations are prioritized, categorized and reported directly to the persons responsible for the audited units, the respective central departments as well as to the Executive Board. Breaches or errors are analyzed and work on their elimination initiated as quickly as possible. The audited unit then submits a report to the Executive Board, indicating which of the stated recommendations were implemented by a defined date. This is followed by follow-up audits that review the implementation of the recommendations, with information on the results being sent to the respective management levels and central departments as well as the Executive Board. Internal Auditing submits a report to the Audit Committee of the Supervisory Board at least once a year on its key findings since the last report. In 2016, two Jenaudits, two follow-up audits and two special audits were conducted. Six units received support for implementation of the measures.

Jenoptik has a centralized financial management system. The central Treasury department coordinates the financing needs of the Group, ensuring liquidity and monitors the currency, interest rate and liquidity risks on the basis of group-wide guidelines. These guidelines include provisions for the clear separation of transaction and corporate oversight functions as well as trading within predetermined limits.

The purpose of financial risk management is to limit financial risks arising from changes in market rates, for example interest

and exchange rates. Financial instruments are used exclusively for the purpose of securing underlying transactions and not for speculative purposes and are only concluded with banks with good to very good credit ratings. Currency-related risks arise from the Group's international activities. The central Treasury department identifies these risks in collaboration with the group companies and controls them with appropriate measures such as the conclusion of currency forward transactions. As a basic principle, all group companies must hedge foreign currency positions on the date they are created. Hedging has the aim of establishing an accounting hedge relationship with the greatest possible effectiveness.

The interest rate risk is in part reduced by the conclusion of fixed-interest loans. In addition, interest rate swaps are used to reduce the risk of changing interest rates for loans with variable interest. Because the swaps were concluded on the basis of variable-interest debenture loans that have since been paid, the accounting hedge relationship no longer exists here. A variable interest rate was consciously agreed for a part of the loans in order to fully profit from the current low interest rate environment.

The purpose of the liquidity planning is to identify liquidity risks at any early stage and to systematically minimize them on a group-wide basis. Regular Treasury reports and a monthly rolling liquidity forecast are used for liquidity control and monitoring.

Key Features of the Internal Control and Risk Management System with regard to the Consolidated Accounting Process (§ 289 (5) and § 315 (2) (5) of the German Commercial Code (HGB))

The accounting-related internal control system is part of the overall ICS of the Jenoptik Group. Its purpose is to ensure a due and proper process in preparing the Consolidated Financial Statements, guaranteeing compliance with statutory regulations, accounting rules and internal guidelines for uniform accounting and valuation principles, which are binding for all companies included in the Consolidated Financial Statements. New regulations and changes to existing rules are analyzed promptly and implemented. All employees involved in the accounting process receive regular training.

Access restrictions in the respective IT systems protect the financial systems against abuse. Centralized control and regular backup of the IT systems reduce the risk of data loss.

In order to prepare the Consolidated Financial Statements, the IFRS data of the companies is recorded directly by them in the consolidation tool LucaNet. The transferred data from the statements and financial statements of consolidated companies is verified by technical system inspections. All the consolidation processes required for the preparation of the Consolidated Financial Statements are documented. These processes, systems and controls enable Jenoptik to ensure a reliable group accounting process that complies with both the IFRS and statutory requirements. The group auditor audits the consolidated financial statements of the companies in accordance with the IFRS regulations, as adopted by the EU.

The [Corporate Governance Report](#) can be found on pages 38 ff. of the Annual Report. The [Corporate Governance Statement](#) in accordance with § 289a and § 315(5) of the German Commercial

Code (HGB) can be found on our website www.jenoptik.com in the section Investors/Corporate Governance. In accordance with § 317(2)(3) of the German Commercial Code, the information required under § 289a and § 315(5) is not considered by the auditor.

The Group's Risk and Opportunity Profile

The Group's risk profile was determined based on the year 2016 for 2017 and subsequent years with the aid of the various risk and opportunity assessments from the segments. Our risk and opportunity management makes possible a direct comparison of the individual risk subcategories and the associated risk symptoms. **T43**

T43 Risk Profile of the Jenoptik Group 2016

	Group risk assessment	
	Current year	Prior year
Strategic risks		
Market development	Medium	Medium
Product development (incl. R+D)	Medium	Medium
Corporate development (portfolio and structure)	Medium	Medium
Organizational setup (processes and resources)	Medium	Medium
Operational risks		
Supply chain management	Medium	Medium
Safety and environmental protection	Low	Low
Production (incl. quality management)	Medium	Medium
Marketing and sales	Medium	Medium
Patents and IP rights	Low	Low
Human resources management	Medium	Medium
IT (incl. implementation of JOE)	Medium	Medium
Compliance	Low	Low
Legal affairs	Low	Low
Real estate	Low	Low
Financial management risks		
Accounting	Low	Medium
Finance management	Low	Medium
Controlling	Medium	Medium
Taxes	Low	Low
Total risk	Medium	Medium

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Overall, the risks to which the Group is exposed reduced slightly on the prior year and are currently at the lower end of the medium risk range.

Once again, **strategic risks** were assessed as most important compared to operational and finance management risks in 2016. Jenoptik operates on very different, in part very volatile markets, such as the semiconductor equipment, automotive, health-care and defense markets, such that their development can represent both a continuous risk and opportunity.

Uncertainty surrounding the development of Jenoptik's growth markets, potential negative effects of Great Britain's withdrawal from the European Union, political unrest in the Middle East and the difficulty in assessing the trade and foreign policy positions of the current US administration all run the risk of negatively influencing the Group.

Jenoptik is exposed to intense competition in all three segments. Due to their size and concomitant financial resources, a number of competitors may be in a position to better respond to competitive pressure. In addition, mergers and acquisitions on the markets we target may further exacerbate the competitive environment and the potentially improved cost structures at competitor companies may have negative effects on group earnings. Jenoptik counters these risks by subjecting its portfolio of products to ongoing analysis to determine which markets can be served with which products. We also review whether targeted investments in the form of corporate acquisitions can usefully complement our portfolio and generate lasting profitable growth.

Operational risks were assessed with low to medium risk indicators throughout the Group. The increasing number of complex international projects, particularly those of a technically challenging nature, place enormous operational demands on all parts of the Group. Supply chain management and production are predominantly responsible for assuring the quality of the products we supply. The use of isolated single-source suppliers increases the risk of dependency. The continuing expansion of our purchasing departments aims to ensure that suppliers are qualified around the world on an ongoing basis.

Global IT systems and processes are of significance to Jenoptik in all segments. The security and availability of the systems have top priority. Data is stored on redundant storage media and secured against data loss by means of a tiered archive and backup system. This allows for rapid data recovery in the event of a possible crisis scenario. The world is seeing a rise

in the number of IT threats, e.g. in the form of phishing or virus attacks in which corporate information is obtained by third parties by means of deception. Despite compliance with a range of technical requirements and internal training provided to relevant employees, there still remains a risk of data loss, which in turn could negatively impact on our business position.

Our employees make the most important contribution to the company's success. As a diversified company, we need dedicated and highly qualified colleagues around the world – now and in the future. There is a risk that we may not be able to secure sufficient numbers of skilled employees for open positions or that we may lose our top performers. Jenoptik counters this risk with targeted employer branding and structured HR development, which in part includes the J²LP leadership development program and attractive incentive plans.

Against the background of Jenoptik's business operations, one group-wide operating risk is compliance in terms of adherence to various legal and ethical requirements. As a company with customers and business partners in numerous countries, clients in the public sector and involvement with the US defense market, Jenoptik must grapple with many compliance requirements. Although the necessary organizational measures to minimize potential compliance violations have been implemented with a group-wide export control organization, the central Risk and Compliance Management department and corresponding processes, such violations cannot be entirely ruled out. Strict adherence to our compliance program and the continuous development of our compliance management system aim to close up any process gaps and ensure that processes comply with laws and regulations.

In 2016, **finance management risks** were downgraded from the low medium to the low risk range. The issues cited below also include the segment-specific risks. One key task of Jenoptik's finance division is the long-term coordination of financing requirements within the Group. The central Treasury Management department is primarily responsible for reducing the finance management risks. Jenoptik has good internal financing and access to alternative, external financing options. Covenants were agreed for the existing debenture loans and the syndicated loan of JENOPTIK AG and are regularly monitored and reported. Two of the ways we address the risks arising from the negative effects of potential fluctuations in the working capital, greater exchange rate differences and a potential liquidity risk is with active inventory and receivables management to manage the working capital and the use of a treasury management system. Regarding the utilization of financial

instruments we refer to the Group Notes, section 8.2 from page 171 on. In the Financial Control and Accounting departments, opportunities predominantly arise from the continuing expansion of the standardized SAP system. Thanks to the ongoing establishment and development of modern, targeted financial control instruments, we counter the risk of possibly missing business-critical information in internal reporting.

Risk and Opportunity Profiles of the Segments

The risk and opportunity profile of the Jenoptik Group was derived from the various risk profiles of the segments, which are shown separately and set out below. Finance management risks are shown as consolidated in the Group risk and opportunity profile. T44

Optics & Life Science

Strategic risks and opportunities primarily arise on the basis of demand in the semiconductor equipment industry, which is subject to cyclical developments. They may have a significant positive or negative affect on the segment's results. Moreover, the focus on major customers also poses a general risk that the loss of one customer may have a significant effect on results in selected areas of business. On the other hand, the loyalty of such customers brings the prospect of profitable revenue growth due to economies of scale. There is always an inherent threat to this growth posed by a growing number of mainly Asian competitors as well as the trend among suppliers and customers toward forward and/or backwards integration. However, it may be achieved through the continuous expansion of existing competitive advantages and internationalization. In addition, the segment addresses this risk by continuously reviewing vertical integration with the aim of supplying system solutions to its customers.

The increasing importance of healthcare, demographic developments in the industrialized nations and advances in medical technology all give rise to growing demand. Ongoing development of the product portfolio and Jenoptik's greater market centrality mean that we are better able to meet our customers' requirements. Increasing financial problems in national healthcare systems, however, are resulting in growing price pressure among suppliers. The trend toward increasing complexity and volatility in the market environment makes clear and reliable forecasts more difficult, especially in innovative areas of application.

Customers' specific requirements result in particular in **operational risks** in supply chain management and production processes. For many components manufactured in the segment, there are only a very limited number of qualified suppliers that are able to meet the necessary specifications in a timely manner. When such a supplier is lost or the customer changes specifications, this can result in corresponding problems in the development or production process. Partners are subject to ongoing qualification with the help of strategic purchasing to develop a stable base of suitable suppliers in the medium and long term. Specific customer requirements, especially regarding the quality of the products, also lead to increased demands for asset investment in the area of manufacturing, which is countered by targeted investment in expansion or replacements. Consequently, there is a risk that the quality requirements cannot be achieved by the agreed time, which may in turn lead to delays in delivery.

Mobility

In the Mobility segment, both market and political developments influence the **strategic risks and opportunities**. Achieving revenue targets is strongly dependent on the automotive market in the metrology business. The repercussions of the exhaust gas manipulations at numerous automotive manufacturers and the criminal penalties for which they may be liable as a result could lead to a freeze on investment and thus a loss of orders for Jenoptik. In addition, tighter state regulations would mean planning uncertainties for the industry, which may also represent an increased overall risk for Jenoptik.

The trend toward electric mobility is both a risk and an opportunity. The reduction in the number of mechanical components is a risk to the established business model in the Metrology business unit. On the other hand, there is the opportunity to secure further orders, since the trend to cut carbon emissions may increase investment in low-emission engines.

Presently uncertain economic and political developments on the Asia and North African markets represent a risk to the Traffic Solutions business area. As a supplier to international public-sector customers in particular, Jenoptik is exposed to both the political and economic development of the respective countries. Particularly in the event of unrest or regime change, this may result in projects being delayed or even stopped entirely. However, in contrast, increasing political stability and economic prosperity of the countries can open up opportunities to better serve the evolving demand for traffic safety technology. Through continuous optimization of the product portfolio as

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part of the corporate development, strategic opportunities will be able to compensate for these fluctuations in demand within a defined scope. Nevertheless, due to changes expected in the medium term in what are currently still stable market segments and in the face of increasing competitive pressure, it is also necessary to develop new sales opportunities. Targeted acquisitions can help here, but the resulting positive effects will only be fully felt after complete integration of the respective units.

In terms of **operational risks**, the increasing internationalization of projects and parts of the value chain is reflected in increased demands on supply chain management, manufacturing, marketing and sales as well as HR management. The rapid expansion of efficient service and sales structures is of crucial importance

to the growth targets, particularly abroad. Delays in the development of structures may lead to the loss of orders. This will be countered by the future establishment of regional competence centers – and thus improved customer and market reach.

The roll-out of the standardized SAP system in areas of the segment as part of the JOE project could give rise to risks inherent in the process, especially in the initialization/start-up phase, which could potentially also lead to delays in achieving the desired efficiency gains. With long-term use of the group-wide ERP system, however, the opportunities outweigh the risks in terms of efficiency and improved controls.

T44 Risk Profiles of the Segments 2016

	Risk assessment					
	Optics & Life Science segment		Mobility segment		Defense & Civil Systems segment	
	Current year	Prior year	Current year	Prior year	Current year	Prior year
Strategic risks						
Market development	Medium	Medium	Medium	Medium high	Medium	Medium
Product development (incl. R+D)	Medium	Medium	Medium high	Medium high	Medium	Medium
Corporate development (portfolio and structure)	Medium	Medium	Medium	Medium	Medium	Medium
Organizational setup (processes and resources)	Medium	Medium high	Medium	Medium	Medium	Medium
Operational risks						
Supply chain management	Medium	Medium	Medium	Low	Medium	Medium high
Safety and environmental protection	Medium	Low	Low	Low	Low	Low
Production (incl. quality management)	Medium	Medium	Low	Medium	Medium	Medium
Marketing and sales	Medium	Medium	Medium	Medium high	Medium	Medium
Patents and IP rights	Low	Low	Medium	Low	Low	Low
Human resources management	Medium	Medium	Medium	Medium	Medium	Medium
IT (incl. implementation of JOE)	Low	Low	Medium	Medium	Medium	Low
Compliance	Low	Low	Medium	Low	Medium	Low
Legal affairs	Low	Low	Low	Low	Low	Low
Real estate	Low	Low	Low	Low	Low	Low
Financial management risks						
Accounting	Low	Medium	Medium	Medium	Low	Low
Finance management	Low	Medium	Low	Medium	Low	Low
Controlling	Medium	Medium	Medium	Medium	Medium	Medium
Taxes	Low	Low	Low	Medium	Low	Low
Total risk	Medium	Medium	Medium	Medium	Medium	Medium

Defense & Civil Systems

Strategic risks. The defense market is strongly influenced by political decision-making, in particular by governments' budgetary positions, and by the continuing restrictive export license policy of the present German government. Due to various global political conflicts and tensions, however, defense spending in individual countries is again increasing. The planned increase in the defense budget and the associated growth in investment by the German government could result in higher order intakes for the segment. This is further bolstered by recent deliberations within the EU regarding a common armaments policy.

In terms of corporate development, the potential risk of a dependency on political decisions and government budgets is in part countered by the target expansion of the civilian and in particular international product portfolio. The processes and resources required for this must be gradually adapted within the course of strategic organizational development. Marketing and sales activities are also being stepped up continuously to fully exploit the relevant growth options.

Since a large proportion of the segment revenue is the result of project business, product developments and launches represent both the biggest risk and the biggest opportunity. Long-term development projects present great potential to generate future revenue. However, there are also inherent technological and organizational risks here that may jeopardize the timely success of the development.

Due to the segment's business model being focused on long-term customer relationships and long product life cycles, the supplier performance is an important success factor. **Operational risks** arise primarily from a strong dependency on single sources in a number of cases, which may endanger future business opportunities. Compared to the prior year, the risk was reduced thanks to active supply chain management.

Risks Across All Segments ("Other" Segment)

Part of the risk assessment of the segments is also a review by the central functions of the holding company and the Shared Service Center, so that their risks are included in the segment reporting and in the final group assessment.

General Statement by the Executive Board on the Group's Risk and Opportunity Situation

Overall, in terms of strategic, operational and financial management risks, the Jenoptik Group has a slightly reduced risk exposure compared with the prior year, and is currently at the lower end of the medium risk range.

The strategic risks that were assessed as "medium" are offset by adequate opportunities or are countered by measures that enable lastingly beneficial strategic positioning. This is particularly the case for the risks in the "product development", "corporate development" and "organizational setup" subcategories. The risks in the "market development" subcategory are largely attributable to external sources of risk that are impossible to influence and can thus only partly be forecast or minimized.

In the area of operational risk, the successful development and expansion of the sales structures is of crucial importance. The same applies to supply chain management and production, which demand special attention due to the high technological requirements in an international environment and, in some cases, associated single source procurement. Due to the increased digitization, the associated increased requirements in the field of IT and the further ongoing process of internationalization, the risk for IT (including implementation of the JOE project) is still assessed as "medium".

The Group's finance management risks have reduced marginally, as previously defined actions have in part been carried out, thereby particularly lowering the risk in Accounting and Treasury Management.

Overall, there is an acceptable relationship between risks and opportunities in the Jenoptik Group. No risks were identified that may jeopardize the continued existence of the Group.

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Framework Conditions: Future Development of the Economy as a whole and the Jenoptik Sectors

Despite a range of uncertainties and risks, the International Monetary Fund (IMF) expects in its “World Economic Outlook” the **global economy** to grow at a marginally better rate in 2017 than in the prior year. At present, growth of 3.4 percent is forecast. The outlook for industrialized nations has improved slightly, but high levels of debt in some newly industrialized and emerging economies mean that the prospects there are now assessed as less good than still in the October forecast. The IMF has cut back its growth forecasts for India, Brazil and Mexico in particular. There are significantly fewer opportunities for growth in Saudi Arabia, according to the IMF, as oil production is being scaled back and civil wars in other Middle East countries are taking a heavy toll. **T45**

Both the IMF and the OECD are concerned about signs of protectionism emanating from the **US**: although the tax cuts and infrastructure programs planned by the US government could further boost the US economy in 2017, restrictions in free trade combined with punitive tariffs imposed on Mexico or China, for example, could result in postponements in capital expenditure and weaken global trading.

The economic, political and institutional implications of the Brexit decision are not yet foreseeable. **Great Britain** intends to leave both the EU and the single market in the next two years. A new free trade agreement with the EU could complicate trade links, especially in financial services and exports. Even though Brexit, the new US administration and various

T45 Gross Domestic Product Forecast (in percent)

	2018	2017
World	3.6	3.4
USA	2.5	2.3
Euro zone	1.6	1.6
Germany	1.5	1.5
China	6.0	6.5
India	7.7	7.2
Emerging Countries	4.8	4.5

Source: International Monetary Fund, World Economic Outlook, January 2017

European elections this year make forecasts subject to uncertainties, in its Winter forecast as of February 2017 the EU Commission is anticipating for the first time economic growth throughout the single currency area in its forecasting period to 2018, albeit with considerable difference in the various EU nations. It believes that GDP in the **Euro zone** will grow 1.6 percent on the prior year in 2017, and then by 1.8 percent in 2018. Domestic demand is still seen as the greatest driver of growth. The EU Commission considers a continuing low level of investment as cause for concern.

Economic growth in **China** is expected to slow further. The government is committed to strengthening domestic consumption and the service sector. However, economists believe that these adjustments to the economic structure will lead to a further reduction in the previously very high growth rates. In addition, foreign investment is due to be made more difficult according to reports by news agencies. This is to help boost the domestic currency following a major wave of Chinese investment in the US and Europe in 2016.

In **Germany**, the economic upswing seen last year is due to continue at a slightly weaker rate: In its latest forecast for 2017, the German Government is forecasting GDP growth of 1.4 percent, again primarily bolstered by consumer spending. The BGA foreign trade association is not alone in seeing major uncertainties arising from the protectionist policies announced in the US. In view of the close ties that exist, German companies have a great deal at stake in terms of jobs and exports, said the BGA in a press release. Overall, the German Federation of Wholesale and Foreign Trade is still expecting exports to grow 2.3 percent in 2017, to a new record figure of around 1.23 trillion euros. The ifo Business Climate Index fell unexpectedly in January 2017 as reported by the ifo Institute in its monthly press release. Although companies assessed their present situation as better, the outlook for the next six months was considerably poorer.

According to Transparency Market Research, the global **photonics** market will grow annually by an average 5.8 percent to 2020 and reach a value of 766 billion US dollars. By comparison, in their “Photonics Industry Report” the Spectaris, VDMA and ZVEI industry associations still anticipate average annual growth of 6.5 percent and a market volume of 615 billion euros in 2020. They see this development as primarily driven by demand for highly-efficient electronics products and growing



See the chapter Expected Development of the Business Situation for information on how this affects the forecast for the Jenoptik Group

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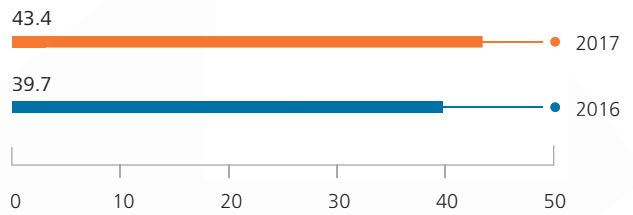
data volumes. The field of silicon photonics is becoming increasingly important to data transfer and the necessary optics design. It uses silicon as an optical medium. With a view to applications, the medical technology and healthcare segments will grow the fastest, as demand for early diagnosis and minimal invasive surgery increases. **G21**

In the **semiconductor equipment industry**, the SEMI industry association sees global revenues growing by 9.3 percent to 43.4 billion US dollars in 2017, according to its most recent forecast in a press release in December 2016. Taiwan, Korea and China will remain the biggest markets, but revenue in Europe is expected to grow at the fastest rate following a weak prior year. According to a press release IT analyst Gartner forecasts growth of 2.9 percent in 2017. **G22**

The momentum in the global **semiconductor market**, which began in mid-2016, will continue in 2017, according to industry experts. As published in a press release, the SIA association is expecting moderate revenue growth of 3.3 percent, to around 346 billion US dollars, in 2017, and 2.3 percent, to 354 billion US dollars, in 2018. Gartner expects greater growth of 7.2 percent for 2017, to 364 billion US dollars. It believes that industrial, automotive and storage applications will develop at a rapid pace, while traditional areas of business such as smartphones and PCs will grow more slowly.

The **machinery and plant engineering** industry is facing geopolitical uncertainties such as forthcoming Brexit, the situation in the US and similar protectionist trends as the VDMA industry association reported in a press release. Exports to China could also contract as a consequence of overcapacity and high debt in the state-owned enterprise sector and the municipalities. Although the VDMA is anticipating minor growth of 1 percent in production for Germany in 2017, genuine growth momentum is not in sight. Revenue at Germany machinery engineering

G22 Semiconductor Equipment:
 Global Revenue Forecast (in billion US dollars)

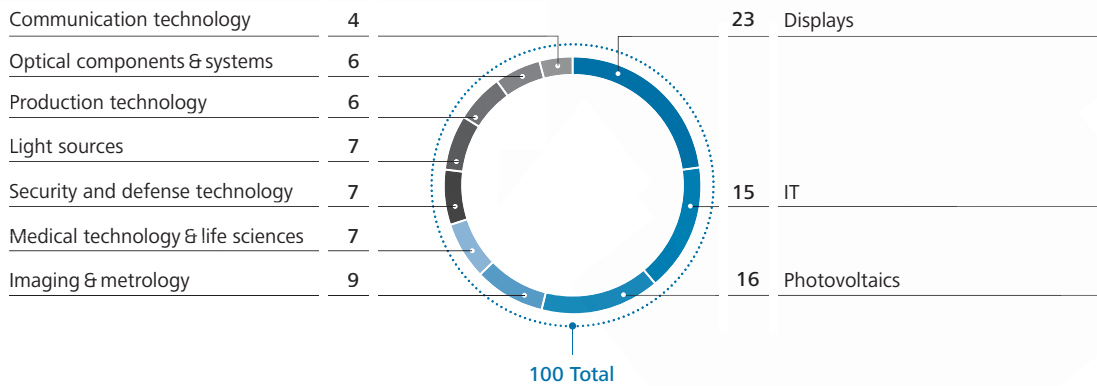


Change in %

9.3

Source: Semiconductor Equipment and Materials International (SEMI)

G21 Global Photonics Market in 2020: 615 billion euros (share in percent)



Source: VDMA, ZVEI, Spectaris: Photonics Industry Report 2013

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companies is due to increase from around 220 billion euros to 224 billion euros. The VDMA takes a critical view of the German government's focus on e-mobility, as alternatives such as the ongoing development of combustion engines are not being pursued with the same vigor. The machinery engineering industry has opportunities for new growth in the automation of production processes and digitization.

On an international scale, these trends are reflected in the forecast revenue growth with industrial robots of 13 percent annually to 2019, according to the International Federation of Robotics (IFR). As part of its reindustrialization strategy, the US industrial sector continues to invest heavily in [automation and robotics](#), according to the IFR in its "World Robotics Report 2016". The aim of automating production is to boost the competitiveness of American industry and both secure and repatriate production capacities. According to the ZVEI manufacturers' association, the German automation industry can look forward to a good year: growth of 3 to 6 percent is anticipated in factory automation, and up to 3 percent in process automation, as stated at a ZVEI press conference at a trade fair at the end of 2016.

For the [automotive industry](#), the VDA anticipates in its press releases that the car markets in the US and Western Europe will develop at a stable rate in 2017, while the Chinese market is expected to continue growing. On a global scale, the car market is due to grow in size by 2 percent to approximately 84 million vehicles. The global commercial vehicle market may retain or slightly exceed its prior-year level. According to the association, industry trends include digitization, networking, automated driving and alternative drive systems. The new US government's policy regarding non-American automakers is not yet foreseeable. According to an analysis of market researcher IHS, a slight decline in new registrations is expected in the US in 2017, although high sales figures will continue. In Germany, automotive associations and manufacturers have criticized the initiative taken by a number of federal states to ban combustion engines in new cars from 2030. In addition to state subsidies for electric cars made in China, China plans to introduce a production quota for electric vehicles from 2018, which will give domestic automakers a competitive advantage.

In its report „Road Safety Market by Solution, Service“ US market research company Markets and Markets believes that the global [traffic safety](#) market will grow from 2.6 billion US dollars in 2016 to 4.1 billion dollars in 2021, an average annual increase of 9.3 percent. Key factors include the growing number of traffic accidents, growing urbanity and mobility, and increasing statutory regulations for traffic safety. The red light monitoring segment is due to dominate the market, particularly in connection with smart cities. Automatic number plate recognition (ANPR) is also becoming more important as a means of traffic monitoring and prevention: in industry reports, market researchers expect the ANPR market segment to grow by an average 12.8 percent annually and be worth 1.4 billion US dollars by 2023. Interest in section control is growing in Germany: the city of Cologne, for example, plans to install section control technology in the Rheinufer Tunnel, reported local media. This is dependent on the successful completion of the pilot project in Lower Saxony.

By 2020, the market for electronic [toll payment monitoring](#) is due to expand at a double-digit growth rate to meet the demand for improved, safer infrastructure, according to a long-term analysis conducted by market researcher "Future Market Insights". The demand for faster toll payment processing and the aim to reduce congestion and journey times will be important drivers of this market, although high installation costs and a strong dependency on governments are inhibiting factors.

The global [railway industry](#) is at a crossroads: according to a study by market researchers at SCI Verkehr and McKinsey, manufacturers must develop their business models with a greater focus on service and after-sales. Global growth in new business is losing momentum and is due to amount to just 1.3 percent in the coming five years, in part due to declining demand occasioned by China's scaled-down capital expenditure planning, while service and maintenance will account for a majority of revenue in the future. In summary, the global market for railway technology is due to grow an average of 2.3 percent in the next five years according to SCI. Asia will remain the biggest regional market, while Africa and the Middle East will grow most strongly, conditional upon a stable political environment.



See the Targets and Strategy chapter for more information on the strategy and the new segment structure

The American aircraft manufacturer Boeing increased its regional long-term forecast for the [aviation industry](#): China will need over 6,800 new aircraft in the next 20 years, equivalent to a value of over one trillion US dollars. In its press releases, Boeing is forecasting demand for 39,620 passenger and transport aircraft with a total value of 5.9 trillion US dollars globally. In its "Global Market Forecast" European manufacturer Airbus is anticipating 33,000 new aircraft with at least 100 seats, worth 5.2 trillion US dollars. Together with Siemens, the company plans to verify the technical feasibility of hybrid electric drive systems for aircraft by 2020. In a press release the IATA industry association forecasts, that following cyclical high profits in the international aviation industry profit will fall to 29.8 billion US dollars in 2017 (prior year 36.5 billion US dollars). This is in part due to the renewed rise in oil prices and a range of political, economic and security risks. Nevertheless, 2017 would be one of the industry's best three years if the forecast is fulfilled.

The German [Ministry of Defense](#) is due to see its budget increase significantly in the coming years. It rose by around 2.7 billion euros to 37 billion euros in 2017, and the German government plans to increase it further to 39.2 billion euros by 2020. It would, however, have to rise to over 60 billion euros to make up 2 percent of gross domestic product, as demanded by NATO and the US. As stated in an arms report by the Federal Defense Ministry, one of the biggest armaments projects could turn out far more expensive than expected: the development of the new Meads missile defense system for the Tactical Air Defense System (TLVS), for which Jenoptik is a supplier. Over the next decade, it is due to gradually replace the Patriot system, but negotiations and legislative approval could be delayed to the next legislative period. On defense policy, Germany, France, Italy and Spain intend to increase cooperation in the future as was announced by the defense ministers of the countries in a joint letter. The EU Commission intends to support this move with additional funding for defense research and more stringent tendering rules. From 2021, 500 million euros will be provided for European development projects from a European defense fund. A pilot scheme worth 90 million euros is already planned for 2017 to 2019. Aviation company Airbus has reported to the media that final assembly of the Eurofighter jet in Germany and Spain will end in 2018 if no new orders are received. Great Britain and Italy are not yet affected. Reasons include the low order backlog, an assembly process spread over four sites and complex responsibility over exports. There will, however, still be modernization and maintenance work to perform.



For more information on the top control and information parameters, see the Control System chapter

Expected Development of the Business Situation

Planning Assumptions for the Group and Segments

The forecast for the future business development was based on the Group planning undertaken in the Autumn of 2016.

The starting point for this planning is formed by the strategic plans from the segments and operational business units which are geared towards market requirements, and are coordinated together and integrated in the group planning. Possible acquisitions were not included in the planning.

At the start of the 2017 fiscal year, the system of key performance indicators was subjected to further development at both group and segment level, and focused on the revenue, EBIT margin, EBITDA, order intake, free cash flow and capital expenditure indicators. Other indicators will also be regularly compiled in the future and are used by top management as information parameters.

Alongside the successful implementation of a standardized ERP system in the Traffic Solutions area in Germany, at the Shared Service Center and at JENOPTIK AG in the past fiscal year that started at the beginning at January 1, 2017, roll-out of the JOE project will extend to the US in 2017 and 2018, and thus outside Germany for the first time. The costs associated with this are included in the forecast. The Jenoptik Excellence Program (JEP), with a focus on Go-Lean and purchasing, will also be continued in 2017. Ongoing optimization of both procurement processes and production processes will produce savings in future that result in further improvements in the gross margin. This, too, is included in the current planning.

Strategic HR work will again focus on rolling out individual human resources topics on an international level in 2017. Group-wide harmonization of HR processes at the European locations and in Asia/Pacific and North America will take center stage here. Another focus of HR work in the current fiscal year will involve the ongoing support of organizational development in the context of new regional competence centers in the Mobility segment and the completed restructuring process in the Healthcare business unit. Beyond this, there are plans to optimize standardized personnel cost planning in the harmonized ERP system.

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The Jenoptik Group anticipates a good development of business in the **Optics & Life Science** segment in 2017. Its continuing focus on optical information and communication technologies will contribute to growth. For the semiconductor equipment market, observers are expecting positive performance in the current year. Here, the segment can also profit from its position as one of the leading suppliers of optical and micro-optical system solutions for semiconductor production. Due to a larger range of integrated system solutions, we are increasingly benefiting from a higher share of added value. Jenoptik has also securely established itself as a development and production partner for numerous international market leaders. The segment is therefore expecting revenue to rise in this market. In medical technology and life science, existing cooperation with key international customers is due to be expanded in the current fiscal year and contribute to growth. In 2017, the segment will also continue to focus on the acquisition of new major customers. On a regional level, growth is particularly expected in Asia/Pacific and the Americas. In the current fiscal year, the segment will also continue to invest in the international production locations to promote future growth, continue the process of internationalization, especially in the core regions and push on with forward integration and expansion of the systems business.

The **Mobility** segment expects a positive development in the automotive industry in 2017. The risk of the emissions scandal spreading or new regulations influencing automotive manufacturers' capital spending patterns is still present. In terms of products, the trend toward integrated production-related metrology is due to continue. This plays a particularly important role when precision parts are manufactured, such as those required by the automotive industry for efficient and environmentally friendly drive systems. In order to take into account this trend, the segment is continuing to invest in the development of tactile, pneumatic and particularly optical measurement technologies. Growth momentum is also expected in the field of laser machines. Alongside established systems for plastics processing in the automotive industry, the segment is primarily focusing on 3D processing of metal and plastic parts. Construction of the modern technology campus for metrology and laser machines for the North American automotive industry will be completed in 2017, and will give the Group a key basis from which to expand its business in the region. In the field

of traffic safety, anticipated growth will particularly be bolstered by the major orders secured in 2016. The Traffic Service Provision business model that alongside the equipment business is becoming increasingly important in established markets, including Germany, Canada and Australia, will also be further expanded. From a regional perspective, Jenoptik forecasts the greatest growth momentum in the Asia/Pacific region and North America, in particular Canada. We believe that the traffic safety market in the US will slowly recover in 2017. A slight improvement is also expected in the Middle East/Africa. At the start of 2017, a new global sales structure with regional competence centers (RCC)  was launched in the Traffic Solutions area. It aims to show a stronger presence in local markets, step up customer relations and respond faster to market trends.

Business in the **Defense & Civil Systems** segment is predominantly project-based and geared toward the long term. The defense market in the West is increasingly recovering and a significant increase in expenditure – primarily in NATO member states – is expected in the coming years, meaning that demand for defense products could rise. In the medium-term, a considerable increase in investment is planned for the German armed forces. This could also contribute to higher revenues in the years ahead. In the 2016 fiscal year, the segment secured several major orders, work on these will continue in the current year and should thus have a positive impact on revenue and earnings performance. Internationalization also remains a key topic in 2017; foreign business is due to expand steadily, particularly in North America and Asia/Pacific. Beyond this, the segment is looking to further increase the share of systems used in civil fields. This, for example, includes energy systems for railway technology, an internationally growing market and system solutions for civil aviation.



See the Segment Report for more information on the RCC

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See the Framework Conditions chapter for more information on the future development of the Jenoptik sectors

Forecast for the Earnings Situation in 2017 and Trends in 2018

Based on a good order and project pipeline, the Executive Board is anticipating organic growth in revenue and earnings for 2017. This presupposes that political and economic conditions do not worsen. These include in particular the effects of Brexit, which could not be adequately assessed at the time this report was compiled, regulations at European level, export restrictions, further developments in the US, China, the Middle East and the conflict between Russia and Ukraine.

Larger acquisitions are not included in these forecasts but have not been ruled out for the current fiscal year.

The Jenoptik Group expects organic growth to generate revenue of between 720 and 740 million euros in 2017. All three segments will contribute to this growth. For 2018, the Executive Board is forecasting growth (including smaller acquisitions) to around 800 million euros, in line with its established mid-term targets. More than 40 percent of revenue is then expected to be generated in the Americas and Asia/Pacific.

Jenoptik is currently anticipating a rise in EBIT for the 2017 fiscal year (2016: EBIT in continuing operations 66.2 million euros). Depending on the development of revenue, the operating earnings margin (EBIT margin) is expected within the range of 9.5 to 10.0 percent. The Executive Board forecasts slightly weaker growth in EBITDA (earnings before interest, taxes, depreciation and amortization including impairment losses and reversals of impairment losses) than in EBIT. The costs for the group development project are expected in the mid single-digit million euros range and are already included in the EBIT margin range referred to above. EBIT and EBITDA are also due to develop positively in 2018.

The order intake for a period is affected by major orders, particularly in the Defense & Civil Systems and Traffic Solutions areas. In the 2016 fiscal year, Jenoptik received several major multi-year orders in both areas and has thus built up a very good order base. Jenoptik expects order intake to grow slightly in the current fiscal year. Also worthy of note is that Jenoptik already had frame contracts worth 160.9 million euros at the end of 2016, which are not included in the order intake or backlog. Around 71 percent of the order backlog as at the end of December 2016 will impact on revenue in 2017. The order intake is due to increase further in 2018.

For the 2017 fiscal year, the Optics & Life Science segment anticipates revenue growth in the high single-digit percentage range. The segment's 2016 EBIT included one-off operational income of around 2.9 million euros. As a comparable sum is not currently expected, the operating earnings are due to remain stable at minimum. A rise in revenue and EBIT is forecast for 2018.

Buoyed by the major orders it has secured, the Mobility segment is anticipating revenue growth in the high single-digit percentage range in the current fiscal year. EBIT is due to show a stronger rate of growth than revenue. Further increases in revenue and earnings are expected in 2018. The accuracy of the forecast is influenced by the time at which traffic safety projects are settled.


The Defense & Civil Systems segment is again forecasting minor revenue growth in the 2017 fiscal year. In 2016, the segment managed to again improve its EBIT margin. Starting from this good earnings position, stable performance is expected in the current fiscal year. Minor revenue growth and stable earnings are also forecast for 2018.

Group Asset and Financial Position Forecast

Due to a strong scheduled increase in capital expenditure in 2017, we expect the free cash flow to be considerably below the figure at the end of 2016. Even with increasing capital expenditure and stable working capital despite growth, Jenoptik expects to be able to meet all interest, tax and dividend payments out of the free cash flow. A higher free cash flow is expected in 2018 than in 2017.

For 2017, Jenoptik anticipates an increase in capital expenditure to 35 to 40 million euros, and expects to maintain this level in 2018. The capital expenditure on property, plant and equipment will focus on the growth areas within the segments or take place within the scope of new customer projects. It aims to expand capacities, thereby ensuring future growth. At group level, further capital expenditure will be effected for the JOE Project. Capital expenditure is due to be covered by the operating cash flows or with available cash and cash equivalents.

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In 2016, Jenoptik paid out a **dividend**  for the 2015 fiscal year in the amount of 0.22 euros per share to the shareholders. In addition to financing the continued growth of the company, the future aim of the Executive Board is still to ensure a dividend policy in line with corporate success. In the view of the Executive Board, a stable provision of equity for sustainable organic growth to increase the company value as well as the exploitation of opportunities for acquisitions are also of crucial importance to the interests of the shareholders.

The actual results may differ significantly from the forecasts of anticipated development made above. This may arise, in particular, if one of the uncertainties mentioned in this report were to materialize or if the assumptions upon which the statements are based prove to be inaccurate, also in relation to the economic development.



See the Report on Post-Balance Sheet Events for more information on the dividend

T46 Targets for Group and Segments (in million euros)

	Actual 2016	2017 guidance	Trend 2018 compared with 2017 ²⁾
Revenue	684.8	Between 720 and 740 million euros	Around 800 million euros, incl. smaller acquisitions
Optics & Life Science	221.5	Growth in the high single-digit percentage range	Further growth
Mobility	247.7	Growth in the high single-digit percentage range	Further growth
Defense & Civil Systems	218.3	Slight growth	Slight growth
EBITDA (continuing operations)	94.7	Slightly weaker rise than EBIT	Positive development
EBIT/EBIT margin (continuing operations)	66.2/9.7%	Increase, EBIT margin between 9.5 and 10.0%	Further growth
Optics & Life Science	33.4	Stable at minimum (includes one-off operational income in 2016)	Further growth
Mobility	24.4	Rise stronger than revenue	Further growth
Defense & Civil Systems	19.1	Stable	Stable
Order intake	733.8	Slight increase	Increase
Free cash flow	80.4	Considerably below 2016 figure	Increase
Capital expenditure ¹⁾	27.5	35 to 40 million euros	At 2017 level

¹⁾ without capital expenditure on financial investments

²⁾ Trend forecast, not a forecast as specified in DRS 20

General statement by the Executive Board on Future Development

The Jenoptik Group will continue to push ahead with its strategic agenda in the 2017 fiscal year, with a key focus on profitable growth in all segments. In the opinion of the Executive Board, revenue growth, the resulting economies of scale, more efficient processes and higher margins from the growing systems and service business will lead to a lasting increase in earnings.

In 2017, the company will again invest a significant portion of its funds in the expansion of international sales and value creation structures, as well as the development of innovative products. The measures for internal process optimization and group development projects will also continue as scheduled, while value-adding acquisitions will be closely scrutinized.

The Jenoptik Group plans to continue on its path of organic growth in 2017. In pursuing this policy, the company can build on a strong order backlog and a high volume of frame contracts. The good asset position and a viable financing structure also give Jenoptik sufficient room for maneuver to carry out acquisitions and finance further growth. For 2017, the Executive Board expects revenue of between 720 and 740 million euros and an EBIT margin of between 9.5 and 10.0 percent. Achieving these targets is dependent on economic and political conditions.

The Executive Board expects positive corporate development within the Jenoptik Group overall during the 2017 fiscal year.

Jena, March 8, 2017

JENOPTIK AG
the Executive Board

Consolidated Financial Statements

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Excellent financial resources and solid balance sheet ratios are proof of a healthy, well-positioned company: our asset position improved in 2016; equity and the equity ratio grew despite a rise in the balance sheet total. Jenoptik has a viable capital and financing structure. Net debt was completely eliminated by the end of 2016.

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Consolidated Statement of Comprehensive Income

Consolidated Statement of Income

in thousand euros	Note No.	1/1 – 31/12/2016	1/1 – 31/12/2015
Continuing operations			
Revenue	4.1	684,769	668,637
Cost of Sales	4.2	446,915	442,468
Gross profit		237,854	226,169
Research and development expenses	4.3	42,298	41,774
Selling expenses	4.4	73,598	72,591
General administrative expenses	4.5	57,583	53,997
Other operating income	4.7	23,374	27,019
Other operating expenses	4.8	21,540	23,777
EBIT		66,209	61,048
Result from other investments	4.9	303	1,558
Financial income	4.10	4,403	5,469
Financial expenses	4.10	9,892	10,819
Financial result		-5,185	-3,792
Earnings before tax		61,024	57,256
Income taxes	4.11	-7,112	-7,516
Earnings after tax		53,911	49,740
Discontinued operations			
	4.14		
Other operating income		2,261	175
EBIT		2,261	175
Financial income		1,458	0
Financial result		1,458	0
Earnings before tax		3,719	175
Income taxes		-174	0
Earnings after tax		3,545	175
Group			
Earnings after tax		57,456	49,915
Results from non-controlling interests	4.12	53	345
Earnings attributable to shareholders	4.13	57,403	49,570
Earnings per share in euros – continuing operations			
Earnings per share in euros – continuing operations	4.15	0.94	0.86
Earnings per share in euros – discontinued operations			
Earnings per share in euros – discontinued operations	4.15	0.06	0.00
Earnings per share in euros – Group (diluted = undiluted)			
Earnings per share in euros – Group (diluted = undiluted)	4.15	1.00	0.87

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Comprehensive income

in thousand euros	Note No.	1/1 – 31/12/2016	1/1 – 31/12/2015
Earnings after tax		57,456	49,915
Items that will never be reclassified to profit or loss	5.16	- 358	4,669
Actuarial gains/losses arising from the valuation of pensions and similar obligations		- 298	6,255
Deferred taxes		- 60	- 1,585
Items that are or may be reclassified to profit or loss	5.16	- 2,376	5,456
Available-for-sale financial assets		- 249	202
Cash flow hedges		- 1,680	778
Foreign currency exchange differences		- 915	4,633
Deferred taxes		468	- 158
Total other comprehensive income		- 2,735	10,125
Total comprehensive income		54,722	60,041
Thereof attributable to:			
Non-controlling interest		331	245
Shareholders		54,391	59,795

Consolidated Statement of Financial Position

Assets in thousand euros	Note No.	31/12/2016	31/12/2015	Change
Non-current assets		371,891	382,827	- 10,935
Intangible assets	5.1	111,352	122,737	-11,385
Property, plant and equipment	5.2	157,882	155,659	2,223
Investment property	5.3	4,444	4,536	-92
Financial investments	5.5	19,034	21,745	-2,711
Non-current trade receivables	5.6	1,923	3,100	-1,177
Other non-current financial assets	5.7	1,926	1	1,925
Other non-current non-financial assets	5.8	1,108	1,447	-340
Deferred tax assets	5.9	74,223	73,602	621
Current assets		441,159	386,340	54,819
Inventories	5.10	159,324	167,132	-7,809
Current trade receivables	5.11	129,821	123,616	6,205
Other current financial assets	5.12	2,422	1,991	432
Other current non-financial assets	5.13	7,091	9,359	-2,267
Current financial investments	5.14	50,540	418	50,122
Cash and cash equivalents	5.15	91,961	83,824	8,137
Total assets		813,051	769,167	43,884

Equity and liabilities in thousand euros		31/12/2016	31/12/2015	Change
Equity	5.16	476,379	435,132	41,247
Share capital		148,819	148,819	0
Capital reserve		194,286	194,286	0
Other reserves		133,604	93,108	40,496
Non-controlling interests	5.17	-330	-1,081	751
Non-current liabilities		175,358	169,513	5,845
Pension provisions	5.18	37,630	36,095	1,535
Other non-current provisions	5.20	12,339	10,275	2,064
Non-current financial debt	5.22	120,479	113,243	7,236
Non-current trade payables	5.23	680	1,183	-503
Other non-current financial liabilities	5.24	3,485	2,912	574
Other non-current non-financial liabilities	5.25	655	3,820	-3,165
Deferred tax liabilities	5.9	90	1,986	-1,896
Current liabilities		161,313	164,521	-3,208
Tax provisions	5.19	3,380	3,281	99
Other current provisions	5.20	46,152	42,745	3,407
Current financial debt	5.22	4,129	14,850	-10,721
Current trade payables	5.26	48,402	48,355	47
Other current financial liabilities	5.27	5,642	10,213	-4,572
Other current non-financial liabilities	5.28	53,609	45,078	8,531
Total equity and liabilities		813,051	769,167	43,884

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Consolidated Statement of Cash Flows

in thousand euros	1/1 – 31/12/2016	1/1 – 31/12/2015
Earnings before tax – continuing operations	61,024	57,256
Earnings before tax – discontinued operations	3,719	175
Earnings before tax	64,743	57,431
Interest income	4,030	5,350
Non-operating income from investments	-1,693	0
Depreciation and amortization	27,603	28,770
Impairment losses and reversals of impairment losses	1,982	-2,319
Profit/loss from asset disposals	-591	-1,491
Other non-cash income/expenses	-446	-663
Operating profit before adjusting working capital and further items of the statement of financial position	95,628	87,078
Change in provisions	4,539	3,419
Change in working capital	5,713	5,582
Change in other assets and liabilities	3,342	-4,407
Cash flows from operating activities before income tax	109,223	91,673
Income tax expense	-9,121	-6,548
Cash flows from operating activities	100,102	85,124
thereof discontinued operations	101	175
Proceeds from sale of intangible assets	154	62
Capital expenditure for intangible assets	-3,446	-2,500
Proceeds from sale of property, plant and equipment	126	263
Capital expenditure for property, plant and equipment	-25,681	-17,743
Proceeds from sale of investment property	0	9,100
Capital expenditure for investment property	0	-333
Proceeds from sale of financial investments	1,508	8
Capital expenditure for financial investments	-356	-317
Proceeds from sale of consolidated entities	1,211	0
Acquisition of consolidated entities	-539	-708
Proceeds from sale of investment companies	1,126	4,480
Capital expenditure for financial assets within the framework of short-term disposition	-49,746	0
Proceeds from non-operating income from investments	1,693	0
Interest received	2,610	537
Cash flows from investing activities	-71,339	-7,152
thereof discontinued operations	2,669	0
Dividends paid	-12,592	-11,447
Proceeds from issuing bonds and loans	7,463	103,000
Repayments of bonds and loans	-11,468	-136,244
Payments for finance leases	-33	-49
Change in group financing	-556	-12,123
Interest paid	-3,541	-9,681
Cash flows from financing activities	-20,728	-66,544
Change in cash and cash equivalents	8,035	11,428
thereof discontinued operations	2,770	175
Effects of movements in exchange rates on cash held	102	2,901
Cash and cash equivalents at the beginning of the period	83,824	69,495
Cash and cash equivalents at the end of the period	91,961	83,824

Statement of Changes in Equity

in thousand euros	Note No.	Share Capital	Capital reserve	Retained Earnings	Available-for-sale financial assets
Balance at 1/1/2015		148,819	194,286	73,442	600
Dividends	6			-11,447	
Measurement of financial instruments	5.5/8.2				202
Measurement of pension obligations	5.18				
Foreign currency exchange differences	5.16				
Net profit for the period	4.12/4.13			49,570	
Other adjustments				-57	
Balance at 31/12/2015		148,819	194,286	111,508	802
Balance at 1/1/2016		148,819	194,286	111,508	802
Acquisition of non-controlling interests	2.4			-419	
Dividends	6			-12,592	
Measurement of financial instruments	5.5/8.2				-287
Measurement of pension obligations	5.18				
Foreign currency exchange differences	5.16				
Net profit for the period	4.12/4.13			57,403	
Other adjustments	2.1			-883	
Balance at 31/12/2016		148,819	194,286	155,016	515

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Cash flow hedges	Cumulative exchange differences	Actuarial effects	Equity attributable to shareholders of JENOPTIK AG	Non-controlling interests	Total	
-945	4,042	-32,322	387,922	-1,329	386,593	Balance at 1/1/2015
			-11,447		-11,447	Dividends
546			748		748	Measurement of financial instruments
		4,669	4,669		4,669	Measurement of pension obligations
	5,231	-423	4,807	-100	4,707	Foreign currency exchange differences
			49,570	345	49,915	Net profit for the period
			-57	3	-54	Other adjustments
-399	9,273	-28,076	436,213	-1,081	435,132	Balance at 31/12/2015
-399	9,273	-28,076	436,213	-1,081	435,132	Balance at 1/1/2016
			-419	419	0	Acquisition of non-controlling interests
			-12,592		-12,592	Dividends
-1,178			-1,465		-1,465	Measurement of financial instruments
		-358	-358		-358	Measurement of pension obligations
	-1,165	-23	-1,188	278	-911	Foreign currency exchange differences
			57,403	53	57,456	Net profit for the period
			-883	0	-883	Other adjustments
-1,577	8,108	-28,457	476,710	-331	476,379	Balance at 31/12/2016

Notes

1 Presentation of the Group Structure

1.1 Parent Company

The parent company is JENOPTIK AG headquartered in Jena and is registered in the Commercial Register of Jena in Department B under the number 200146. JENOPTIK AG is publicly listed on the German Stock Exchange in Frankfurt and in the TecDax index.

The list of shareholdings of the Jenoptik Group is published in the Federal Gazette in accordance with § 313 (2) Nos. 1 to 4 of the German Commercial Code [Handelsgesetzbuch (HGB)] and is disclosed from page 185 on of the Notes under the heading "List of Shareholdings" of the Jenoptik Group. The entities to which the simplification relief regulations were applied as specified in § 264 (3) or § 264b of the HGB, were disclosed in the section "Required and Supplementary Disclosures under HGB".

1.2 Accounting Principles

The consolidated financial statements of JENOPTIK AG were prepared for the 2016 fiscal year in accordance with the International Financial Reporting Standards (IFRS) and the binding interpretations of the International Financial Reporting Interpretations Committee (IFRIC) in force at the reporting date for use in the European Union.

The consolidated financial statements were presented in euros. If not otherwise specified, all amounts were presented in thousand euros. Please note that there may be rounding differences as compared to the mathematically exact amounts (monetary units, percentages, etc.). The statement of comprehensive income was prepared in accordance with the cost of sales method.

The fiscal year of JENOPTIK AG and those of the subsidiaries included in the consolidated financial statements corresponds with the calendar year.

In order to improve the clarity of the presentation, individual items were aggregated in the statement of comprehensive income and in the statement of financial position. The classifications used for these items are listed in the Notes.

IFRS Improvements (2012 – 2014). The Annual Improvements Project made amendments to four standards. Along with the clarification of existing regulations, amendments impacting on the accounting and disclosures in the Notes were adopted. The standards affected are IAS 19, IAS 34, IFRS 5 and IFRS 7. These amendments come into effect on January 1, 2016. These improvements have no material effect on the consolidated financial statements.

Amendments to IAS 1 "Presentation of Financial Statements". These amendments affect various disclosure issues. These clearly specify that disclosures in the Notes are only required if their content is not immaterial. This also applies explicitly if an IFRS regulation requires a list of minimum disclosures. In addition, explanations have been added regarding aggregating and disaggregating items in the statement of financial position and the statement of comprehensive income. Furthermore, these clearly specify how investments in entities valued at equity are to be disclosed in other comprehensive income in the statement of comprehensive income. Finally, a sample structure for the Notes was removed in order to take account of content which is relevant for the specific entity. Furthermore, the changes clarify which regulations apply for the presentation of additional subtotals in the statement of financial position, the income statement and other comprehensive income. These amendments come into effect on January 1, 2016. These amendments have no material effect on the consolidated financial statements.

Amendment to IAS 16 "Property, Plant and Equipment" and IAS 38 "Intangible Assets". This amendment provided further guidelines for determining an acceptable method of depreciation. Turnover-based depreciation methods are accordingly not permitted for property, plant and equipment and only permitted in certain exceptional cases for intangible assets (rebuttable presumption of inappropriateness). This amendment comes into effect on January 1, 2016. This amendment has no material effect on the consolidated financial statements.

Amendment to IFRS 11 "Joint Arrangements". This amendment allows the IASB to regulate the accounting treatment for an acquisition of shares in a joint operation that constitutes a business as defined by IFRS 3 "Business Combinations". In such cases the acquiring entity should apply the accounting princi-

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ples specified in IFRS 3 for business combinations. Moreover, the disclosure requirements specified in IFRS 3 also apply. This amendment comes into effect on January 1, 2016. This amendment has no material effect on the consolidated financial statements.

The new regulations listed below are not applicable to the Group and therefore have no effect on the consolidated financial statements:

- Changes to IFRS 10, IFRS 12 and IAS 28: Investment entities – application of the exemption from the disclosure on consolidation
- Change to IAS 27: Equity method in individual financial statements
- Amendments to IAS 16 and IAS 41: Fruit-bearing plants

The application of the following standards and interpretations published by the IASB and adopted by the EU is not yet mandatory, nor have these been applied by Jenoptik in the consolidated financial statements as at December 31, 2016. The Group does not intend an early application of those standards.

The new standards or amendments to standards are to be applied for the fiscal years commencing on or after the date these come into effect.

IFRS 9 “Financial Instruments”. This standard replaces all earlier versions of IAS 39 for the classification and valuation of financial assets and liabilities as well as for the accounting treatment for hedging instruments. This new version of the standard contains revised guidelines for the classification and valuation of financial instruments. These include a new model for anticipated credit defaults for calculating the impairment loss to financial assets as well as the new general accounting regulations for hedging transactions. This standard also adopts the IAS 39 guidelines for the recognition and derecognition of financial instruments. IFRS 9 is to be adopted in fiscal years beginning on or after January 1, 2018. Early application is allowed. With the exception of the accounting for hedging transactions, the standard is to be applied retrospectively, but there is no requirement for the disclosure of comparison information. Apart from a few exceptions, the regulations for the accounting treatment of hedging transactions must be applied in general prospectively.

Jenoptik is presently analyzing the impact of this standard on the consolidated financial statements. The Group does not anticipate the application of the regulations on classification and valuation to have any significant consequences for its statement of financial position or the equity. Jenoptik assumes, on the basis of the currently available information, that all financial assets shown at fair value will continue to be recognized at fair value. There is also expected to be no material change with regard to assets valued at amortized procurement costs in accordance with IFRS 9. In our current assessment, the new method for showing impairment losses in accordance with the Expected Loss model will not lead to any material changes in the consolidated financial statements. Since IFRS 9 does not provide for any change in the general principles of effective hedging relationships, no material changes are expected with regard to the accounting of hedging relationships in the consolidated financial statements. However, with regard to the specific effects, there is still a need for an analysis which is not available as at the current status of the project.

IFRS 15 “Revenue from Contracts with Customers”. IFRS 15 introduces a five-stage model for accounting for revenue from contracts with customers. Under IFRS 15, revenue is recorded in the amount of the consideration in return which an entity can expect for the transfer of goods or services to a customer (the transaction price within the meaning of IFRS 15). This standard replaces existing guidelines for recording revenues such as IAS 18 Revenue, IAS 11 Construction Contracts and IFRIC 13 Customer Loyalty Programs. For fiscal years commencing on or after January 1, 2018, the regulation stipulates either the full retrospective application or a modified retrospective application. Early application is allowed.

Jenoptik is presently analyzing the impact on the consolidated financial statements as part of a project. Based on the results of the first completed phases of the project, potential changes are mainly expected in the following points:

- a) Contractual penalties arising from contracts with customers: Payments of contractual penalties will in future reduce revenue. In the past, these were reported as cost of sales.
- b) Warranties: The Group offers individual customers extended warranty periods compared with the standard periods. These were previously recorded as a liability at the time of sale, recognized as an expense, under cost of sales. Under the rules of IFRS 15, the Group's provisional assessment is that this a separate performance obligation which is realized over the warranty period. In addition to a deferral between revenue and cost of sales, this leads to a tendency for revenue to be recognized at a later date.
- c) Customer-specific development projects, followed by serial manufacture: In the past, revenues were recognized after delivery of the product, unless IAS 11 applied (successive contracts to supply). The Group expects that under IFRS 15 development services will be recognized as revenue on a pro rata basis over the duration of the development instead of a recognition with the serial manufacturing. According to provisional calculations, in the fiscal year 2018 this will lead to an minimal reduction in revenue and a bit stronger reduction in the cost of sales, as well as in a tendency towards revenue being recognized at an earlier date.

The Group currently intends to record the conversion effects on January 1, 2018 on a cumulative basis into equity. Based on the current knowledge this leads to a reduction of equity by a mid single-digit million amount.

Furthermore when applying IFRS 15 Jenoptik will definitely need to disclose more information concerning the nature, amount, timing and the uncertainty of revenue and cash flows arising from contracts with customers as defined in IFRS 15.

The following standards and interpretations published by the IASB have not yet been adopted by the European Union.

Clarification on IFRS 15 "Revenue from Contracts with Customers". The clarifications explain implementation issues which were addressed by the Joint Transition Group for Revenue Recognition. These questions relate to the identification of performance obligations, the application guidelines for principal-agent relationships and licenses for intellectual property, as well as the transitional provisions. In addition, the aim of the amendments is to ensure a more consistent approach in the implementation of IFRS 15 and to reduce the costs and complexity associated with its application. The amendments will come into effect on January 1, 2018.

Amendment to IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures". The amendments address a well-known inconsistency between the regulations of IFRS 10 and IAS 28 (2011) for cases when assets are to be sold to an associate or to a joint venture or when assets are to be contributed towards an associate or to a joint venture. The intention in the future is for the entire profit or loss from a transaction to only be recognized if the assets, either sold or contributed, constitute a business in accordance with IFRS 3. This applies independently of whether the transaction is designed as a share deal or an asset deal. If, by contrast, the assets do not constitute a business, then the results may only be recognized proportionately. The date on which the amendments come into effect has been deferred by the IASB for an indefinite period. This amendment will have no material impact on the consolidated financial statements.

IFRS 16 "Leases". IFRS 16 contains comprehensive new regulations on the accounting for leases and replaces the previous regulations of IAS 17 Leases and several interpretations. The objective is to disclose the lessee's rights and obligations associated with the leases in the statement of financial position. Relief is planned for short-term leases and the leasing of objects of low-value. Lessors will continue having to account for leases by classifying them as either finance or operating leases, applying the criteria defined in IAS 17. Moreover, IFRS 16 contains further regulations on classification and disclosures in the Notes. Subject to its adoption into EU law, IFRS 16 is to be applied for the first time in fiscal years beginning on or after January 1, 2019. Early application is permitted insofar as IFRS 15 is also applied.

These amendments are expected to have material effects on the Group as a lessee, because the Group has primarily concluded operating leases on movable assets and real estate. From the future reporting of those contracts in the statement of financial position the Group expects, on the basis of the currently available information, a significant increase in the fixed assets and the financial debts by a mid double-digit million amount as well as an increase of the statement of financial position total and a corresponding reduction in the equity ratio. Furthermore the changed recognition of lease payments will lead to an improvement in the EBITDA by a high singledigit million amount. In the statement of cash flows, payments for operating leases will be apportioned to the cash flow from financing activities. This will also lead to an increased cash flow from operating activities compared with the provisions of IAS 17.

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With regard to the scope of future leases to be recognized in the statement of financial position, we refer to Note 5.4 from page 152.

This is not expected to have any material effects for the Group as a lessor.

Amendment to IAS 12 “Recording of deferred tax claims for non-realized losses”. The amendment makes it clear that an entity must consider whether tax laws restrict the sources for future taxable income, against which it can use deductions from the reversal of the corresponding, deductible temporary differences. In addition, the amendment contains guidelines on how an entity has to determine future taxable income and explains the circumstances in which future taxable income can include amounts arising from the realization of assets above their carrying amount. The amendment is to be applied for fiscal years beginning on or after January 1, 2017. Early application is allowed. This amendment will have no material impact on the consolidated financial statements.

Changes to IAS 7: Disclosure initiative. The amendment to IAS 7 Cash Flow Statements, is part of the IASB’s disclosure initiative and obligates entities to provide information that enables addressees of financial statements to keep track of the changes to the debts arising from financing activities. When applying the amendments for the first time, entities do not have to give any comparison information for prior periods. This amendment is to be applied for fiscal years beginning on or after January 1, 2017. Early application is allowed. The Group intends to apply the amended standard on the specified date it comes into effect. As a result of applying the amendments the Group will provide the additional information required.

Amendments to IFRS 2: Classification and valuation of share-based payment agreements. The IASB has published an amendment to IFRS 2 “Share-Based Payment” which addresses three main areas: the effects of vesting conditions on the valuation of share-based payment transactions with cash settlement, the classification of share-based payment transactions with net fulfillment clauses with a legal obligation to the deduction of withholding tax and the accounting of share-based payment transactions with settlement in cash in the event of a modification of their conditions leading to a classification as a share-based payment transaction with equity settlement. The amendment is to be applied for fiscal years beginning on or after January 1, 2018. Early application is allowed. This amendment will have no material impact on the consolidated financial statements.

IFRS Improvements (2014–2016). The Annual Improvements Project has made changes to three standards. The standards affected are IFRS 1, IFRS 12 and IAS 28. The amendments to IFRS 1 cover the deletion of the remaining, temporary relief regulations for first-time users. The amendments to IFRS 12 and IAS 28 entail clarifications. The effective date is January 1, 2017 for the amendment to IFRS 12; the amendments to IFRS 1 and IAS 28 come into force on January 1, 2018. These amendments will have no material effects on the consolidated financial statements.

Amendments to IAS 40 “Investment Property”. The amendment to IAS 40 relates to the classification of property which has not yet been completed and makes it clear in which cases the classification of an investment property begins or ends if the property is still under construction or in development. The amendment is to be applied for fiscal years beginning on or after January 1, 2018. Early application is allowed. This amendment will have no material impact on the consolidated financial statements.

IFRIC 22 “Foreign Currency Transactions and Prepaid Considerations”. The IASB has clarified the date for calculating the exchange rate for the conversion of transactions in a foreign currency which include payments received or paid. The amendment is to be applied for fiscal years beginning on or after January 1, 2018. Early application is allowed. This amendment will have no material impact on the consolidated financial statements.

The new regulation listed below is not applicable to the Group and will therefore have no effect on the consolidated financial statements:

Amendments to IFRS 4: Application of IFRS 9 “Financial Instruments” together with IFRS 4 “Insurance Contracts”

1.3 Estimates

The preparation of the consolidated financial statements in accordance with IFRS, as are to be applied in the EU, requires that assumptions be made for certain items that affect their recognition in the statement of financial position or in the statement of comprehensive income as well as the disclosure of contingent receivables and contingent liabilities. All assumptions and estimates are made to the best of the Group’s knowledge and belief in order to provide a true and fair picture of the asset, financial and earnings situation of the Group.

The underlying assumptions and estimates are continually reviewed. This gives the author of the consolidated financial statements a certain amount of discretionary leeway. This essentially relates to:

- the assessment of impairment to goodwill (see section “Intangible Assets” from page 148),
- the definition of useful lives when valuing intangible assets, property, plant and equipment and investment property (see section “Intangible Assets” from page 148, section “Property, Plant and Equipment” from page 151 and section “Investment Property” from page 152),
- the method for valuing inventories, as well as for defining valuation routines and discounts (see section “Inventories” from page 155),
- the actuarial parameters for the valuation of provisions for pensions and similar obligations, as well as the determination of the fair value of fiduciary assets (see section “Pension Provisions and similar obligations” from page 160),
- the assumptions and methods for valuing other provisions – for example, warranty obligations, restructuring and actuarial parameters of personnel provisions (see section “Other provisions” from page 163) and
- the realizability of future tax reliefs – in particular arising from losses carried forward – in the valuation of deferred tax assets (see section “Income taxes” from page 145).

2 Consolidation Principles

2.1 The Group of Entities Consolidated

The group of entities consolidated is based on applying IFRS 10 and IFRS 11. Along with JENOPTIK AG, all significant subsidiaries have been included fully in the consolidated financial statements and one joint operation on a proportional basis. The list of shareholdings is presented in detail in note 12 from page 185.

The consolidated financial statement of JENOPTIK AG includes 31 (prior year 33) fully consolidated subsidiaries. Of which 12 (prior year 14) have their legal seat in Germany and 19 (prior year 19) have theirs abroad. The consolidated entities of the Jenoptik Group include one joint operation (prior year 1).

In the fiscal year 2016 the following fully consolidated subsidiaries were merged or have become defunct through accrual:

- JORENT Techno GmbH, Jena
- LEUTRA SAALE Gewergrundstücksgesellschaft mbH & Co. KG, Grünwald

Furthermore in the fiscal year 2016 the previously not consolidated JENOPTIK South East Asia Pte. Ltd., Singapore, was merged into a fully consolidated subsidiary.

Hillos GmbH, Jena, will be consolidated with a shareholding of 50 percent in accordance with IFRS 11. This entity is a strategic customer of Jenoptik, operating in the area of construction and construction-related applications of laser technology. The following assets and liabilities have been allocated to the Group:

in thousand euros	2016	2015
Non-current assets	711	810
Current assets	9,738	8,829
Non-current liabilities	30	25
Current liabilities	2,853	2,471
Income	24,637	18,612
Expenses	24,037	18,206

14 subsidiaries, of which 8 are non-operating entities, have not been consolidated as their influence on the net assets, financial position and results of operations – both individually and in total – is of minor significance. The total revenue of the non-consolidated entities amounts to about 0.2 percent of group revenue; the EBIT was around minus 0.4 percent of group EBIT. The estimated effect of consolidating all the entities on the group’s statement of financial position total is approximately 0.3 percent.

The following subsidiaries have material investments held by non-controlling shareholders:

Name	Legal seat of the entity	Non-controlling interests
JENOPTIK Korea Corporation Ltd.	Korea	33.4
JENOPTIK Japan CO. Ltd.	Japan	33.42
Vysionics Group	Great Britain	5.36

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The following table summarizes the financial information of the subsidiaries mentioned above, which is based on the individual financial statements of the entities, including IFRS adjustments as well as adjustments due to the allocation of the purchase price for the Vysionics Group. Effects of the consolidation were not taken into account in this context.

in thousand euros	JENOPTIK Korea	JENOPTIK Japan	Vysionics Group
Revenue	4,403	5,094	19,772
	(4,025)	(7,326)	(22,835)
Earnings after tax	-320	2	2,122
	(-272)	(451)	(3,557)
Earnings after tax from non-controlling interests	-107	1	159
	(-91)	(151)	(286)
Total results	-320	2	2,122
	(-272)	(451)	(3,557)
Total results from non-controlling interests	-107	1	159
	(-91)	(151)	(286)
Non-current assets	175	71	5,798
	(211)	(72)	(8,977)
Current assets	2,458	2,105	7,853
	(4,154)	(3,024)	(9,078)
Non-current liabilities	0	633	24,412
	(0)	(387)	(31,901)
Current liabilities	1,465	1,298	4,895
	(2,880)	(2,473)	(6,774)
Net assets	1,168	246	-15,657
	(1,486)	(236)	(-20,620)
Net assets from non-controlling interests	390	82	-802
	(496)	(79)	(-1,656)
Cash flows from operating activities	312	25	3,791
	(-758)	(499)	(8,265)
Cash flows from investing activities	-5	0	-225
	(-131)	(0)	(-1,058)
Cash flows from financing activities	-398	-475	-2,974
	(-337)	(-249)	(-7,510)
Change in cash and cash equivalents	-90	-450	592
	(-1,225)	(250)	(-302)

Prior year figures are in parentheses

2.2 Consolidation Procedures

The assets and liabilities of domestic and foreign entities included fully or proportionately in the consolidated financial statements are recognized uniformly in accordance with the accounting policies and valuation methods applicable throughout the entire Jenoptik Group.

At the acquisition date, the capital consolidation is based on the acquisition method. In this context, the assets and liabilities of the subsidiaries are recognized at fair values. Furthermore, identifiable intangible assets are capitalized and contingent liabilities as defined in IFRS 3.23 are classified as liabilities. The remaining difference between the purchase price and the acquired net assets corresponds to the goodwill. This is not subject to scheduled depreciation in the subsequent periods but instead to an annual impairment test in accordance with IAS 36.

Receivables and payables as well as income and expenses between the consolidated entities are eliminated. The Group's inter-company goods and services are delivered and rendered both on the basis of market prices as well as transfer prices and are determined on the basis of the "dealing-at-arm's-length" principle. Assets from inter-company deliveries included in the inventories and property, plant and equipment are adjusted by intercompany results. Consolidation procedures recognized as profit or loss are subject to the delimitation of deferred taxes, with deferred tax assets and deferred tax liabilities being netted if there is a legally enforceable right to offset current tax refund claims against current tax liabilities and only if they concern income taxes levied by the same tax authority.

There was no change in the consolidation methods applied in comparison to the prior year.

2.3 Foreign Currency Exchange Effects

Annual financial statements prepared by subsidiaries in foreign currencies are converted on the basis of the functional currency concept as defined in IAS 21 "The Effects of Changes in Foreign Exchange Rates" by using the modified reporting date exchange rate method. Since the subsidiaries conduct their business activities independently in view of financial, economic and organizational concerns, the functional currency is generally identical to the currency of the country in which the subsidiary is located.

Assets and liabilities are consequently converted at the exchange rate on the reporting date, whereas income and expenses are converted at the average exchange rate which is determined on a monthly basis. The resulting difference arising from the currency conversion is offset outside of profit or loss and shown separately in equity as a foreign currency reserve.

If a consolidated entity leaves the group of consolidated entities, the corresponding difference arising from the foreign currency conversion is reversed through profit or loss.

Receivables and payables in the separate financial statements of consolidated entities prepared in a local currency which is not the functional currency of the subsidiary, are converted at the exchange rate on the reporting date in accordance with IAS 21. Differences arising from the foreign currency conversion are shown under other operating income or other operating expenses affecting the results and, if these result from financial transactions, are shown in financial income or financial expenses (see details on the Income Statement from page 141). This excludes currency conversion differences arising from loans which constitute a part of the net investment in a foreign operation. These differences arising from foreign currency conversions are shown under other comprehensive income outside of profit or loss.

The exchange rates used for the conversion are listed in the following table:

	1 EUR =	Annual average exchange rate		Reporting date exchange rate	
		2016	2015	2016	2015
Australia	AUD	1.4874	1.4808	1.4596	1.4897
Switzerland	CHF	1.0901	1.0642	1.0739	1.0835
China	CNY	7.3482	6.9448	7.3202	7.0608
Great Britain	GBP	0.8166	0.7241	0.8562	0.7340
Japan	JPY	120.0834	133.4325	123.4000	131.0700
Korea	KRW	1,283.5105	1,268.5484	1,269.3600	1,280.7800
Malaysia	MYR	4.5823	4.6959	4.7287	4.6959
Singapore	SGD	1.5275	1.5127	1.5234	1.5417
USA	USD	1.1061	1.1042	1.0541	1.0887

2.4 Entities Acquired and Sold

In the second half-year of 2016, non-controlling shareholders of JENOPTIK Holdings UK Ltd. (formerly VYSIONICS Ltd.) exercised existing put options. This resulted in Jenoptik's equity interest in JENOPTIK Holdings UK Ltd. and the companies controlled by this entity increasing from 91.97 to 94.64 percent with a corresponding reduction in non-controlling interests. The change is shown as an acquisition of non-controlling interests in the consolidated statement of changes in Equity.

On signing the agreement on January 19, 2017, and thus after the statement of financial position date, Jenoptik acquired 100 percent of the shares in Domestic and Commercial Security Limited (in the following: ESSA Technology), Saltash (Great Britain) via the British entity JENOPTIK Traffic Solutions UK Ltd. As Jenoptik holds 94.96 percent of the shares in the acquiring entity JENOPTIK Traffic Solutions UK Ltd., ESSA Technology is also consolidated in the Group with a shareholding of 94.96 percent from the time of acquisition.

The information below is based on provisional figures. Their provisional nature concerns determination of the acquired net assets in particular in terms of acquired intangible assets and determination of the purchase price with regard to finalization of the completion accounts, which influence the calculation of the purchase price and thus the purchase price allocation and the amount of goodwill to be capitalized. The provisional aspect also concerns the information regarding off-balance sheet contingent liabilities.

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ESSA Technology specializes in software for traffic monitoring and back office solutions, particularly automatic number plate recognition (ANPR) applications for the police. The acquisition expands the Jenoptik Group's traffic safety portfolio and promotes its ongoing transformation into a supplier of integrated solutions for public safety and "smart cities".

The purchase price comprises a fixed cash component of 4,760 thousand pounds sterling (5,506 thousand euros). In turn, we acquired the following identified net assets at the point of first-time consolidation:

in thousand euros	Total
Non-current assets	1,522
Current assets	1,112
Non-current liabilities	264
Current liabilities	400

The acquired assets include receivables with a gross value of 805 thousand euros, corresponding to the full fair value. There is no expectation that the acquired receivables will be unrecoverable.

Also included in the acquired assets are cash and cash equivalents amounting to 265 thousand euros.

In connection with the acquisition of shares in ESSA Technology, the main items identified as intangible assets were a customer base, technologies, trademark rights and an order backlog. The intangible assets are depreciated over periods of between three and ten years. Goodwill in the sum of 3,536 thousand euros was also recorded for the acquisition of skilled personnel and synergy effects arising from the expansion of the range of services, which extend all the way to integrated solutions. The goodwill is to be allocated to the cash-generating Traffic Solutions unit and is not tax-deductible.

Contingent liabilities were not included in the company acquisition.

Applying the partial goodwill method, non-controlling interests in the net assets of ESSA Technology came to 99 thousand euros at the time of acquisition.

Because this date was after the balance sheet date for the past fiscal year, neither earnings nor expenses relating to ESSA Technology are included in the Jenoptik Group's statement of comprehensive income.

Costs of 148 thousand euros were incurred for the acquisition of ESSA Technology in the 2016 fiscal year and are included in the other operating expenses.

In the 2016 fiscal year no companies were sold.

2.5 Notes on Other Entities

Jenoptik holds shares in 8 (prior year 9) entities with a maximum 50 percent investment quota respectively. The investments in these entities are accounted for at fair value in accordance with IAS 39. If no reliable fair value can be determined, then the purchase price is recognized. The investments are of minor importance for the respective asset, financial and earnings situation of Jenoptik. Therefore, based on the principle of cost effectiveness and materiality, the at-equity valuation was not applied.

The investment held in a minority holding in the Optics & Life Science segment was sold in the 2016 fiscal year. The gain from the sale was accounted for in other operating income. Cash inflows are disclosed in the statement of cash flows as proceeds from sale of investment entities.

The general disclosures regarding the investments held are contained in the list of shareholdings of the Jenoptik Group.

2.6 Discontinued Operations

Discontinued activities are material definable operations which have either been sold or are planned to be sold. A breakdown of the income and expenses relating to discontinued activities is shown in the income statement – after the result of continuing operations. In the prior year this was shown in separate lines within the income statement. The prior year's figures for the income statement were adjusted accordingly.

Detailed information on the discontinued operations is provided in section 4.14 from page 147.

3 Accounting Policies and measurement methods

3.1 Goodwill

The accounting rules of IFRS 3 are to be used for all business combinations.

Goodwill as stated in IFRS 3 corresponds to the positive difference between the consideration for a business combination and the newly acquired, revalued assets and liabilities, including certain contingent liabilities, remaining after a purchase price has been allocated and intangible assets, which have consequently been identified. Within the framework of this purchase price allocation, the identifiable assets and liabilities are not recognized at their previous carrying amounts but at their fair value. During an acquisition of a controlling interest, non-controlling interests are valued according to their proportion of the identifiable net assets.

Goodwill is recognized as an asset and subject to an impairment test at least once a year on a defined date or whenever there is an indication that the cash-generating unit could be impaired. An impairment loss is recognized immediately through profit or loss and not reversed in later reporting periods.

In accordance with IFRS 3, negative differences arising from the capital consolidation are recognized immediately through profit or loss in other operating income.

3.2 Intangible Assets

Intangible assets acquired in return for payment, primarily patents, trademarks, software and customer relationships, are capitalized at their acquisition costs. Intangible assets with finite useful lives are subject to scheduled depreciation on a straight-line basis over their economic useful lives. This is generally a period of between three and ten years. The Group reviews its intangible assets with finite useful lives to determine whether there is any impairment loss (see section 5.1 "Impairment Losses on Property, Plant and Equipment and Intangible Assets").

Internally generated intangible assets are capitalized if the recognition criteria specified in IAS 38 "Intangible Assets" have been fulfilled.

Internally generated patents are subject to schedule depreciation on a straight-line basis over their economic useful lives which are basically between five and ten years.

Development costs are capitalized if a newly developed product or process can be clearly identified, is technically realizable and if there are plans for production, own use or marketing. Furthermore, it is assumed that, if capitalized, there is a reasonable probability that the development costs will be covered by future financial cash inflows and can be reliably determined. Finally, there must be adequate resources available to conclude the development and enable the asset to be used or sold.

Capitalized development costs are subject to scheduled depreciation over the anticipated period during which the products are sold – but no longer than five years. In this context, the acquisition and manufacturing costs cover all the costs directly attributable to the development process as well as appropriate portions of the general and administrative expenses related to the development. If the requirements for capitalization have not been fulfilled, the expenditures are recognized through profit or loss in the year they occurred.

Amortization on intangible assets is apportioned on the basis of the causer principle to the corresponding function areas in the income statement.

IAS 38 requires research costs to be recognized as current expenses in research and development expenses.

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3.3 Property, Plant and Equipment

Property, plant and equipment are valued at acquisition and manufacturing cost, less scheduled, straight-line depreciation. The depreciation method reflects the anticipated pattern of consumption of the future economic benefits. Where necessary, impairment losses reduce the amortized acquisition and production costs. In principle, government grants are deducted from the acquisition and production costs in accordance with IAS 20 "Accounting for and Presentation of Government Grants" (see section entitled "Government Grants"). Production costs are calculated on the basis of directly attributable specific costs as well as proportionate, directly attributable cost of materials and production overheads including depreciation. In accordance with IAS 23 "Borrowing Costs", borrowing costs directly attributable to acquisition or production costs of a qualifying asset are capitalized as a portion of the acquisition or production costs.

Costs incurred for repairing property, plant and equipment are generally treated as an expense. Subsequent acquisition costs for any components of property, plant and equipment replaced at regular intervals, can be capitalized insofar as future economic benefits can be reasonably expected and the respective costs can be reliably measured.

Scheduled depreciation is essentially based on the following useful lives:

	Useful life
Buildings	20 – 80 years
Machinery and technical equipment	4 – 20 years
Other equipment, operating and office equipment	3 – 10 years

If any items of property, plant and equipment are decommissioned, sold or relinquished, the gain or loss arising from the difference between the proceeds of the sale and the residual carrying amount are recorded under other operating income or other operating expenses.

3.4 Impairment of Property, Plant and Equipment and Intangible Assets

Property, plant and equipment and intangible assets with finite useful lives are assessed at each reporting date to see if there are any indications of possible impairment losses for the corre-

sponding assets in accordance with IAS 36 "Impairment of Assets". If any such indications for specific assets or cash-generating units are identified, impairment tests are performed on these assets.

The demarcation between cash-generating units is primarily based on the structure of the business units constituting divisions.

An impairment test is performed by first determining the recoverable amount of an asset or cash-generating unit and then comparing it with the carrying amount in order to identify if there is any need for an impairment test.

The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use.

The amount designated as at fair value less costs to sell is that which could be achieved through the sale of an asset in a transaction at arm's length between knowledgeable and willing parties.

Value in use is determined on the basis of discounted expected future cash inflows. This is based on a fair market interest rate before tax that reflects the risks of using the asset that are not yet considered in the estimated future cash inflows.

If the recoverable amount of an asset is estimated to be less than the carrying amount, it is then depreciated to the recoverable amount. An impairment loss is recognized immediately through profit or loss.

If an impairment loss is reversed in a subsequent accounting period, the carrying amount of the asset must then be adjusted to the recoverable amount determined. The maximum limit of the impairment loss reversal is determined by the amount of the amortized acquisition or production costs that would have been recorded if an impairment loss had not been recognized in prior periods. An impairment loss reversal is immediately recorded through profit or loss.

3.5 Government Grants

IAS 20 distinguishes between grants related to acquiring non-current assets and grants related to income.

In general, IAS 20 states that grants are to be accounted for through profit or loss in the same period as the relevant expenses.

In the Jenoptik Group a grant for a non-current asset is deducted from the acquisition costs. Correspondingly, the amount to be written off is determined on the basis of the reduced acquisition costs.

3.6 Leases

When using leased items of property, plant and equipment, the conditions for finance leases as defined in IAS 17 "Leases" are fulfilled if all material risks and opportunities incidental to ownership have been transferred to the respective consolidated entity of the Group. All other leases are classified as operating leases.

Finance leases. The Group, as a lessee of the finance lease, capitalizes the assets leased at the inception of the lease at the amount equal to their fair value, or if lower, the current value of the minimum lease payments. The straight-line depreciation method is to be used to write off the asset over the period of its economic useful life or the shorter term of the lease agreement if it is unlikely that an option to purchase the asset will be exercised. Liabilities from finance lease agreements are shown at the current value of the minimum lease payments.

If the Group is a lessor, the amount equal to the net investment in the lease is to be capitalized as a receivable. Financial income is recognized through profit or loss in the respective reporting period, so that there is a constant periodic return on the net investment.

Operating leases. Lease payments from operating leases are recognized through profit or loss on a straight-line basis over the term of the corresponding lease.

Any incentives received or outstanding for entering into an operating lease agreement are also recognized on a straight-line basis over the term of the lease.

3.7 Investment Property

Investment property comprises plots of land and buildings held for gaining rental income or for the purpose of their value increasing. These properties are not held for the Group's own production, for supplying goods or rendering services, for administration purposes or for any sales in the ordinary course of business activities.

In accordance with the option of IAS 40 "Investment Property", such assets are to be accounted for at amortized acquisition or

production costs (see page 152). The basis for determining the stated fair value is standard land values or the application of the discounted cash flow method.

The straight-line depreciation method is based on a useful life of between 20 to 80 years.

In accordance with IAS 36, depreciation resulting from impairment losses on investment property is charged if the value in use or fair value less costs to sell of the respective asset is less than the carrying amount. If the reasons for an impairment loss from a prior period cease to exist, corresponding write ups are recorded.

3.8 Financial Instruments

Financial instruments are contracts giving rise to a financial asset of one entity and to a financial liability or an equity instrument of another entity. As defined in IAS 32, such instruments include on the one side primary financial instruments such as trade receivables and trade payables or financial receivables and financial payables. On the other side, they also include derivative financial instruments which are used for hedging risks arising from fluctuations in interest and foreign currency exchange rates.

Financial assets and financial liabilities are recognized in the consolidated statement of financial position from the date on which the Group becomes a contractual party in a financial instrument agreement.

The treatment of existing financial instruments depends on their classification: "receivables and loans" are recognized at amortized acquisition costs and "available-for-sale financial assets" are recognized at fair value.

The amortized acquisition costs of a financial asset or a financial liability are defined as the amount at which the financial asset or financial liability was valued at initial recognition:

- minus any repayments
- minus any impairment losses or potential inability to be recovered, as well as
- plus/minus the cumulative allocation of any difference between the initial amount and the amount repayable on maturity (e.g. discounts and transaction costs). Under the effective interest method, this difference is spread over the full contractual term of the financial asset or financial liability.

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The amortized procurement costs for current receivables and payables generally reflect the nominal amount or the repayment value.

Fair value generally corresponds to the market or stock market value. If there is no active market, the fair value is determined by using financial mathematical methods such as by discounting estimated future cash flows at market interest rates or by applying standard option price models and by checking confirmations issued by the banks that sold the instruments.

a) Primary financial instruments

Shares in entities

Initial recognition of shares in entities in the statement of financial position is based on fair value.

Within the Jenoptik Group all shares in publicly listed subsidiaries and shareholdings in publicly listed stock corporations which have not been fully consolidated and have also not been accounted for at equity in the consolidated financial statements, are classified as “available-for-sale” and in subsequent reporting periods are valued at fair value without deducting any transaction costs. Value adjustments to “available-for-sale financial assets” are recognized not through profit or loss but in other comprehensive income. In the case of a permanent impairment loss, this is to be recognized through profit or loss.

Shareholdings in subsidiaries not publicly listed and other investments are also generally classified as “available-for-sale financial assets”. However, these are to be shown at their respective acquisition costs since there is no active market for such entities and the carrying amounts represent a reasonable approximation of the fair values. As far as there are any indications of lower fair values, these are recognized.

Loans

Loans involve credit granted by the Jenoptik Group and are to be valued at the amortized acquisition costs in accordance with IAS 39.

Non-current, non-interest-bearing loans and low interest-bearing loans are accounted for at current value. If any objective, substantial evidence of impairment can be identified, then unscheduled depreciation is applied. The carrying amounts are reduced through the use of an impairment loss account.

Securities

Securities belong to the category of “available-for-sale financial assets” and are recognized at fair value. They are valued until sold and reported outside of profit or loss under other comprehensive income, taking deferred taxes into consideration. When securities are sold or if a material or permanent impairment loss occurs, the cumulative profit or loss that had been accounted for directly in equity is reclassified in the profit or loss of the current reporting period. The initial valuation is recorded at the settlement date at acquisition costs which reflect the fair value.

Trade Receivables

Trade receivables are non-interest bearing due to their being short term and are recognized at nominal value less impairment losses on the basis of anticipated bad debts. In this context, consideration is given to both the individual default risk as well as a general default risk derived from past events for a group of receivables with comparable default risks (portfolio-based impairment) when setting up an impairment loss account. When the loss of a trade receivable is finally realized, the receivable is booked out by consuming any impairment previously recognized.

Other Receivables and Assets

Other receivables and assets are recognized at amortized acquisition costs. All identifiable default risks are accounted for by a corresponding impairment.

Significant non-current, non-interest-bearing or low interest-bearing receivables are discounted.

Current Financial Investments

Current financial assets – with the exception of securities – are included in the category “financial investments held to maturity” or “loans and receivables” and are valued at amortized acquisition costs.

Cash and Cash Equivalents

Cash and cash equivalents comprise cash on hand, checks and bank credit balances available on demand with an original maturity of up to three months. These are accounted for at their nominal value.

Financial Liabilities and Equity Instruments

In principle, financial liabilities are valued at amortized procurement costs by applying the effective interest method. This does not apply to financial liabilities which are accounted for at fair value through profit or loss.

Liabilities from finance lease agreements are shown at the current value of the minimum lease payments.

An equity instrument is any contractual agreement containing a residual interest in the assets of the Group after all liabilities have been deducted. Issued shares are classified as equity, whereby the costs (less related income tax benefits) directly attributable to the issue of treasury shares have been deducted from equity.

Liabilities to Banks

Interest-bearing bank loans and overdraft lines of credit are accounted for at the amounts received less any directly attributable disbursement expenses. Financing costs, including premiums due to be paid on repayments or redemption, are accounted for on an accrual basis by applying the effective interest method, and increase the carrying amount of the instrument insofar as they have not been settled at the date of its inception.

b) Derivative Financial Instruments

Within the Jenoptik Group, derivative financial instruments are used for hedging risks arising from fluctuations in interest and foreign currency exchange rates. They serve to reduce earnings volatility resulting from interest and foreign currency exchange rate risks. Fair values are determined on the basis of the market conditions – interest rates, foreign currency exchange rates – at the balance sheet date and using the valuation methods shown below.

Derivative financial instruments are not used for speculation purposes. The use of derivative financial instruments is governed by group guidelines which are authorized by the Executive Board and represent a fixed written guideline on the use of derivative financial instruments. In order to hedge risks from fluctuations in interest and foreign currency exchange rates, the Group uses cash flow hedges.

Changes in the fair value of derivative financial instruments which serve to hedge cash flow risks, are documented. If the hedge accounting has been classified as effective, the changes in fair value are recognized outside of profit or loss in other comprehensive income. Reclassifications from equity to profit

or loss are carried out in the period during which the hedged underlying transaction affects profit or loss. Fluctuations in value arising from financial instruments which are classified as not effective are recorded directly in profit or loss.

3.9 Inventories

Inventories are recognized at the lower of acquisition or production costs and their net realizable value.

Net realizable value is the estimated proceeds from sale less the estimated production costs and any costs incurred up to sale.

Acquisition costs also include any other costs incurred to restore the inventories to their current condition. Any reductions in purchase prices such as rebates, bonuses or trade discounts are taken into account.

Production costs include the full costs relating to production that have been determined on the basis of normal production capacity utilization. In addition to direct costs, these also include the appropriate portion of the necessary material and production overheads as well as production related depreciation which can be directly attributable to the production process. In this context, particular account is taken of the costs that are allocated to specific production cost centers. Administrative expenses are also taken into account insofar as they can be allocated to production. If carrying amounts at the reporting date have decreased due to lower prices on the sales market, then these are recognized. In principle, similar inventory assets are valued using the average cost method. If the reasons that led to a write-down of inventories cease to exist and in turn result in an increase of their net realizable value, reversals of write-downs are recognized as a reduction in material expenses in the corresponding periods in which the reversal of the write-downs occurs.

3.10 Borrowing Costs

Borrowing costs that can be directly attributed to the construction or production of a qualifying asset are capitalized as a portion of the acquisition or production costs of this asset.

3.11 Advances Received

Advance payments received from customers are recognized as liabilities as far as such payments do not relate to construction contracts.

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3.12 Construction Contracts

In accordance with IAS 11 “Construction Contracts”, revenue and profits from construction contracts are recognized according to the “Percentage of Completion Method”. The percentage of completion is generally derived from the ratio between the actual construction costs incurred up to the end of the fiscal year and the currently estimated total contract costs (“Cost-to-Cost Method”). Losses arising from construction contracts are immediately and fully recognized in the fiscal year in which they are identifiable.

Construction contracts valued according to the percentage of completion method are recognized as receivables or payables arising from construction contracts, depending on the amount of the progress payments received or progress billings outstanding. They are valued at construction costs plus any proportion of income received corresponding to the percentage of completion. Insofar as the cumulative services rendered (construction costs and construction outcome) exceed the progress payments and advances received in individual cases, construction contracts are shown under receivables from construction contracts. If, after deducting progress payments and advances received, there is a negative balance, this is shown as a payable under liabilities from construction contracts. Any anticipated contract losses are taken into account as write-downs or provisions. They are determined by considering all identifiable risks.

3.13 Deferred Taxes

The accounting for and valuation of deferred taxes is performed in accordance with IAS 12 “Income Taxes”. Deferred tax assets and deferred tax liabilities are shown as separate items in the statement of financial position in order to take into account future tax effects resulting from timing differences between the valuation of assets and liabilities and tax losses carried forward.

Deferred tax assets and deferred tax liabilities are computed in the amount of the anticipated tax burden or tax relief in subsequent fiscal years on the basis of the tax rate applicable on the date of realization. The effects of changes in tax rates on deferred taxes are recognized in the reporting period during which the legislative procedure on which the change in the tax rate is based has been completed.

Deferred tax assets on differences in the statement of financial position and on tax losses carried forward are only recognized if it is probable that these tax advantages can be realized in the foreseeable future.

Deferred tax assets and deferred tax liabilities are offset against each other insofar as taxes are levied by the same authority and relate to the same tax period. In accordance with the regulations of IAS 12, there is no discounting of deferred tax assets and liabilities.

3.14 Provisions for Pensions and Similar Obligations

Pensions and similar obligations comprise both the pension obligations of the Jenoptik Group as well as defined benefit and defined contribution retirement schemes.

In accordance with IAS 19, pension obligations for defined benefit schemes are determined by applying the so-called projected unit credit method. Actuarial expert opinions are annually obtained for this procedure.

The mortality rates are determined in accordance with the Heubeck guideline mortality tables 2005 G. Actuarial gains and losses are not recognized through profit or loss but in other comprehensive income. Past-service expenses are shown under personnel expenses and the interest portion of the addition to provisions is recorded in the financial result.

For defined contribution schemes, the contributions payable are recognized immediately as an expense.

3.15 Tax Provisions

Tax provisions contain obligations arising from current income taxes. Deferred taxes are disclosed in separate items in the statement of financial position.

Tax provisions for corporation tax and business tax or similar income tax expenses are determined on the basis of the taxable income of the consolidated entities, less any prepayments made. Any other taxes to be assessed are considered in the same manner.

3.16 Other Provisions

In accordance with IAS 37 "Provisions, Contingent Liabilities and Contingent Assets", provisions are set aside insofar as there is any current liability to a third party resulting from a past event that is likely to lead to an outflow of resources in the future and the amount of which can be reliably estimated.

Other provisions are only set aside for legal or de facto obligations to third parties that are more likely than not at the reporting date.

Provisions are recognized at their settlement value discounted at the reporting date, providing the interest effect is significant. The settlement value also includes the anticipated price or cost increases. Discounting is based on interest rates before taxes that reflect current market expectations with regard to the interest effect as well as the risks specific to the liability and that depend on the corresponding term of the obligation.

The interest portion of the compounded interest in a provision is recorded in the financial result.

Provisions are valued on the basis of empirical values, taking the circumstances at the balance sheet date into consideration. Provisions for warranties and guarantees are set aside on the date of the sale of the corresponding goods or date on which the corresponding services are rendered. The amount of the provision is based on the historical development of guarantees and warranties as well as on a consideration of all future potential guarantee or warranty claims, weighted by the probability of their occurrence.

Claims to the right of recourse are only taken into account if these claims are virtually certain.

3.17 Share-based Payment

The long-term incentive components (LTI) for the current members of the Executive Board as well as for some members of the JENOPTIK AG top management are accounted for as share-based payments settled in cash as defined in IFRS 2 "Share-based Payment". At the balance sheet date and depending upon the contractual provisions, a long-term liability is set aside in the amount either of the pro rata or full fair value of the payment obligation. Granting of virtual shares is made on the basis of the annual target agreement. Changes in fair value are recognized through profit or loss.

3.18 Contingent Liabilities

Contingent liabilities are potential obligations that are based on past events and whose existence is only confirmed by the occurrence of one or more uncertain future events, which are, however, outside the control of the Jenoptik Group. Moreover, current obligations can constitute contingent liabilities if there is insufficient certainty regarding the likelihood of outflows of resources to set aside a provision and/or the amount of the obligation cannot be reliably estimated. The valuations of the contingent liabilities correspond to the existing scope of liability at the balance sheet date. In principle, they are not accounted for in the statement of financial position but are explained in the Notes in section "Contingent Liabilities" from page 178.

3.19 Revenue

Revenue generated from the sale of goods is recognized through profit or loss as soon as all material risks and rewards associated with the ownership of the goods have been transferred to the buyer, a price is agreed or can be determined and the payment thereof can be assumed. The payments charged to the customers for the goods and services – less sales deductions and trade discounts – are shown under revenue.

Revenue from services is recorded in accordance with the percentage of completion of the order at the balance sheet date. The percentage of completion of the order is determined on the basis of the services rendered. Income is only recognized if there is sufficient probability that the entity will receive the economic benefit associated with the contract. Otherwise, income is only recognized to the extent that expenses incurred are refundable.

If a contract consists of various separate elements (multi-component contract), they are recognized separately according to the above mentioned principles.

Rental income received from investment property is recognized on a straight-line basis over the term of the corresponding rental contracts and disclosed in revenue.

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3.20 Cost of Sales

The cost of sales shows the costs incurred to generate the revenue. This item also includes the costs for setting aside provisions for warranties and guarantees. The scheduled depreciation on intangible assets, property, plant and equipment is shown in accordance with the principle of cause and included in the cost of sales insofar as it is attributable to the production process. Research and development expenses which do not qualify for being capitalized are shown under research and development expenses.

3.21 Selling Expenses and General Administrative Expenses

Along with personnel expenses and cost of materials, selling expenses include the costs incurred for distribution, advertising, sales promotion, market research and customer service.

General and administrative expenses include personnel expenses and the cost of materials as well as administration-related depreciation.

3.22 Other Operating Income and Expenses

Income from the reversal of provisions is recognized through profit or loss. Insofar as the underlying provisions were set aside in the functional costs, the provision reversals are also allocated to the corresponding functional costs. If a provision is set aside in other operating expenses, the reversal of the provision is also shown under other operating expenses.

Other taxes are allocated to other operating expenses.

3.23 Financial Income and Financial Expenses

The financial income and financial expenses of the Group mainly comprise interest income and interest expenses. Furthermore, these items include currency exchange gains and losses arising from financial assets and liabilities, net gains or losses arising from hedging instruments for these financial assets and liabilities, as well as reclassifications of net gains and losses arising from such hedging instruments previously recorded under other comprehensive income. In addition, the financial income and financial expenses include net gains and losses arising from the measurement of the fair value of contingent considerations that are classified as financial liabilities.

4 Disclosures on the Statement of Income

4.1 Revenue

In comparison to 2015, revenue increased overall by 16,132 thousand euros or 2.4 percent to 684,769 thousand euros and mainly resulted from sales of goods:

in thousand euros	2016	2015
Sales of goods	583,838	573,063
Services rendered	98,969	92,751
Rental income	1,961	2,823
Total	684,769	668,637

The item revenue comprised revenue from construction contracts accounted for in accordance with their percentage of completion at the reporting date in the sum of 9,437 thousand euros (prior year 7,360 thousand euros) for the fiscal year 2016. For these construction contracts, progress billings sent to customers amounted to 4,000 thousand euros (prior year 5,404 thousand euros).

Revenue for construction contracts not yet completed as at the balance sheet date arising from the fiscal year 2016 and from previous years, totaled 18,582 thousand euros (prior year 9,144 thousand euros).

Detailed disclosures on revenue according to segment and region are shown in the Segment Report from page 169 on.

4.2 Cost of Sales

in thousand euros	2016	2015
Cost of materials	269,026	268,975
Personnel expenses	134,205	127,730
Depreciation and amortization	21,390	21,238
Other cost of sales	22,295	24,525
Total	446,915	442,468

In comparison to 2015 cost of sales increased overall by 4,447 thousand euros or 1.0 percent and totaled 446,915 thousand euros. Cost of sales show the costs incurred to generate revenue. In addition this item records the costs for setting aside provisions for sales-related transactions as well as the costs for development services on behalf of customers.

As in the prior year, cost of sales did not contain any unscheduled impairment costs for intangible assets nor for property, plant and equipment. The unscheduled impairment losses are reported in other operating expenses.

Cost of sales for construction contracts not yet completed as at the balance sheet date, arising from the fiscal year 2016 and from previous years, totaled 16,619 thousand euros (prior year 8,488 thousand euros). The profit generated from these totaled 1,962 thousand euros (prior year 656 thousand euros) a loss in the sum of 2,488 thousand euros was reported, (prior year 2,285 thousand euros).

4.3 Research and Development Expenses

Compared to the 2015 fiscal year, research and development expenses have increased overall by 524 thousand euros or 1.3 percent to 42,298 thousand euros.

These cover all expenses attributable to research and development activities. The expenses paid by customers in connection with research and development services in the sum of 15,013 thousand euros (prior year 10,908 thousand euros) are not included in this item in the statement of income. Such expenditures were allocated to cost of sales.

Costs for not yet completed development projects were capitalized within other intangible assets in the amount of 78 thousand euros.

As in the prior year, research and development expenses did not contain any impairments.

4.4 Selling Expenses

In comparison to 2015, selling expenses increased overall by 1,007 thousand euros or 1.4 percent and totaled 73,598 thousand euros.

Selling expenses include personnel expenses and the cost of materials as well as sales-related depreciation. They also include the expenses for sales commissions as well as marketing and communication.

4.5 General Administrative Expenses

Compared to the prior year, general administrative expenses in 2016 rose by 3,586 thousand euros or 6.6 percent to 57,583 thousand euros. General administrative expenses include personnel expenses and the cost of materials as well as administration-related depreciation.

4.6 Expenses According to Types of Expense

The following main types of expenses are included in cost of sales, selling and administrative expenses as well as research and development expenses:

in thousand euros	2016	2015
Material costs	284,574	281,511
Personnel expenses	246,127	239,629
Depreciation and amortization	27,151	28,770
Other expenses	62,542	60,921
Total	620,394	610,830

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4.7 Other Operating Income

in thousand euros	2016	2015
Foreign currency exchange gains	8,910	8,639
Income from reversed bad debt allowances	6,058	4,069
Income from government grants	1,783	2,886
Income from services, offsets and rentals	1,627	2,565
Income from non-cash contributions	1,079	1,364
Gains from the sale of investment companies	1,070	1,916
Income from impairment reversals of properties	439	1,986
Income from damage claims/ insurance benefits	239	283
Income from the sale of intangible assets, property, plant and equipment and investment property	153	580
Income from the sale of materials	72	691
Miscellaneous	1,944	2,040
Total	23,374	27,019

Other operating income in 2016 was reduced by 3,645 thousand euros and thus by 13.5 percent to 23,374 thousand euros.

Income from foreign currency exchange gains mainly include gains arising from fluctuations in exchange rates between the transaction date and the payment date of receivables and payables in foreign currencies, as well as exchange rate gains arising from the valuation at the exchange rate on the reporting date. Currency exchange losses from these items are shown under other operating expenses.

The reversal of impairments of receivables has been recorded through profit or loss on the basis of payments received for overdue receivables.

Income from government grants generally contained grants for research and development projects that Jenoptik received from the Federal Ministry for Education and Research.

Income from services, clearing and rental is not derived from the company's common business activities.

Income from the sale of investment companies was generated with the sale of a minority investment in the Optics & Life Science segment.

The item Miscellaneous includes income from various sources, among which were income from works canteens, derecognition of liabilities and refunds from other taxes.

4.8 Other Operating Expenses

in thousand euro	2016	2015
Foreign currency exchange losses	8,770	7,923
Expenses for services and rentals	3,049	2,697
Expenses from increase of bad debt allowances for receivables and bad debt losses	2,476	5,144
Losses from disposals of intangible assets, property, plant and equipment and investment property	1,845	883
Impairments of intangible assets, property, plant and equipment and investment property	1,313	761
Expenses for group projects	1,064	747
Amortization of intangible assets from a first-time consolidation	441	517
Other taxes	285	523
Acquisition costs	148	0
Reorganization and restructuring expenses	0	2,667
Additions/reversals of provisions	-557	-2,664
Miscellaneous	2,705	4,581
Total	21,540	23,777

Other operating expenses fell by 2,237 thousand euros or 9.4 percent compared with the prior year, to 21,540 thousand euros.

The expenses incurred from foreign currency exchange losses primarily include losses from changes in currency exchange rates between the transaction date and the date of payment of receivables or payables, as well as from the valuation at the exchange rate on the reporting date. Exchange rate gains resulting from these items are recognized under other operating income. From the net viewpoint, foreign currency gains and losses led to a net gain of 140 thousand euros (prior year 716 thousand euros).

The expenses arising from the increase of bad debt allowances for receivables, as well as the recording of bad debts have fallen significantly compared to the previous year. This is primarily attributable to an improvement in receivables management.

The losses arising from disposals of intangible assets, property and equipment and investment property include disposals in the sum of 1,139 thousand euros of unused and fundamentally revised components of the JOE project (JENOPTIK One ERP).

The impairments of intangible assets, property, plant and equipment and investment property primarily included an impairment to the rented part of a mixed-use property. More information on these items can be found in section "Property, Plant and Equipment" from page 151 on.

The expenses for group projects relate essentially to the JOE project, as well as various special projects in the areas of IT, accounting and taxes as well as controlling.

In the prior year, the item reorganization and restructuring expenses chiefly contained additions to provisions for severance payments in connection with the restructuring of the laser business activities of JENOPTIK Laser GmbH in Jena.

The addition to and reversal of provisions include additions in the sum of 2,141 thousand euros (prior year 251 thousand euros) as well as reversals in the sum of 2,698 thousand euros (prior year 2,915 thousand euros). More information on these items can be found in section "Other provisions" from page 163 on.

The item Miscellaneous mainly included expenses arising from passing on charges, expenses for running works canteens, legal and consulting fees, as well as numerous individual items.

4.9 Investment income

in thousand euro	2016	2015
Impairments and impairment reversals of financial investments	-1,172	1,295
Earnings from investments	1,475	263
Total	303	1,558

The investment income in 2016 fell by 1,255 thousand euros to 303 thousand euros.

Impairment losses on financial investments in the fiscal year amounted to 1,832 thousand euros and mainly comprised impairment losses on available-for-sale financial assets and loans. Impairment reversals were recorded on financial investments in the sum of 660 thousand euros and relate to a loan as well as an investment which was sold in the fiscal year.

Earnings from investments include dividends from investment companies in the sum of 1,705 thousand euros (prior year 356 thousand euros) and losses in the sum of minus 230 thousand euros (prior year minus 93 thousand euros) from profit transfer agreements with non-consolidated entities.

4.10 Financial Income and Financial Expenses

in thousand euros	2016	2015
Income from measuring financial instruments in foreign currencies	3,980	4,320
Income from financial asset securities and loans	39	292
Income from financial instrument remeasurements	0	608
Other interest and similar income	384	250
Total financial income	4,403	5,469
Expenses for measuring financial instruments in foreign currencies	4,392	2,501
Interest expenses for debenture loans	1,979	2,364
Interest expenses for syndicated loan	842	817
Net interest expenses for pension provisions	689	486
Expenses from financial instrument remeasurement	643	0
Expenses for restructuring debenture loans	0	1,370
Expenses for recycling derivatives on interest rate hedges	0	604
Other interest and similar expenses	1,346	2,676
Total financial expenses	9,892	10,819
Total	-5,488	-5,350

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The net balance of financial income and financial expenses reduced by 139 thousand euros or 2.6 percent to minus 5,488 thousand euros (prior year minus 5,350 thousand euros).

Income from the valuation of financial transactions in the sum of 3,980 thousand euros (prior year 4,320 thousand euros) and corresponding expenses in the sum of 4,392 thousand euros (prior year 2,501 thousand euros) led to a net loss in the fiscal year 2016 of 412 thousand euros (prior year net gain of 1,819 thousand euros). This result is derived from the foreign currency exchange gains and losses arising from the valuation of financial investments which are issued in foreign currencies, less the valuation of the respective derivatives.

Interest derivatives were concluded in order to hedge risks of interest rates changing. The changes in market value are recorded through profit or loss in the financial result and included in the item other interest and similar income.

The item other interest and similar income also primarily includes interest income from bank deposits.

Costs arising from the remeasurement of the fair value of financial instruments include the valuation of the put option agreed as part of the acquisition of the Vysionics Group.

The item other interest and similar expenses includes guaranty and bank charges as well as interest expenses from accrued interest of non-current liabilities and other provisions.

4.11 Income Taxes

Income taxes are shown as the current income tax (paid or owing) in the respective countries as well as deferred tax assets and deferred tax liabilities. The calculation of the current income taxes of the Jenoptik Group was performed by using the tax rates valid at the balance sheet date.

The calculation of the deferred taxes for domestic entities was based on a tax rate of 29.9 percent (prior year 29.9 percent). In addition to the corporation tax at 15.0 percent (prior year 15.0 percent) and the solidarity surcharge of 5.5 percent of the corporation tax charge (prior year 5.5 percent), an effective

business tax rate of 14.1 percent (prior year 14.1 percent) is taken into account. The calculation of deferred taxes for foreign entities was based on the tax rates applicable in the respective country.

Deferred taxes are recognized as either tax income or tax expenses in the statement of comprehensive income, unless these directly relate to items outside of profit or loss in other comprehensive income. In this event, deferred taxes are also recognized outside of profit or loss in other comprehensive income.

Tax expenses were classified according to origin as follows:

in thousand euros	2016	2015
Current income taxes		
Domestic	4,952	3,043
Foreign	4,164	2,741
Total	9,116	5,784
Deferred taxes		
Domestic	-4,150	-1,244
Foreign	2,320	2,976
Total	-1,830	1,732
Total income tax	7,286	7,516

The item current income taxes include an expense in the sum of 174 thousand euros (prior year 0) for discontinued operations.

The item current income taxes include an income in the sum of 367 thousand euros (prior year expense of 183 thousand euros) for current taxes from earlier business periods. Deferred tax income (prior year expense) includes income relating to a different period in the sum of 867 thousand euros (prior year income 782 thousand euros).

Deferred tax income (prior year expense) includes an expense in the sum of 1,440 thousand euros (prior year expense 481 thousand euros) resulting from the development of timing differences.

As at the balance sheet date, the Jenoptik Group had the following unused tax losses carried forward at its disposal for offsetting against future profits:

in thousand euros	31/12/2016	31/12/2015
Corporate income tax	341,185	363,935
Trade tax	500,829	528,970

Of which the following is subject to time limit on losses carried forward:

in thousand euros	31/12/2016	31/12/2015
1 year or less	457	198
2 years to 5 years	2,970	3,125
6 years to 9 years	2,900	2,753
More than 9 years	741	657
Total of losses carried forward subject to time limit	7,068	6,733

The reduction in tax losses carried forward mainly resulted from their being used in the reporting period. Taking all currently known positive and negative factors influencing future tax results of the Jenoptik Group into consideration, the use of a corporation tax loss carried forward of 168,488 thousand euros (prior year 154,059 thousand euros) and the use of a trade tax loss carried forward of 169,884 thousand euros (prior year 159,405 thousand euros) are anticipated.

A deferred tax claim of 51,101 thousand euros (prior year 47,145 thousand euros) is recognized for unused tax losses carried forward. Of which 23,911 thousand euros (prior year 22,436 thousand euros) is attributable to tax losses carried forward for trade tax.

For the remaining losses carried forward, no deferred tax assets are recognized for corporation tax purposes in the sum of 172,697 thousand euros (prior year 209,876 thousand euros) and for trade tax purposes in the sum of 330,945 thousand euros (prior year 369,565 thousand euros).

In addition, no deferred tax assets are shown for allowable timing differences in the sum of 9,396 thousand euros (prior year 14,437 thousand euros) as these will probably not be realized in the underlying reporting period.

The following recognized deferred tax assets and deferred tax liabilities are attributed to recognition and valuation differences in the individual items of the statement of financial position and to tax losses carried forward:

in thousand euros	Deferred tax assets		Deferred tax liabilities	
	31/12/2016	31/12/2015	31/12/2016	31/12/2015
Intangible assets	1,122	1,190	1,962	2,687
Property, plant and equipment	1,791	1,796	1,776	2,279
Financial assets	687	2,391	48	1,553
Inventories	9,278	8,006	28	57
Receivables and other assets	1,841	4,378	2,814	2,020
Provisions	12,558	12,423	320	449
Liabilities	3,281	3,144	1,118	1,540
Tax losses carried forward and tax refunds	51,641	48,873	0	0
Gross value	82,199	82,201	8,066	10,585
(thereof non-current)	(59,860)	(59,715)	(5,141)	(7,857)
Offset	-7,976	-8,599	-7,976	-8,599
Value presented on the statement of financial position	74,223	73,602	90	1,986

The net balance of the asset surplus in deferred tax assets increased by 2,517 thousand euros. Taking into consideration the deferred taxes (409 thousand euros) recognized outside of profit or loss when offset in the reporting year, as well as the foreign currency exchange conversions (278 thousand euros), the result is a deferred tax income of 1,830 thousand euros shown in the statement of comprehensive income.

Temporary differences in the amount of 75,577 thousand euros (prior year 79,617 thousand euros) are associated with investments in subsidiaries for which no deferred tax liabilities are recognized.

The following table shows the tax reconciliation between the tax expense expected in the respective fiscal year and the actual tax expense recognized. To determine the anticipated tax expense, in the fiscal year 2016 the applicable group tax rate of 29.9 percent (prior year 29.9 percent) is multiplied by the earnings before tax.

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in thousand euros	2016	2015
Earnings before tax – continuing operations	61,024	57,256
Earnings before tax – discontinued operations	3,719	175
Earnings before tax	64,743	57,431
Corporate income tax rate for the Jenoptik Group in %	29.9	29.9
Expected tax expense	19,358	17,172
Following tax effects resulted in the difference between the actual and the expected tax expense:		
Non-deductible expenses, tax-free income and permanent deviations	906	-323
Changes in impaired deferred taxes and unrecognized deferred taxes	-12,772	-9,081
Effects resulting from tax rate differences	992	175
Effects of tax rate changes	-66	20
Taxes for prior years	-1,234	-599
Other tax effects	102	152
Total adjustments	-12,072	-9,656
Actual tax expense	7,286	7,516
Actual tax expense – continuing operations	7,112	7,516
Actual tax expense – discontinued operations	174	0
Actual tax expense	7,286	7,516

4.12 Earnings of Non-controlling Interests

The result of the non-controlling interests in the consolidated result is 53 thousand euros (prior year 345 thousand euros) and relates to the non-controlling interests of JENOPTIK Korea Corporation Ltd., JENOPTIK Japan Co. Ltd. and the Vysionics Group.

More information on the entities with non-controlling interests is available in section 2.1 “The Group of Entities Consolidated” from page 130 on.

4.13 Earnings attributable to shareholders

in thousand euro	2016	2015
Earnings attributable to shareholders – continuing operations	53,858	49,395
Earnings attributable to shareholders – discontinued operations	3,545	175
Earnings attributable to shareholders – Group	57,403	49,570

4.14 Earnings from Discontinued Operations

Individual, economic subjects which JENOPTIK AG had regarding the sale of M+W Zander Holding AG in 2005 have now

been concluded. A final agreement on purchase price-related facts was reached in the fiscal year 2016, leading to an overall claim for payment on the part of Jenoptik. The resulting income including interest in the sum of 3,444 thousand euros is shown separately in discontinued operations. Income taxes of minus 174 thousand euros were incurred in connection with this transaction.

The cash flow was affected in the sum of 2,770 thousand euros (prior year 175 thousand euros).

4.15 Earnings per Share

Earnings per share corresponds to the earnings attributable to shareholders divided by the weighted average of outstanding shares of 57,238,115 units (prior year 57,238,115 units).

	2016	2015
Earnings per share in euros – continuing operations	0.94	0.86
Earnings per share in euros – discontinued operations	0.06	0.00
Earnings per share in euros – Group (undiluted = diluted)	1.00	0.87

5 Disclosures on Statement of Financial Position

5.1 Intangible Assets

in thousand euros	Development costs from internal development projects	Acquired patents, rademarks, software licenses, customer relationships	Internally generated patents	Goodwill	Other intangible assets	Total
Acquisition or production costs	14,213	70,333	1,578	109,911	1,268	197,302
Balance at 1/1/2016	(16,445)	(66,654)	(1,573)	(106,833)	(1,571)	(193,077)
Foreign currency exchange effects	-18 (19)	-1,024 (906)	0 (0)	-5,713 (2,804)	0 (2)	-6,755 (3,730)
Changes in the group of entities consolidated	0 (0)	0 (-39)	0 (0)	0 (273)	0 (0)	0 (234)
Additions	0 (365)	1,728 (3,135)	242 (230)	0 (0)	1,025 (570)	2,994 (4,300)
Disposals	0 (2,616)	4,021 (765)	150 (230)	0 (0)	167 (455)	4,338 (4,066)
Reclassifications (+/-)	0 (0)	393 (442)	18 (5)	0 (0)	-327 (-420)	83 (27)
Acquisition or production costs	14,194	67,408	1,688	104,197	1,800	189,288
Balance at 31/12/2016	(14,213)	(70,333)	(1,578)	(109,911)	(1,268)	(197,302)
Amortization and impairments	13,058	50,921	693	9,894	0	74,566
Balance at 1/1/2016	(13,845)	(45,151)	(764)	(9,892)	(162)	(69,814)
Foreign currency exchange effects	-19 (13)	-253 (377)	0 (0)	1 (2)	0 (0)	-271 (392)
Changes in the group of entities consolidated	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Additions	423 (1,152)	5,979 (6,151)	135 (135)	0 (0)	0 (0)	6,537 (7,438)
Impairments	0 (253)	9 (0)	0 (0)	0 (0)	0 (93)	9 (346)
Disposals	0 (2,206)	2,925 (759)	50 (206)	0 (0)	0 (255)	2,975 (3,425)
Reclassification (+/-)	0 (0)	-70 (0)	0 (0)	0 (0)	0 (0)	-69 (0)
Amortization and impairments	13,462	53,801	778	9,895	0	77,936
Balance at 31/12/2016	(13,058)	(50,921)	(693)	(9,894)	(0)	(74,566)
Net carrying amount at 31/12/2016	732	13,608	909	94,303	1,800	111,352
	(1,155)	(19,412)	(885)	(100,017)	(1,268)	(122,737)

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In the prior year, under IFRS 3 there was a change in the valuations of the intangible assets identified during the acquisition of JENOPTIK Holdings UK Ltd. (formerly: Vysionics Ltd.) as well as the goodwill resulting from the finalization of the initial consolidation. These changes are shown separately as changes in the group of entities consolidated.

For more detailed information on the disposal of patents, trademarks, software and customer relationships we refer to the explanations in Note 4.8 "Other operating expenses" on page 143.

As in the prior year, intangible assets were not subject to any disposal restrictions. The order commitments for intangible assets total 242 thousand euros (prior year 390 thousand euros).

Additions to other intangible assets include capitalized expenses for internally generated assets in the sum of 106 thousand euros (prior year 805 thousand euros), of which 78 thousand euros is attributable to development costs arising from internal development projects and 28 thousand euros to internally generated patents. On completion of the internal development project respectively granting of the patent a transfer into the corresponding group of intangible assets is recorded.

Other than goodwill, there are no intangible assets with an indefinite useful life.

A new group structure came into effect on January 1, 2016, wherein business activities were realigned and focused more on growth markets. In the course of this reorganization, the cash-generating units benefiting from the synergies embodied by goodwill were restructured. This led to goodwill being reallocated to the cash-generating units existing since 2016. The following disclosures for prior year were adjusted accordingly.

As at December 31, 2016 goodwill amounted to 94,303 thousand euros (prior year 100,017 thousand euros). The change in the carrying amounts in the sum of minus 5,714 thousand euros is attributable exclusively to currency effects (prior year 2,802 thousand euros). The figure in the prior year also included a change in the goodwill in the sum of 273 thousand euros arising from the finalization of the initial consolidation of the Vysionics Group.

As in the prior year, no impairments were required for goodwill in the 2016 fiscal year.

The following table summarizes the goodwill for each cash-generating unit according to segment:

in thousand euros	31/12/2016	31/12/2015
Optics & Life Science		
Optical Systems	1,662	1,609
Healthcare & Industry	41,284	41,262
Mobility		
Automotive	4,597	4,564
Traffic Solutions	38,839	44,662
Defense & Civil Systems	7,921	7,920
Total	94,303	100,017

The following table represents the allocation of goodwill to the segments by percentage:

in %	31/12/2016	31/12/2015
Optics & Life Science	46	43
Mobility	46	49
Defense & Civil Systems	8	8
Total	100	100

The impairment test for goodwill is performed at the level of the cash-generating units benefiting from the synergies of the respective business combination and representing the lowest level at which goodwill is monitored for internal company management. If the carrying amounts of these cash-generating units exceed their recoverable amounts, the goodwill allocated is correspondingly reduced. The determining factor for the impairment test is the recoverable amount, i.e. the higher of the two amounts derived from the fair value less costs to sell or value in use.

Jenoptik calculates the recoverable amount as value in use on the basis of a discounted cash flow method. The basis for this is the five-year corporate plan approved by the Management and presented to the Supervisory Board. This takes past experience into consideration and is based on the best estimates of management on future development. The cash flows in the detailed planning phase are planned on the basis of differential growth rates. These take into account the development and dynamics of the relevant sectors and target markets. For the Healthcare & Industry (HCI) section as part of the

Optics & Life Science segment a sustainable revenue growth parallel with the segment is anticipated. After the restructuring in an area of HCI in the past fiscal year it is as well reckoned with an increase in profitability mainly due to more efficient processes and increased usage of synergies. In the section Traffic Solutions (TS) as part of the Mobility segment also a long-term revenue increase is assumed. Profitability will rise by further improvements in structures and processes, an increase in local value added and growth of the service business (TSP). Besides the planned revenue increase the segments also anticipate a lasting positive development of EBIT in the planning period. In addition, the planning is carried out group-wide under the assumption of a continuing process of internationalization and regionalization, with an increase in the share of revenue and value added in the growth regions of the Americas and Asia/Pacific. In order to determine the future development of working capital, differentiated ranges are applied. At the same time, the earnings for the respective planning year are adjusted for the calculation of free cash flow by non-cash income and expenses such depreciation and amortization. Currency effects are negligible overall.

A perpetual annuity is assumed, the amount of which is individually derived by management from the fifth year of the planning time frame for each cash-generating unit. The perpetual annuity includes a growth component in the form of a deduction on the capitalization interest rate of between 0.9 and 1.1 percentage point (prior year 0.9 to 1.1 percentage point). Non-recurring effects in the last year of the plan are eliminated prior to calculating the perpetual annuity.

The weighted average cost of capital after taxes necessary for impairment testing is determined by using the capital asset pricing model for determining the cost of equity. The components for calculating the cost of equity are a risk-free interest rate, the market risk premium, a beta factor customary in our industry determined from peer groups and the average country risk of each cash-generating unit. Borrowing costs were determined by including a risk-free interest rate, the spread custom-

ary in our industry and the standard average tax rate. The weighted costs of equity and borrowing costs resulted from applying the capital structure customary in our industry.

Impairment testing was conducted assuming a weighted average cost of capital after taxes at a rate between 5.81 and 8.25 percent (prior year 5.51 to 7.44 percent). This corresponded to the weighted average cost of capital before taxes at a rate between 7.54 and 11.21 percent (prior year 7.43 to 11.24 percent).

The assumptions used to determine the values in use of the cash-generating unit are shown in the following table:

	Growth component in perpetual annuity	Weighted average cost of capital after taxes	Weighted average cost of capital before taxes
Optical Systems	1.00 (1.00)	7.41 (7.44)	10.67 (11.24)
Healthcare & Industry	1.10 (1.10)	8.25 (7.43)	11.21 (9.83)
Automotive	1.00 (0.90)	5.82 (5.80)	8.12 (8.11)
Traffic Solutions	1.00 (0.90)	5.81 (5.84)	7.54 (7.43)
Defense & Civil Systems	0.90 (0.90)	6.00 (5.51)	8.32 (7.71)

Prior year figures are in parentheses.

Sensitivity analyses were performed for all cash-generating units to which goodwill was allocated as at December 31, 2016. A reduction in the cash flows or an increase in the weighted cost of capital within the range considered by the management as likely would not cause the recoverable amount being less than the carrying amount of the cash-generating unit.

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5.2 Property, Plant and Equipment

in thousand euros	Land and buildings	Technical equipment and machinery	Other equipment, operating and office equipment	Assets under construction	Total
Acquisition or production costs	151,279	174,859	99,309	3,962	429,408
Balance at 1/1/2016	(141,000)	(167,802)	(94,251)	(8,676)	(411,729)
Foreign currency exchange effects	302	-640	154	328	145
	(1,227)	(2,764)	(454)	(79)	(4,524)
Additions	3,008	4,870	5,492	11,068	24,438
	(947)	(8,860)	(7,295)	(3,265)	(20,366)
Disposals	474	8,177	7,534	37	16,222
	(471)	(10,589)	(3,109)	(32)	(14,200)
Reclassifications (+/-)	835	1,729	751	-3,051	264
	(8,576)	(6,022)	(418)	(-8,025)	(6,991)
Acquisition or production costs	154,950	172,641	98,171	12,271	438,032
Balance at 31/12/2016	(151,279)	(174,859)	(99,309)	(3,962)	(429,408)
Depreciation and impairments	65,893	131,965	75,891	0	273,749
Balance at 1/1/2016	(58,785)	(131,149)	(71,047)	(0)	(260,982)
Foreign currency exchange effects	216	-410	134	0	-60
	(613)	(2,131)	(350)	(0)	(3,094)
Additions	4,167	9,197	7,608	0	20,972
	(4,232)	(9,332)	(7,431)	(0)	(20,995)
Impairments	1,145	46	37	61	1,289
	(0)	(190)	(0)	(0)	(190)
Reversal of impairments	-439	0	0	0	-439
	(0)	(0)	(0)	(0)	(0)
Disposals	434	7,913	7,272	0	15,619
	(322)	(10,271)	(2,893)	(0)	(13,486)
Reclassifications (+/-)	5	26	228	0	259
	(2,586)	(-567)	(-44)	(0)	(1,975)
Depreciation and impairments	70,554	132,911	76,625	61	280,151
Balance at 31/12/2016	(65,893)	(131,965)	(75,891)	(0)	(273,749)
Net carrying amount	84,396	39,730	21,546	12,210	157,882
at 31/12/2016	(85,385)	(42,894)	(23,418)	(3,962)	(155,659)

Prior year figures are in parentheses.

Land and buildings of the Group in the amount of 84,396 thousand euros (prior year 85,385 thousand euros) included in particular the production and administration buildings in Jena, Altenstadt, Huntsville (USA) and Shanghai (China) as well as the land acquired in 2016 in Michigan (USA) valued at 2,180 thousand euros. As a result of the building being constructed on this site not yet having been completed, it will be reported in the sum of 5,550 thousand euros as an addition to assets under construction.

The reclassification from investment property in 2015 related to real estate in Jena and resulted in an increase of 5,143 thousand euros in land and buildings. No such reclassifications were carried out in 2016.

The impairment losses applied were recognized in other operating expenses. The impairment reversal was shown under other operating income.

The impairment losses covered in particular an impairment to a property used by third parties at the Jena Göschwitz site in the sum of 1,145 thousand euros. Due to imminent maintenance investments to clear an investment backlog in the rented part of the building, the carrying amount of the rented part of the building exceeds the value in use determined in accordance with the discounted cash flow method. The discounting of the anticipated cash flows was applied at a property interest rate specific to the individual property of 6.30 percent.

As the reasons for an impairment loss applied in prior years no longer exist, a recovery of impairment was applied in the sum of 439 thousand euros for a part of a property used by third parties in Jena.

The order commitments for property, plant and equipment total 1,958 thousand euros (prior year 4,019 thousand euros). In the 2016 fiscal year investment subsidies of 43 thousand euros were deducted from the acquisition costs of property, plant and equipment (prior year 0).

As at the balance sheet date, liens against property, plant and equipment totaled 111 thousand euros (prior year 151 thousand euros) and loans in the sum of 138 thousand euros were secured through registered charges against real property (prior year 176 thousand euros). There are no further disposal restrictions for property, plant and equipment.

5.3 Investment Property

in thousand euros	Investment Property
Acquisition or production costs	10,396
Balance at 1/1/2016	(29,954)
Additions	1
	(0)
Disposals	0
	(11,925)
Reclassifications	0
	(-7,633)
Acquisition or production costs	10,397
Balance at 31/12/2016	(10,396)
Depreciation	5,860
Balance at 1/1/2016	(13,596)
Additions	93
	(337)
Impairments	0
	(270)
Reversal of impairments	0
	(-1,986)
Disposals	0
	(3,766)
Reclassifications	0
	(-2,591)
Depreciation	5,953
Balance at 31/12/2016	(5,860)
Net carrying amount at 31/12/2016	4,444
	(4,536)

Prior year values are in parentheses.

The investment property as at December 31, 2016 primarily included a real estate fund containing largely commercial property in the Jena-Göschwitz Industrial Park. As at January 1, 2016, the real estate fund previously included in the consolidated financial statements in accordance with IFRS 10 has been merged to JENOPTIK AG.

The investment property was valued at the amortized acquisition and production costs in the sum of 4,444 thousand euros (prior year 4,536 thousand euros). No impairment losses were applied in the fiscal year just ended since the respective fair value determined of the property exceeds its net carrying amount.

The fair value was determined on the basis of a discounted cash flow method. In this context, the net rents without utilities as well as maintenance and other costs were estimated for the entire remaining useful lives of the properties and discounted over the remaining useful lives. Risk-adjusted interest rates were used as the discount rate. Fair value was allocated to level 3 of the hierarchy of fair values because of the use of non-observable parameters such as interest rates, rents without utilities as well as maintenance and ancillary expenses.

In total, the fair value of the item investment property was determined to be 5,894 thousand euros (prior year 5,821 thousand euros).

Rental income from investment property held at the end of the fiscal year 2016 amounted to 577 thousand euros (prior year 510 thousand euros).

In fiscal year 2016, the direct operating expenses for rented space in the real estate and movables accounted for at the end of the year totaled 218 thousand euros (prior year 236 thousand euros) and for non-rented space 5 thousand euros (prior year 133 thousand euros).

5.4 Leasing

Finance leases

The Group as lessee. Finance leases included other equipment, operating and office equipment. This related to several lease-purchase agreements for vehicles based on an average borrowing rate of interest of 4.9 percent.

The assets based on the finance lease agreements are included in the recognized property, plant and equipment in the sum of 83 thousand euros (prior year 119 thousand euros). As at the balance sheet date, the original acquisition and production costs of the assets in the item finance leases amounted to 207 thousand euros (prior year 257 thousand euros).

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Of the lease payments in the sum of 39 thousand euros (prior year 48 thousand euros), 5 thousand euros (prior year 6 thousand euros) were recognized through profit or loss in the fiscal year 2016.

Future lease payments are shown in the following table:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Minimum lease payments	44 (53)	47 (75)	0 (0)	91 (128)
Interest portion included in payments	3 (5)	2 (5)	0 (0)	5 (9)
Present value	41 (48)	45 (70)	0 (0)	86 (118)

Prior year values are in parentheses.

The Group as lessor. Following the amicably agreed premature termination of contracts for the supply of traffic control devices to a customer which had been categorized as a finance lease, at the beginning of the 2016 fiscal year a group company in the Mobility segment concluded similar follow-up contracts which were also categorized as a finance lease. The average total lease period for these contracts is 30 months.

Of the agreed minimum lease payments received in the fiscal year 2016 in the sum of 425 thousand euros (prior year 123 thousand euros), 21 thousand euros (prior year 8 thousand euros) were recognized through profit or loss.

The outstanding minimum lease payments as at December 31, 2016 are shown as follows:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Minimum lease payments	510 (0)	340 (0)	0 (0)	850 (0)
Interest portion included in payments	0 (0)	5 (0)	0 (0)	5 (0)
Present value	510 (0)	335 (0)	0 (0)	845 (0)

Prior year values are in parentheses.

The unrealized finance lease income is 5 thousand euros (prior year 0).

Operating Leases

The Group as lessee. Operating leases mainly include lease agreements for commercial space as well as for office and data processing equipment.

The payments arising from leases are recognized through profit or loss in the sum of 8,608 thousand euros (prior year 8,138 thousand euros). As in the prior year, there were no contingent lease payments included.

As at the balance sheet date, there are open obligations from non-terminable operating leases with the following maturities:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Minimum lease payments	7,818 (8,987)	17,362 (21,071)	16,998 (22,573)	42,179 (52,631)

Prior year values are in parentheses.

The details for the prior year included future payments for ancillary services in the lease in the sum of 13,909 thousand euros which were no longer taken into account in the fiscal year 2016.

The Group as lessor. Within the framework of operating leases, the Group leases commercial property. Rental income from the leasing of property, plant and equipment and from investment property in the reporting period amounted to 1,961 thousand euros (prior year 2,823 thousand euros).

At the balance sheet date the following minimum lease payments had been contractually agreed with tenants:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Minimum lease payments	1,645 (1,601)	2,523 (1,907)	48 (315)	4,216 (3,823)

Prior year values are in parentheses.

Lease agreements without a termination date were recorded in rental income only up until the date of the earliest possible termination. The probability of leasing the space further or of granting extensions on the lease agreements was not included in the calculation.

5.5 Financial Investments

in thousand euros	31/12/2016	31/12/2015
Shares in unconsolidated associates	2,222	2,877
Investment companies	14,376	14,129
Loans to unconsolidated associates and investment companies	1,294	1,072
Long-term securities	1,142	2,167
Other loans	0	1,500
Total	19,034	21,745

In the fiscal year 2016 the shares in non-consolidated, associated companies increased as a result of the new formation of JENOPTIK Saudi Arabia LLC by 111 thousand euros. This was offset by the reduction in the share carrying amount in another company by an impairment applied in the sum of 754 thousand euros to the recoverable amount which corresponds to the value in use determined in accordance with the discounted cash flow method.

Investment companies reduced by 161 thousand euros in 2016 as the result of the sale of a minority investment holding in the Optics & Life Science segment. Shares in a property company were revalued by 256 thousand euros outside of profit or loss. Further changes resulted from foreign currency exchange effects in the conversion of the foreign currencies used in preparing the separate financial statements of the entities consolidated.

The increase in loans to non-consolidated associated companies and investment companies is attributable, among other things, to a value recovery in the sum of 477 thousand euros. This was countered by the write-down of a loan in the sum of 225 thousand euros.

The reduction in non-current securities is mainly the result of a fall in the prices of listed securities in the "available-for-sale financial assets" category in the sum of 1,086 thousand euros. Due to the sustainability of the decline in prices, 485 thousand euros was recorded as an impairment and consequently through profit or loss.

Other loans were repaid in full by an entity in the fiscal year 2016.

The table below reflects the changes in the impairments to financial investments:

in thousand euros	2016	2015
Impairment at 1/1	22,864	48,252
Additions	2,438	1,046
Utilization	9,575	24,927
Reversals/derecognition	660	1,507
Foreign currency exchange effects	2	0
Impairment at 31/12	15,069	22,864

The balance of impairment losses and impairment reversals applied to financial investments in previous years amounted to minus 1,778 thousand euros in the fiscal year (prior year minus 461 thousand euros).

In addition to the facts already presented above, the development of impairments in 2016 were affected primarily by the deletion of an entity and the impairment losses used in this context in the total sum of 8,923 thousand euros.

5.6 Non-current Trade Receivables

Receivable in the amount of 1,923 thousand euros (prior year 3,100 thousand euros) arising from contracts with customers with a due date of more than one year, are shown under non-current assets due to their maturity and special nature of the business.

5.7 Other Non-current Financial Assets

Other non-current financial assets include the following:

in thousand euros	31/12/2016	31/12/2015
Derivatives	1,591	1
Receivables from lease agreements	335	0
Total	1,926	1

The aggregated item derivative financial instruments is explained in greater detail under Note 8.2 from page 171 on.

For details on receivables arising from lease contracts we refer to Note 5.4 from page 153 on.

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5.8 Other Non-current Non-financial Assets

Other non-current assets amounting to 1,108 thousand euros (prior year 1,447 thousand euros) essentially comprise the deferred charges for the syndicated loan in the amount of 649 thousand euros (prior year 936 thousand euros).

5.9 Deferred Tax Assets

The development of deferred tax assets shown as an item in the statement of financial position is shown under Note 4.11 from page 145 on.

5.10 Inventories

in thousand euros	31/12/2016	31/12/2015
Raw materials, consumables and supplies	56,186	60,122
Unfinished goods and work in progress	84,400	89,007
Finished goods and merchandise	18,738	18,004
Total	159,324	167,132

The carrying amount of inventories corresponds to the lower of net realizable value and acquisition or production costs.

As at the end of the fiscal year 2016, accumulated impairment losses in the sum of 45,508 thousand euros (prior year 44,055 thousand euros) were taken into account on the net realizable value. The carrying amount of the inventories which were recognized at the net realizable value was 97,437 thousand euros.

In the fiscal year 2016 impairments were recognized in the amount of 5,295 thousand euros (prior year 7,164 thousand euros). Impairment losses were reversed in the sum of 3,951 thousand euros (prior year 1,029 thousand euros) as the reason for the impairment loss applied in prior years no longer existed.

The consumption of inventories affected expenses in the fiscal year in the sum of 218,510 thousand euros (prior year 216,588 thousand euros), the table below shows the distribution.

in thousand euro	31/12/2016	31/12/2015
Cost of sales	215,992	214,417
Research & development expenses	1,735	1,428
Selling expenses	479	470
Administrative expenses	304	273
Total	218,510	216,588

At the reporting dates there were no restrictions on the availability of inventories.

5.11 Current Trade Receivables

in thousand euros	31/12/2016	31/12/2015
Trade receivables from third parties	124,608	120,009
Receivables from construction contracts	4,419	1,359
Trade receivables from unconsolidated associates and joint operations	562	1,843
Trade receivables from entities in which investments are held	232	405
Total	129,821	123,616

The fair values of trade receivables correspond to their carrying amounts.

With regard to receivables from construction contracts less progress payments, customer-specific construction contracts are recognized as assets if the construction costs incurred, including shares in profits, exceed the amount received from advance payments and partial billings. In the fiscal year 2016, progress payments in the sum of 2,486 thousand euros (prior year 1,047 thousand euros) were offset against receivables arising from construction contracts.

Trade receivables comprise the following:

in thousand euros	31/12/2016	31/12/2015
Gross amount of trade receivables from third parties	130,243	129,506
Gross amount of receivables from construction contracts	4,419	1,359
Gross amount of trade receivables from unconsolidated associates and joint operations	1,942	3,616
Gross amount of trade receivables from entities in which investments are held	302	1,108
Gross amount of trade receivables (total)	136,906	135,590
Cumulative impairments	-7,084	-11,973
Carrying amount of trade receivables at 31/12	129,821	123,616

Default risks are taken into account through impairments. The following table shows the changes in bad debt allowances on outstanding trade receivables:

in thousand euros	2016	2015
Bad debt allowances at 1/1	11,973	13,542
Additions	2,289	4,399
Consumption	445	694
Reversals/derecognition	6,785	5,010
Foreign currency exchange effects	53	-264
Bad debt allowances at 31/12	7,084	11,973

The gross carrying amounts of trade receivables from third parties totaled 130,243 thousand euros (prior year 129,506 thousand euros). Thereof receivables amounting to 2,609 thousand euros (prior year 6,465 thousand euros) are subject to individual impairment. The age structure of unimpaired trade receivables from third parties is as follows:

in thousand euros	2016	2015
Not due	101,395	89,443
Overdue	26,238	33,598
Less than 60 days	18,321	22,472
Between 60 and 120 days	2,021	3,963
Between 120 and 240 days	1,270	2,559
Between 240 and 360 days	695	802
More than 360 days	3,931	3,802
Total	127,634	123,041

There was a decrease in overdue but unimpaired receivables compared to the prior year. This was achieved primarily to the introduction of shorter dunning intervals and systems-based credit management system. The effect of these measures will continue to be felt in subsequent years. Overdue but unimpaired receivables were owed primarily by public contractors, companies in the automobile industry as well as their suppliers. The default risk as at the balance sheet date for receivables not subject to individual impairment were taken into account through portfolio-based impairments in the sum of 3,491 thousand euros (prior year 4,053 thousand euros).

Non-impaired receivables are covered by collateral in the form of bank guarantees in the sum of 4,251 thousand euros (prior year 2,130 thousand euros).

5.12 Other Current Financial Assets

in thousand euros	31/12/2016	31/12/2015
Receivables from Mitarbeiter-treuhand e.V.	1,752	1,615
Receivables from lease agreements	510	0
Other receivables from unconsolidated associates	102	4
Derivatives	51	342
Miscellaneous current financial assets	8	30
Total	2,422	1,991

As in the prior year, there were no restrictions on disposals of other current financial assets.

For details on receivables arising from lease contracts we refer to Note 5.4 from page 152 on.

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The aggregated item derivative financial instruments is explained in greater detail under Note 8.2 from page 171 on.

Default risks are taken into account through impairments. Other current financial assets comprise the following:

in thousand euros	31/12/2016	31/12/2015
Gross amount of other current financial assets	3,927	6,539
Cumulative impairments	-1,504	-4,549
Carrying amount of other current financial assets at 31/12	2,422	1,991

The following table shows the changes in bad debt allowances on other current financial assets:

in thousand euros	2016	2015
Bad debt allowances at 1/1	4,549	3,917
Additions	0	954
Consumption	2,801	322
Reversals/derecognition	243	0
Bad debt allowances at 31/12	1,504	4,549

The claim of bad debt allowance mainly results from the final agreement on purchase price-related facts in connection with discontinued operations.

5.13 Other Current Non-financial Assets

in thousand euros	31/12/2016	31/12/2015
Accruals	3,348	3,154
Receivables from other taxes	1,527	1,779
Receivables from income taxes	513	247
Receivables from subsidies and grants	301	1,811
Receivables from compensation claims	0	1,174
Miscellaneous current non-financial assets	1,402	1,194
Total	7,091	9,359

As in the prior year, there were no restrictions on disposals of other current non-financial assets.

5.14 Current Financial Investments

in thousand euros	31/12/2016	31/12/2015
Fair value	50,540	418

In addition to a cash investment in the sum of 49,746 thousand euros, current financial investments essentially include shares and money market funds.

For financial investments valued at amortized acquisition costs, it is assumed that the fair values correspond to the carrying amounts.

For further details on the financial instruments we refer to Note 8.2 from page 171 on.

5.15 Cash and Cash Equivalents

in thousand euros	31/12/2016	31/12/2015
Checks, cash on hand, bank balances and demand deposits with a maturity of less than 3 months	91,961	83,824

For further details on the development of cash and cash equivalents we refer to Note Disclosures on Cash Flow from page 167 on.

5.16 Equity

The development of the equity of Jenoptik is shown in the consolidated statement of changes in equity.

Share Capital

Share capital amounted to 148,819 thousand euros and was divided into 57,238,115 no-par value shares.

At the beginning of July 2011 Thüringer Industriebeteiligungs GmbH & Co. KG, Erfurt, Thüringer Industriebeteiligungsgeschäftsführungs GmbH, Erfurt, bm-t beteiligungsmanagement thüringen GmbH, Erfurt, Stiftung für Unternehmensbeteiligungen und

-förderungen in der gewerblichen Wirtschaft Thüringens (StUWT), Erfurt, Thüringer Aufbaubank Erfurt and the Free State of Thüringia, Erfurt, disclosed that they had exceeded the thresholds of 3, 5 and 10 percent of the voting rights in JENOPTIK AG on June 30, 2011 and that they had held 11.00 percent of the voting rights (6,296,193 voting rights) on that day. Thüringer Industriebeteiligungs GmbH & Co. KG acquired the voting rights from ECE Industriebeteiligungen GmbH.

On August 21, 2014, Deutsche Asset & Wealth Management Investment GmbH, Frankfurt, Germany, notified us that it had exceeded the threshold of 5 percent of the voting rights in JENOPTIK AG on August 19, 2014. Accordingly, Deutsche Asset & Wealth Management Investment GmbH directly held 5.20 percent of the voting rights (2,978,179 voting rights) in JENOPTIK AG on that day. Thereof 5.06 percent of the voting rights (2,898,579 voting rights) were held directly by Deutsche Asset & Wealth Management Investment GmbH and 0.14 percent of the voting rights (79,600 voting rights) were attributed to them in accordance with § 22 (1) (1) No. 6 of the WpHG.

Templeton Investment Counsel, LLC, Wilmington, Delaware, USA, notified us on February 17, 2016 that it had exceeded the threshold of 5 percent of the voting rights in JENOPTIK AG, on February 12, 2016. Accordingly, on that day Templeton Investment Counsel, LLC held 4.69 percent of the voting rights (2,682,522 voting rights) as attributed to it in accordance with § 22 (1) No. 6 of the WpHG.

The Ministry of Finance, Oslo, Norway notified us on November 4, 2016 on behalf of the Norwegian state that it had exceeded the threshold of 3 percent of the voting rights in JENOPTIK AG on November 2, 2016. Accordingly, on that day the Ministry of Finance held 3.06 percent of the voting rights (1,752,411 voting rights) as attributed to it in accordance with § 22 (1) No. 6 of the WpHG. The voting rights are held directly by the Norges Bank, Oslo, Norway.

On May 28, 2015, Dimensional Fund Advisors LP, Austin, Texas, USA, notified us it had exceeded the threshold of 3 percent of the voting rights in JENOPTIK AG on May 22, 2015. Accordingly, Dimensional Fund Advisors LP directly held 3.01 percent of the voting rights (1,721,289 voting rights) in JENOPTIK AG on that day. Thereof 2.89 percent of the voting rights (1,654,185 voting rights) were attributable to Dimensional Fund Advisors LP in accordance with § 22 (1) (1) No. 6 of the WpHG and 0.13 percent of the voting rights (73,295 voting rights) were attributed in accordance with § 22 (1) (1) No. 6 of the WpHG in conjunction with § 22 (1) (2) of the WpHG. Thereof 6,191 voting rights were attributed to Dimensional Fund Advisors LP not only in accordance with § 22 (1) (1)

No. 6 of the WpHG, but also in accordance with § 22 (1) (1) No. 6 in conjunction with § 22 (1) (2) of the WpHG. Dimensional Holdings Inc., Austin, Texas, USA, indirectly holds shares through Dimensional Fund Advisors LP, to which 3.01 percent of the voting rights (1,721,289 shares) were attributed in accordance with § 22 (1) (1) No. 6 of the WpHG in association with § 22 (1) (2) of the WpHG.

ODDO Asset Management, Paris, France, informed us on January 25, 2016 that it had exceeded the threshold of 3 percent of the voting rights on January 22, 2016. Accordingly, ODDO Meriten Asset Management SA held 2.97 percent of the voting rights (1,699,036 voting rights) on that day. Thereof 2.17 percent of the voting rights (1,241,798 voting rights) were directly attributable to ODDO Asset Management in accordance with § 21 of the WpHG and 0.80 percent of the voting rights (457,238 voting rights) in accordance with § 22 of the WpHG.

The voting right notifications of recent years and the notifications of shareholders that had closed out their investments have been published on our Internet site www.jenoptik.com under Investors/Share/Voting rights announcements.

Authorized capital

An "Authorized Capital 2015" was created with the resolution passed by the Annual General Meeting on June 3, 2015 as follows: The Executive Board is authorized through June 2, 2020, with the consent of the Supervisory Board, to increase the nominal capital of the company by up to 44,000 thousand euros through one or multiple issues of new, no-par value bearer shares against cash and/or contribution in-kind ("Authorized Capital 2015"). The new shares can be taken on by one bank or multiple banks with the obligation to offer these to shareholders (indirect subscription rights). The Executive Board is authorized, with the approval of the Supervisory Board, to exclude the subscription rights of shareholders (a) for fractional amounts; b) in the event of capital increases against contribution in-kind in particular also as part of corporate mergers or for the acquisition of companies, parts of companies or investments in companies (including an increase in existing investment holdings) or other depositable assets related to such an acquisition project, including receivables from the company; (c) in the event of capital increases in return for cash contributions, to the extent that the portion of the nominal capital attributable to the new shares, taking into account resolutions at the Annual General Meeting and/or the utilization of other authorizations to exclude the subscription right in direct or corresponding application of § 186 (3) (4) of the Stock Corporation Act since the date on which such authorization becomes effective, neither exceeds a total of ten percent of the

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nominal capital as of the date of registration for such authorized capital, nor exceeds a total of ten percent of the nominal capital in existence as of the date of issuance of the new shares and the issue price of new shares is not significantly below the stock exchange price; (d) for the issuance to employees of the company and in companies in which Jenoptik has a majority participation.

All aforementioned authorizations to exclude subscription rights are limited to a total of 20 percent of the nominal capital available at the time this authorization became effective – or, if this value is lower, to 20 percent of the nominal capital at the time this authorization is exercised. This limit of 20 percent includes shares that (i) are sold for the purpose of servicing option and/or convertible bonds that were or could still be issued during the period of validity of the authorized capital to the exclusion of subscription rights or (ii) are sold by the company as treasury shares during the period of validity of the authorized capital to the exclusion of subscription rights.

Decisions on the details of the issuance of new shares, in particular their conditions and the content of rights of the new shares, are taken by the Executive Board, with the consent of the Supervisory Board.

Conditional Capital

The shareholder resolution passed at the Annual General Meeting (AGM) held on June 4, 2013, to contingently raise the share capital of the entity by up to 28,600 thousand euros through the issue of up to 11,000,000 new no-par value bearer shares (“Conditional Capital 2013”). The conditional capital increase will only be executed to the extent that the creditors/ owners of option certificates or conversion rights issued up to June 3, 2018 by the company or a domestic or foreign incorporated company in which the company has a direct or indirect majority stake, pursuant to the resolution of the Annual General Meeting dated June 4, 2013, exercise their options or conversion rights and/or the creditors of the issued convertible bonds obliged to exercise their conversion rights which were issued by the company or a domestic or foreign incorporated company in which the company has a direct or indirect majority stake, on the basis of the resolution of the Annual General Meeting on June 4, 2013, fulfill their conversion rights by June 3, 2018 and neither own shares are used nor is payment made in cash. The new shares are to participate in profits from the commencement of the fiscal year for which no Annual General Meeting resolution has yet been passed on appropriating net profits retained at the time of their issuance. The Executive Board is authorized to determine additional details on the issuance of the conditional capital increase. Because a mutual offset with other authorizations to exclude subscription rights was not yet

provided for in the resolution regarding authorization to issue option and/or convertible bonds at the 2013 Annual General Meeting, the Executive Board and the Supervisory Board undertook a voluntary commitment in 2015 to the effect that any use of the authorization to issue option and/or convertible bonds to the exclusion of subscription rights be subject to the 20-percent limit applicable to the authorized capital, such that, in the event of the issue of option and/or convertible bonds without subscription rights, any shares created without subscription rights from the Authorized Capital 2015 are to be taken into account.

Reserves

Capital reserve. The capital reserve contained the adjustments recognized within the framework of the first-time adoption of IFRS as well as the differences resulting from the capital consolidation being offset against reserves up to December 31, 2002.

Other reserves. A component of other reserves is retained earnings realized by companies included in the consolidated financial statements less dividends paid.

Other reserves also contain value adjustments accounted for outside of profit or loss for

- available-for-sale financial assets
- cash flow hedges,
- accumulated foreign currency exchange differences and
- actuarial gains/losses arising from the valuation of pensions and similar obligations.

In the 2016 fiscal year value adjustments to securities held for sale amounted to minus 249 thousand euros (prior year 202 thousand euros). Deferred taxes of minus 38 thousand euros (prior year 0) are attributable to this. The effective portions of the change in the value of derivatives to be recognized outside of profit or loss within the framework of the cash flow hedges amounted to minus 1,680 thousand euros (prior year 778 thousand euros) less attributable deferred taxes of 502 thousand euros (prior year minus 232 thousand euros). Accumulated foreign currency exchange differences encompassed the effects arising from foreign currency conversions of the separate financial statements of subsidiaries whose functional currency deviates from that of the Group, as well as effects arising from foreign currency conversions of assets and liabilities held in foreign currencies in the total sum of minus 915 thousand euros (prior year 4,633 thousand euros). Deferred taxes attributable to this issue changed by 4 thousand euros (prior year 74 thousand euros).

The actuarial losses (prior year gains) arising from the valuation of pensions are recognized in the sum of minus 298 thousand euros (prior year 6,255 thousand euros). Deferred taxes of minus 60 thousand euros (prior year minus 1,585 thousand euros) are attributable to this.

In the 2016 fiscal year the changes in deferred taxes recognized outside of profit or loss in total increased the reserves by 408 thousand euros (prior year reduced by 1,743 thousand euros). The amount of deferred tax assets in equity totaled 5,961 thousand euros (prior year 5,553 thousand euros).

Treasury Shares

In accordance with the shareholder resolution made at the Annual General Meeting held on June 12, 2014, the Executive Board was authorized to purchase up to a maximum of ten percent of the no-par value shares of the existing share capital as treasury shares for purposes other than trade in treasury shares by no later than June 11, 2019. The purchased treasury shares together with treasury shares that the entity had already purchased and still holds (including the attributable shares in accordance with §§ 71a et seq. of the Stock Corporation Act) may not exceed 10 percent of the share capital of the entity. The authorization may be exercised in whole or in part, on a one-off or repeat basis and for one or more authorized purposes. The purchase and sales of treasury shares may be exercised by the company or, for specific authorized purposes, by dependent companies, by companies in which the company holds a majority interest, or by third parties for its or their account. At the decision of the Executive Board, acquisition is by purchase, subject to compliance with the principle of equal treatment (§ 53a of the Stock Corporation Act), on the stock exchange or by means of a public offering or a public invitation to the shareholders to submit an offer for sale. Further details regarding the buyback of treasury shares are described in the invitation to the Annual General Meeting 2014, accessible to the general public on our website at www.jenoptik.de in the category Annual General Meeting.

5.17 Non-controlling Interests

This item of the statement of financial position contains reconciliation items from the capital consolidation of shares held by other shareholders in the capital to be consolidated as well as the profits and losses allocated to them.

As a result of the acquisition of shares from non-controlling shareholders, the amounts attributable to the acquired shares were reclassified to retained earnings in the fiscal year 2016.

5.18 Provisions for Pensions and Similar Obligations

Provisions for pension obligations are set aside on the basis of funding schemes for retirement, as well as disability and survivor benefit commitments. Obligations exist in Germany and Switzerland. The benefits provided by the Group vary according to the legal, tax and economic circumstances of the respective country and, as a rule, depend on the duration of employment and on the compensation of the employee at the commencement of retirement. Within the Group, company pension plans are provided both on the basis of defined contribution as well as defined benefit plans. In the case of defined contribution plans, the company pays contributions in accordance with statutory or contractual provisions or voluntarily makes contributions to public or private pension insurers. Upon payment of the contributions, the company has no further benefit obligations.

Defined benefit plans

Most pension benefit schemes are based on defined benefit plans, wherein a distinction is made between pension schemes financed through provisions or externally financed pension schemes.

The company is subject to various risks in conjunction with defined benefit plans. Along with general actuarial risks such as longevity risks and interest rate change risks, the company is subject to foreign currency exchange as well as investment risks.

In accordance with IAS 19, pension provisions for the benefit commitments are determined in accordance with the projected unit credit method. In this context, the future obligations are valued on the basis of performance claims acquired pro rata as at the balance sheet date, taking into account trend assumptions for the valuation parameters which affect the level of benefits. All benefit schemes require actuarial calculations.

Jenoptik determines the net interest expense (net interest income) by multiplying the net liability (net asset) at the commencement of the period by the underlying interest rate at the commencement of the period, discounting the benefit-oriented gross pension obligation.

The actuarial effects includes both the actuarial profits and losses from the valuation of the benefit-oriented gross pension obligation and the difference between the actual yield realized on plan assets and the typical yield assumed at the commencement of the period.

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The benefit commitment of the Group cover 905 entitled persons, including 333 active employees, 88 former employees as well as 484 retirees and survivors.

In compliance with IAS 19, the assets held by the Mitarbeiter-treuhand e.V., Jena, are offset as plan assets against pension obligations. The pension obligations of JENOPTIK Industrial Metrology Switzerland SA as well as JENOPTIK Advanced Systems GmbH (formerly: ESW GmbH) are also covered by plan assets and therefore shown on a net basis. The plan assets are mainly managed by AXA Winterthur, Switzerland.

The change in the defined benefit obligations (DBO) is shown as follows:

in thousand euros	2016	2015
DBO at 1/1	67,432	72,834
Foreign currency exchange effects	108	1,246
Past service cost	1,224	1,206
Interest expenses	1,148	1,006
Actuarial gains (-) and losses (+)	1,519	-5,774
Experience-based profits and losses	-2,038	-70
Changes from financial assumptions	3,557	-5,704
Pension benefits	-2,669	-3,085
DBO at 31/12	68,762	67,432

The effects of the expense recognized in the statement of income are summarized as follows:

in thousand euros	2016	2015
Current service cost	1,224	1,206
Net interest expenses	699	486
Total expenses	1,923	1,692

The amounts shown above are generally included in the personnel expenses of the functional areas. The interest charged on the obligation as well as the interest received on plan assets is recorded in the interest result.

Changes in plan assets are shown as follows:

in thousand euros	2016	2015
Plan assets at 1/1	31,339	31,791
Foreign currency exchange effects	69	766
Interest income from plan assets	232	520
Return on plan assets less interest income	1,189	481
Contributions	682	394
Employers	227	214
Employees	454	180
Pension payments	-2,376	-2,614
Plan assets at 31/12	31,133	31,339

The net obligation as at the balance sheet date is as follows:

in thousand euros	2016	2015
Present value of the obligation covered by plan assets	63,022	60,159
Plan assets	-31,133	-31,339
Net liability of the obligation covered by plan assets	31,889	28,820
Net liability of the obligation not covered by plan assets	5,741	7,274
Total	37,630	36,095

The portfolio structure of the plan assets is shown as follows:

in thousand euros	2016	2015
Loans rendered (loans and receivables)	4,985	1,870
Insurance policies	9,528	9,094
Stocks and other securities	5,627	5,624
Investments	5,456	4,400
Cash equivalents	7,288	11,966
Other assets and liabilities	-1,752	-1,615
Total	31,133	31,339

There is an active market for the stocks and other securities held in plan assets.

Actuarial assumptions are disclosed in the following table. Inflation expectations are included in the mentioned assumptions, if applicable.

in percent	2016	2015
Discount rate		
Germany	1.52	1.88
Switzerland	0.18	0.70
Expected salary increases		
Germany	2.79	2.66
Switzerland	0.35	0.35
Expected pension increases		
Germany	1.81	1.81
Switzerland	0.00	0.10

A yield of 1.94 percent on plan assets in the fiscal year 2016 is assumed in accordance with the discounting factor used in calculating the DBO for the prior year, amounting to 232 thousand euros (prior year 520 thousand euros). The actual yield from the plan assets was 1,420 thousand euros (prior year 1,002 thousand euros).

A change in the key actuarial assumptions of one percentage point respectively as at the balance sheet would influence the DBO as follows:

in thousand euros	Changes in DBO	
	Increase	Decrease
Discount rate	-9,194	9,589
	(-8,283)	(11,006)
Expected salary increases	244	-63
	(213)	(-83)
Expected pension increases	8,854	-5,986
	(9,250)	(-5,310)

The sensitivity analysis shows the change in a DBO when an assumption is changed. The cumulative change in the defined benefit obligation resulting from changes in several assumptions cannot be directly derived because the changes do not have a straight-line effect on the calculation of DBO due to actuarial effects.

Actuarial gains or losses result from changes in pension beneficiaries and deviations from actual trends (e.g. increases in income or pensions) compared to calculation assumptions. In accordance with the regulations stated in IAS 19, this amount is offset against other comprehensive income in equity.

The weighted average remaining service period of 5 years and the average weighted maturity of the obligation amount to 14 years as at December 31, 2016.

The financing of the pension plans of JENOPTIK Advanced Systems GmbH (formerly: ESW GmbH), Wedel and of JENOPTIK SSC GmbH, Jena, is provided via a CTA model. The pension plan of JENOPTIK Industrial Metrology Switzerland SA provides for risk participation by the beneficiaries. In this context, the pension plan is financed by contributions from both the employer and the employees.

The anticipated pension payments arising from the pension plans as at December 31, 2016 for the following fiscal year are in the sum of 2,620 thousand euros (prior year 2,592 thousand euros) and for the subsequent four fiscal years 11,610 thousand euros (prior year 11,546 thousand euros).

Defined contribution plans

In regards to defined contribution plans the expenses in fiscal year 2016 amounted to 13,987 thousand euros (prior year 13,813 thousand euros), containing contributions to statutory pension insurance of 13,447 thousand euros (prior year 13,335 thousand euros).

5.19 Tax Provisions

in thousand euros	31/12/2016	31/12/2015
Provisions for income taxes	3,290	3,076
Provisions for other taxes	90	205
Total	3,380	3,281

Details on income taxes are provided in Note 4.11 from page 145 on.

5.20 Other Provisions

The development of other provisions is as follows:

in thousand euros	Balance at 1/1/2016	Foreign currency exchange effects	Additions	Compound interest	Utilization	Reversals	Balance at 31/12/2016
Personnel	20,843	21	20,199	26	-14,466	-2,272	24,352
Guaranty and warranty obligations	13,559	11	7,362	14	-4,988	-2,587	13,369
Trademark and license fees	2,930	1	228	0	-14	-213	2,931
Restructuring	3,714	0	0	0	-949	-504	2,261
Price adjustments	1,471	1	260	8	-2	-11	1,727
Onerous contracts	459	0	1,080	0	-156	-42	1,341
Provisions for disposals	1,028	-3	0	0	-226	-559	240
Other	9,016	-72	6,491	74	-2,219	-1,021	12,270
Total	53,020	-42	35,621	122	-23,020	-7,210	58,491

Significant items in the personnel provisions relate to performance bonuses, profit-sharing schemes and similar obligations such as contractually agreed bridging payments for the President & CEO Dr. Michael Mertin due to the non-renewal of his Executive Board contract with Jenoptik in the sum of 1,762 thousand euros. Personnel provisions also include anniversary bonuses in the sum of 2,584 thousand euros (prior year 2,215 thousand euros) and partial retirement obligations in the sum of 502 thousand euros (prior year 464 thousand euros). Expert opinions were obtained for the partial retirement obligations with the assumption of income increasing at 2.8 percent (prior year 2.8 percent). The amount of the liability for already earned top-up payments was 155 thousand euros as at December 31, 2016 (prior year 80 thousand euros). In 2017, top-up payments will total 145 thousand euros (prior year 75 thousand euros), in the subsequent years 10 thousand euros (prior year 5 thousand euros).

The provision for guaranty and warranty obligations include expenses for individual guaranty cases as well as for general guaranties. The calculation of the provision for general guaranties is largely based on empirical values of the past which are determined as company-specific respectively product group-specific ratio of the guaranty and warranty expenses compared to the revenues and then applied to the revenues subject to guaranties and warranties. The amounts that were reversed in the 2016 fiscal year chiefly comprise guaranty and warranty provisions for specific individual guaranty cases for which the underlying obligations no longer exist.

The provision for trademark and license fees relates to risks in connection with potential patent violations as well as license cost risks.

The use of the provision for restructuring includes the payment of severance pay to employees in connection with the restructuring of the laser business of Jenoptik Laser GmbH in Jena.

Provisions for price adjustments exist for customer contracts that are subject to risks of subsequent changes of selling prices. Additions and reversals are made to revenue.

The provision for onerous contracts primarily includes the obligation surplus for individual customer projects as well as for a small portion of the backlog of deliveries as part of a service contract.

Provisions for disposals mainly contain expenses from disposals as well as the residual risks of Jenoptik from discontinued operations and consequently from related contractual obligations as well as legal and advisory costs. The utilization and reversals relate primarily to a provision that was set aside in the years 2010 to 2012 for risks in conjunction with the sale of part of a business unit and the associated personnel measures.

Other provisions included, amongst others, provisions for potential contractual penalties and claims for damages. In addition, they relate to numerous identifiable specific risks as well as contingent liabilities that were accounted for in the amount of the best possible estimate of settlement sum. The additions in the fiscal year 2016 include, amongst other things, the Supervisory Board remuneration, the recognition of costs for legal disputes, as well as recording of the provision for contractual penalties.

The timing of anticipated cash outflows is shown below:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Personnel	19,721	2,543	2,087	24,352
Guaranty and warranty obligations	10,320	3,018	32	13,369
Trademark and license fees	810	2,121	0	2,931
Restructuring	2,261	0	0	2,261
Price adjustments	1,000	727	0	1,727
Onerous contracts	1,181	160	0	1,341
Provisions for disposals	188	52	0	240
Other	10,671	599	999	12,270
Total	46,152	9,220	3,119	58,491

5.21 Share-based Payments

As at December 31, 2016, the Jenoptik Group had at its disposal share-based remuneration instruments in the form of virtual shares for both active Executive Board members and some members of the top management.

The share-based remuneration affected the statement of income as well as in the statement of financial position in the 2016 fiscal year, as follows:

in thousand euros	Profit or loss		Statement of financial position	
	2016	2015	2016	2015
Virtual shares current year	-262	-1,127	262	1,127
Virtual shares previous years (since 2009)	-1,541	-851	5,676	3,777
Total	-1,803	-1,978	5,938	4,904

The valuation basis for determining the fair value is the volume-weighted daily share price of JENOPTIK AG over the last twelve months.

At the end of their four-year contractual term or in the event of premature termination of contract, the virtual shares are settled in cash. Following preparation by the Personnel Committee,

subject however to the approval of the Supervisory Board, the members of the Executive Board are to be granted a total of 18,134 virtual shares in the 2016 fiscal year. The virtual shares allocated for the fiscal years 2011 to 2016 were valued at the fair value as at the balance sheet date of the 2016 fiscal year and recognized in provisions.

The development of the Executive Board's virtual shares is shown in the following table:

Number of shares	Number 2016	Number 2015
Dr. Michael Mertin		
1/1	328,066	299,024
Adjustment	0	-15
Granted for period	0	69,408
Granted for protection of existing shares	4,326	4,688
Paid out	49,238	45,039
31/12	283,154	328,066

Hans-Dieter Schumacher (Member of the board since April 1, 2015)

1/1	21,329	0
Granted for period	18,134	21,329
Granted for protection of existing shares	331	0
31/12	39,794	21,329

For all further disclosures, we refer to the Remuneration Report in the section Corporate Governance which forms part of the Combined Management Report.

Virtual shares are also granted to some members of the top management. The system of allocation of and payment for the virtual shares is essentially the same as that prescribed for the Executive Board.

The development of these virtual shares is shown in the following table:

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Number of shares	Number 2016	Number 2015
Members of the Executive Management Board		
1/1	114,346	88,428
Granted for period	20,113	34,949
Granted for adjusted achievement of prior year's goals	473	-2,945
Forfeited rights	-12,575	-6,086
Paid out	-12,631	0
31/12	109,726	114,346

5.22 Financial Debt

The details of current and non-current financial debt are shown in the following table:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	2016
Liabilities to banks	4,088 (14,802)	44,845 (44,763)	75,589 (68,410)	124,521 (127,975)
Liabilities from finance leases	41 (48)	45 (70)	0 (0)	86 (118)
Total	4,129 (14,850)	44,890 (44,833)	75,589 (68,410)	124,608 (128,093)

Prior year figures are in parentheses.

The scheduled repayment of a tranche of the debenture loans totaling 11,000 thousand euros took place in the fiscal year 2016. By contrast, liabilities increased as a result of the inclusion of non-current loans amounting to 7,115 thousand euros for financing the investment in Michigan, USA.

Liabilities to banks with a term of up to one year primarily comprise the utilization of revolving lines of financing for our Chinese consolidated entity.

Liabilities to banks with a term of one to five years comprise further tranches of the debenture loans with a nominal value of 45,000 thousand euros.

Liabilities to banks with a term of more than five years include further tranches of the debenture loans in the nominal value of 69,000 thousand euros.

As at the balance sheet date, the syndicated loan was purely utilized for guarantees in the sum of 11,726 thousand euros. Taking into account the other lines of financing not fully utilized 231,488 thousand euros of guaranteed, existing lines of credit lines were unused as at December 31, 2016.

5.23 Non-current Trade Payables

As in prior year, non-current trade payables amounting to 680 thousand euros (prior year 1,183 thousand euros) include liabilities from purchasing intangible fixed assets.

5.24 Other Non-current Financial Liabilities

in thousand euros	31/12/2016	31/12/2015
Derivatives	1,983	689
Liabilities from acquiring associates	702	1,423
Other non-current financial liabilities	800	800
Total	3,485	2,912

Liabilities from acquiring associates result from put options for the purchase of the remaining non-controlling interests agreed upon within the scope of the acquisition of the Vysionics Group.

Further disclosures on derivatives are provided in Note 8.2 from page 171 on.

5.25 Other Non-current Non-financial Liabilities

The other non-current non-financial liabilities of 655 thousand euros (prior year 3,820 thousand euros) were reduced because of the reclassification of liabilities for virtual shares to current non-financial liabilities. This was done as the result of the non-renewal of the Executive Board contract of President and CEO Dr. Michael Mertin from September 20, 2016 and the associated payment for the granted virtual shares in 2017.

5.26 Current Trade Payables

Current trade payables included:

in thousand euros	31/12/2016	31/12/2015
Trade payables towards third parties	48,020	47,801
Trade payables towards unconsolidated associates and joint operations	293	374
Trade payables towards entities in which investments are held	89	180
Total	48,402	48,355

5.27 Other Current Financial Liabilities

Other current financial liabilities include:

in thousand euros	31/12/2016	31/12/2015
Other liabilities towards unconsolidated associates and joint operations	1,784	2,497
Derivatives	1,354	2,752
Interest payables from financial liabilities	762	841
Liabilities from acquiring associates	582	0
Liabilities from purchasing intangible assets and property, plant and equipment	0	3,163
Miscellaneous current financial liabilities	1,160	960
Total	5,642	10,213

Liabilities to unconsolidated associates and joint operations primarily include liabilities to a joint operation in the sum of the non-consolidated part of 1,552 thousand euros (prior year 2,338 thousand euros). Standard market interest rates were agreed for liabilities.

The aggregated item derivative financial instruments is explained in greater detail under Note 8.2 from page 171 on.

The liabilities from the acquisition of associated companies relate to the short-term portion of the put option, agreed as part of the acquisition of the Vysionics Group, for the purchase of the remaining shares.

Liabilities arising out of the purchase of intangible assets and property, plant and equipment were part of the other current liabilities in the prior year. In 2016, in deviation from the prior year, these were shown under trade liabilities in the sum of 1,988 thousand euros (prior year 3,163 thousand euros).

5.28 Other Current Non-financial Liabilities

in thousand euros	31/12/2016	31/12/2015
Liabilities from advance payments received	29,461	25,162
Liabilities to employees	12,816	6,845
Liabilities from other taxes	4,183	5,782
Accruals	3,295	4,097
Liabilities from social security	1,199	1,087
Liabilities from employer's insurance association	1,180	1,275
Liabilities from construction contracts	952	0
Miscellaneous current non-financial liabilities	523	829
Total	53,609	45,078

Liabilities to employees include, amongst other things, vacation entitlements and flextime balances as well as liabilities for virtual shares due to the reclassification from the non-current area.

Other tax liabilities mainly contain sales tax payables.

Liabilities arising from production contracts are shown under customer-specific production orders with a balance of liabilities in which the prepayments received and part billings exceed production costs incurred, including profit shares. In the fiscal year 2016, progress payments in the sum of 1,837 thousand euros (prior year 0) were offset against receivables arising from production contracts.

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6 Disclosures on Cash Flows

Liquid funds comprise the cash and cash equivalents recognized in the statement of financial position in the sum of 91,961 thousand euros (prior year 83,824 thousand euros). Liquid funds are defined as the sum of cash on hand and demand deposits at banks with a maturity of less than three months.

The statement of cash flows explains the flow of payments, divided between the inflows and outflows of cash from operating activities as well as from investing and financing activities. Changes in the statement of financial position items used for preparing the statement of cash flows cannot be directly derived from the statement of financial position because the effects arising from the foreign currency conversion and changes in the group of entities consolidated are non-cash transactions and are therefore eliminated. Cash flows from operating activities are indirectly derived from earnings before tax. Earnings before tax are adjusted for non-cash income and expenses. The cash flow from operating activities is determined by taking into account the changes in working capital, provisions and other operating balance items.

The cash flow from operating activities in the fiscal year just past totaled 100,102 thousand euros (prior year 85,124 thousand euros). The increase is primarily attributable to the improved earnings before tax (EBT) in the sum of 64,743 thousand euros (prior year 57,431 thousand euros) the increased adjustment for impairment losses included in earnings before tax (EBT) and impairment reversals in the sum of 1,982 thousand euros (prior year minus 2,319 thousand euros) as well as to the change in other assets and liabilities which reduced in the reporting year, affecting cash flow by 3,342 thousand euros (prior year increase of 4,407 thousand euros). In the prior year the payments for the expansion of capacities in Shanghai affected this cash flow item essentially by reducing cash flow, whereas in fiscal year 2016 a positive effect was achieved mainly through the reduction of receivables from grants and the increase in liabilities to employees.

The cash flow from investing activities is minus 71,339 thousand euros (prior year minus 7,152 thousand euros) and is characterized in particular by cash deposits within the framework of the current treasury management in the sum of 49,746 thousand euros (prior year 0). In addition, the cash flow from investing

activities includes capital expenditure for property, plant and equipment in the sum of 25,681 thousand euros (prior year 17,743 thousand euros), of which 7,735 thousand euros is attributable to the construction of the new Technology Campus at the US site in Rochester Hills, Michigan. Capital expenditure for intangible assets in the sum of 3,446 thousand euros (prior year 2,500 thousand euros) primarily reflects the investments in connection with group projects, such as for example JOE and HCM and the software required for this purpose. Expenditure for tangible and intangible assets acquired during the fiscal year 2016 in the sum of 1,988 thousand euros (prior year 3,163 thousand euros) is only due in the subsequent years and does not affect the cash flow from investing activities in the fiscal year 2016. Further information on the investments is provided in the section Earnings, Financial and Asset Position in the Management Report from page 71 on.

The proceeds from disposal of consolidated companies include subsequent purchase price payments in connection with the sale of M + W Zander Holding AG in 2005 through the agreement reached on purchase price relevant subjects in the third quarter 2016. The proceeds resulting from the interest on this sum is shown under interest received.

In the year just past, a dividend was paid by an entity in which Jenoptik has a 4 percent investment. This is included in the proceeds from non-operating income from investments.

Proceeds from the sale of investment companies are the result of the sale of a minority investment in the Optics & Life Science segment. In the prior year the item included the proceeds from the sale of a minority investment in the Defense & Civil Systems segment.

Furthermore, cash flows from investing activities were marginally influenced by payments for the acquisition of consolidated entities. In the sum of minus 539 thousand euros. This relates to payments for the acquisition of additional shares in JENOPTIK Holdings UK Ltd. (formerly: Vysionics Ltd.) within the framework of exercising some of the existing put options. More information on the put options for shares of non-controlling shareholders in JENOPTIK Holdings UK Ltd. can be found under Note 2.4 from page 132 on in the Notes. In the prior year, this cash flow item primarily contained subsequent purchase price payments for the acquisition of 91.97 percent of JENOPTIK Holdings UK Ltd. in 2014.

Cash flows from financing activities amounted to minus 20,728 thousand euros (prior year minus 66,544 thousand euros). The cash outflows arising from the dividends paid increased compared with 2015 as a result of the increased dividend payment of 0.22 euros per share (prior year 0.20 euros per share).

The proceeds from the issuing of bonds and loans and the take-up of credits in the reporting year primarily include the cash inflows arising from the financing taken up for the construction of the new Technology Campus at the US site in Rochester Hills, Michigan. The fiscal year 2015 was significantly influenced by the repayment of the syndicated loan in the sum of 46,001 thousand euros and by offsetting inflows arising from the modification and extension of the debenture loans in the net sum of 32,604 thousand euros. In addition, real estate loans in the sum of 20,597 thousand euros were repaid early, in part by using cash inflows from the sale of two properties.

The change in the group financing includes payments from or to affiliated, non-consolidated companies and investments. In 2015 this item included a severance payment to the last, atypical silent shareholder in a real estate firm owned by the Jenoptik Group in the sum of 12,351 thousand euros.

The high interest payments in the fiscal year 2015 were largely attributable to one-off payments for financing ancillary expenses in conjunction with the extension of the syndicated loan as well as with the modifying and reissue of the debenture loans. The interest paid in the fiscal year just past does not include any such one-off payments.

Information regarding the allocation of free cash flows to the segments is provided in the Segment Report from page 169 on.

The total amounts for cash flows from operating, investing and financing activities of the proportionately consolidated joint operation are of minor significance for Jenoptik.

Additional information on the consolidated statement of cash flows is provided in the Group Management Report in the section Financial Position.

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7 Disclosures on Segment Reporting

The segments are shown in accordance with the regulations laid down in IFRS 8 “Operating Segments”.

IFRS 8 follows the management approach. Accordingly, the external reporting is carried out for the attention of the chief operating decision makers on the basis of the internal organizational and management structures within the Group as well as the internal reporting structure. The Executive Board analyzes the financial information using the key controlling parameters which serve as a basis for decisions on allocating resources and assessing performance. The accounting policies and principles for the segments are the same as those described for the Group in the basic accounting principles.

Since 2016, Jenoptik has been reporting on the Optics & Life Science, Mobility as well as Defense & Civil Systems segments.

The segment reporting in the prior year was on the basis of the Lasers & Optical Systems, Metrology, Defense & Civil Systems segments. The figures for the prior year were adjusted to the segment structure applicable since 2016.

The strategic and operating planning process was reorganized to match this new structure applicable as of January 2016. The future segment reporting corresponds to the new organizational structure of the Group. More information on the new organizational structure of the Jenoptik Group applicable since 2016 is provided in the Combined Management Report in the section General Group Information from page 54 on.

The Optics & Life Science segment pools the activities in the Healthcare & Industry as well as Optical Systems areas. Here Jenoptik is one of the few development and production partners worldwide for optical and microoptical systems and precision components which are used in the semiconductor equipment industry and in the areas of information and communication technology as well as security and defense. In addition, the segment develops and manufactures specific system

and application solutions for global customers in the medical and life science sector. For the industry it offers optoelectronic high-performance components and modules as well as integrated solutions for laser, automotive and lighting applications.

The Mobility segment pools the activities in the automotive and traffic safety markets. Mobility and infrastructure are closely interlinked megatrends of the future. The components and system solutions of this segment increase the efficiency of products and production processes in the automotive market. In addition, the traffic flows in the global economic centers are daily becoming more complex. The solutions of the segment ensure that traffic infrastructure in the future will not only remain manageable but become safer.

The focus of the Defense & Civil Systems segment is on the fields of vehicle, rail and aircraft equipment, drive and stabilization technology, energy systems as well as opto-electronic systems for civil and military markets.

The segment Other contains JENOPTIK AG, JENOPTIK SSC GmbH, the real estate companies, JENOPTIK North America Inc., JENOPTIK (Shanghai) Precision Instruments and Equipment Co., Ltd. with its SSC and General Administration business units, JENOPTIK Korea Corporation, Ltd. and JENOPTIK JAPAN CO., Ltd., respectively with the General Administration business unit as well as JENOPTIK Asia-Pacific Pte. Ltd.

The item consolidation comprises the business relationships between the segments as well as the required reconciliations to be consolidated.

The business relationships between the entities of the Jenoptik Group segments are fundamentally based on prices set at arm's length.

There were no customer relationships with individual customers whose share of revenue is significant when measured against group revenue.

The analysis of revenue by region conducted according to the country in which the customer has its legal seat.

7.1 Segment Reporting

in thousand euros	Optics & Life Science	Mobility	Defense & Civil Systems	Other	Consolidation	Group
Revenue	221,546 (213,662)	247,661 (244,585)	218,307 (211,443)	36,572 (32,141)	-39,318 (-33,195)	684,769 (668,637)
thereof intragroup revenue	6,572 (5,214)	87 (1,275)	415 (306)	32,244 (26,400)	-39,318 (-33,195)	0 (0)
thereof external revenue	214,974 (208,449)	247,574 (243,311)	217,892 (211,138)	4,329 (5,741)	0 (0)	684,769 (668,637)
Germany	41,094 (47,016)	65,056 (54,307)	116,157 (110,784)	4,188 (5,721)	0 (0)	226,495 (217,827)
Europe	72,552 (63,087)	69,378 (74,952)	55,828 (60,056)	1 (6)	0 (0)	197,760 (198,100)
thereof Great Britain	3,789 (3,425)	22,219 (25,562)	11,408 (13,542)	0 (0)	0 (0)	37,416 (42,529)
thereof Netherlands	56,649 (47,454)	3,527 (7,740)	2,439 (1,728)	0 (0)	0 (0)	62,615 (56,922)
Americas	46,036 (42,709)	56,795 (53,915)	32,361 (31,789)	56 (3)	0 (0)	135,248 (128,416)
thereof USA	43,431 (41,007)	39,712 (32,276)	31,688 (30,790)	53 (0)	0 (0)	114,884 (104,074)
Middle East and Africa	13,085 (13,494)	9,022 (17,384)	2,991 (3,371)	0 (0)	0 (0)	25,098 (34,250)
Asia/Pacific	42,207 (42,143)	47,323 (42,752)	10,556 (5,139)	83 (11)	0 (0)	100,169 (90,045)
thereof China	10,791 (9,981)	24,619 (24,725)	935 (681)	1 (0)	0 (0)	36,345 (35,386)
thereof Singapore	22,674 (21,028)	160 (1,423)	301 (223)	0 (0)	0 (0)	23,135 (22,674)
EBITDA continuing operations	41,728 (28,321)	32,313 (35,673)	23,761 (23,135)	-3,012 (1,541)	-120 (-31)	94,671 (88,639)
EBITDA discontinued operations	0 (0)	0 (0)	0 (0)	2,261 (175)	0 (0)	2,261 (175)
EBIT continuing operations	33,404 (19,718)	24,448 (27,004)	19,109 (17,895)	-10,635 (-3,539)	-117 (-31)	66,209 (61,048)
EBIT discontinued operations	0 (0)	0 (0)	0 (0)	2,261 (175)	0 (0)	2,261 (175)
Investment income	-186 (-205)	710 (-92)	0 (349)	-220 (2,412)	0 (-906)	303 (1,558)
Research and development expenses	-14,345 (-15,026)	-20,260 (-21,014)	-7,359 (-5,634)	-546 (-591)	212 (491)	-42,298 (-41,774)
Free cash flow (before income taxes)	34,585 (26,891)	14,528 (34,559)	33,546 (14,554)	-2,284 (-3,583)	1 (-669)	80,376 (71,752)
Working capital	56,563 (56,152)	64,668 (58,351)	93,514 (106,026)	-4,717 (-4,961)	-111 (-31)	209,917 (215,537)
Order intake	236,615 (206,675)	267,371 (253,535)	231,566 (177,806)	36,463 (32,143)	-38,256 (-33,425)	733,759 (636,734)
Frame contracts	14,480 (5,519)	79,054 (11,513)	67,408 (42,120)	0 (0)	0 (0)	160,942 (59,151)
Total assets	190,624 (188,948)	225,286 (212,848)	176,851 (187,544)	718,487 (676,953)	-498,198 (-497,125)	813,051 (769,167)
Total liabilities	48,058 (56,622)	146,245 (142,374)	129,538 (143,208)	193,311 (171,323)	-180,479 (-179,493)	336,672 (334,035)

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in thousand euros	Optics & Life Science	Mobility	Defense & Civil Systems	Other	Consolidation	Group
Additions to intangible assets, property, plant and equipment and investment property	5,947 (8,334)	13,850 (6,251)	4,129 (4,917)	3,545 (5,164)	-37 (0)	27,443 (24,666)
Scheduled depreciation and amortization	-8,171 (-8,257)	-7,866 (-8,476)	-4,652 (-5,240)	-6,917 (-6,796)	3 (0)	-27,603 (-28,770)
Impairment losses	-153 (-346)	0 (-192)	0 (0)	-1,145 (-270)	0 (0)	-1,298 (-808)
Reversals of impairment losses	0 (0)	0 (0)	0 (0)	439 (1,986)	0 (0)	439 (1,986)
Number of employees on average (without trainees)	1,108 (1,135)	1,188 (1,178)	822 (835)	286 (273)	0 (0)	3,404 (3,421)

EBITDA = Earnings before interest, taxes, depreciation and amortization

EBIT = Earnings before interest and taxes

Prior year figures are in parentheses.

7.2 Non-current Assets by Regions

in thousand euros	31/12/2016	31/12/2015
Group	273,678	282,932
Germany	197,389	206,959
Europe	43,894	53,357
thereof Great Britain	41,013	50,049
Americas	24,656	13,993
thereof USA	24,656	13,993
Asia/Pacific	7,739	8,623

Non-current assets comprise intangible assets, property plant and equipment as well as investment property. The assets are allocated to the individual regions according to the countries in which the consolidated entities have their legal seat.

8. Other Disclosures

8.1 Financial Management

The aim of the Jenoptik's financial management is to maintain a strong capital base in order to retain the trust of the shareholders, creditors and markets as well as to ensure the sustained development of the company. The Executive Board especially monitors the equity ratio and the net debt as part of the regular management reporting. In the event key ratios sig-

nificantly take a downturn, alternative courses of action are worked out and the resulting measures are implemented.

8.2 Financial Instruments

General

Within the framework of its operating activities, the Jenoptik Group is exposed to credit and default, liquidity and market risks in the financial area. Market risks, in particular, include the risks of fluctuations in interest rates and foreign currency exchange rates.

Detailed information on the risk management and control of risks is shown in the Management Report in section Risk and Opportunity Report (see page 101). Additional information on capital management disclosures is provided in the Economic Report in the chapter Financial Position (see page 77).

The risks described above impact on the financial assets and liabilities which are shown below. In this context, the carrying amount of the items "available-for-sale financial assets", "cash and cash equivalents", "contingent liabilities" and "derivatives with and without hedging realtions" correspond to their fair values, while the carrying amounts of the remaining items represent a reasonable approximation of their fair values. In the following presentation the non-current and current portion of each item of the statement of financial position was aggregated.

Financial assets:

in thousand euros	Valuation category according to IAS 39 ¹⁾	Carrying amounts 31/12/2016	Valuation in statement of financial position according to IAS 39			Valuation according to IAS 17
			Amortized costs	Fair value through other comprehensive income	Fair value through profit & loss	
Financial investments						
Securities	LAR	49,746 (0)	49,746 (0)			
Shares in unconsolidated associates and investments	AFS	16,598 (17,006)		16,598 (17,006)		
Available-for-sale financial assets	AFS	1,656 (2,585)		1,656 (2,585)		
Loans granted	LAR	1,294 (2,572)	1,294 (2,572)			
Financial assets held to maturity	HTM	280 (0)	280 (0)			
Trade receivables	LAR	131,745 (126,716)	131,745 (126,716)			
Other financial assets						
Receivables from lease agreements	–	845 (0)				845 (0)
Derivatives with hedging relations						
Forward exchange transactions	–	43 (343)		43 (343)		
Derivatives without hedging relations						
Interest & currency swap	FVTPL	210 (0)			210 (0)	
Forward exchange transactions	FVTPL	1,389 (0)			1,389 (0)	
Miscellaneous financial assets	LAR	1,862 (1,649)	1,862 (1,649)			
Cash and cash equivalents	LAR	91,961 (83,824)	91,961 (83,824)			

Prior year figures are in parentheses.

¹⁾ LAR = Loans and receivables
HTM = Held to maturity
AFS = Available for Sale
FVTPL = Fair value through profit & loss

Financial liabilities:

in thousand euros	Valuation category according to IAS 39 ¹⁾	Carrying amounts 31/12/2016	Valuation in statement of financial position according to IAS 39			Valuation according to IAS 17
			Amortized costs	Fair value through other comprehensive income	Fair value through profit & loss	
Financial debts						
Liabilities to banks	FLAC	124,521 (127,975)	124,521 (127,975)			
Liabilities from finance lease agreements	–	86 (118)				86 (118)
Trade payables	FLAC	49,082 (49,538)	49,082 (49,538)			

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in thousand euros	Valuation category according to IAS 39 ¹⁾	Carrying amounts 31/12/2016	Valuation in statement of financial position according to IAS 39			Valuation according to IAS 17
			Amortized costs	Fair value through other comprehensive income	Fair value through profit & loss	
Other financial liabilities						
Contingent liabilities	FVTPL	1,284 (1,423)			1,284 (1,423)	
Derivatives with hedging relations						
Forward exchange transactions	–	2,770 (2,752)		2,770 (2,752)		
Derivatives without hedging relations						
Interest swaps	FVTPL	350 (539)			350 (539)	
Interest & currency swaps	FVTPL	0 (150)			0 (150)	
Forward exchange transactions	FVTPL	217 (0)			217 (0)	
Miscellaneous financial liabilities	FLAC	4.506 (8,261)	4,506 (8,261)			

Prior year figures are in parentheses.

¹⁾ FLAC = Financial liabilities at cost

FVTPL = Fair value through profit & loss

The classification of fair values is shown in the following overview of financial assets and liabilities measured:

in thousand euros	Carrying amounts 31/12/2016	Level 1	Level 2	Level 3
Available-for-sale financial assets	1,656 (2,585)	1,295 (2,286)	0 (0)	361 (299)
Derivatives with hedging relations (assets)				
	43 (343)	0 (0)	43 (343)	0 (0)
Derivatives without hedging relations (assets)				
	1,599 (0)	0 (0)	1,599 (0)	0 (0)
Contingent liabilities	1,284 (1,423)	0 (0)	0 (0)	1,284 (1,423)
Derivatives with hedging relations (liabilities)				
	2,770 (2,752)	0 (0)	2,770 (2,752)	0 (0)
Derivatives without hedging relations (liabilities)				
	567 (689)	0 (0)	567 (689)	0 (0)

Prior year figures are in parentheses.

Fair values available which are available as quoted market prices at all times, are allocated to level 1. Fair values determined on the basis of direct or indirect observable parameters are allocated to level 2. Level 3 is based on measurement parameters that are not based upon observable market data.

Fair values of available-for-sale financial assets are determined on the basis of stock exchange prices (level 1), respectively, discounted cash flows (level 3).

The fair values of all derivatives are determined using the generally recognized cash value method. In this context, the future cash flows determined via the agreed forward rate or interest rate are discounted using current market data. The market data used in this context is taken from leading financial information systems, such as, for example, Reuters. If an interpolation of market data is applied, this is done on a straight-line basis.

The fair values of contingent liabilities are determined by taking into account the anticipated payment outflows discounted as at the balance sheet date. This applies to the put option within the framework of the acquisition of JENOPTIK Holdings UK (formerly: Vysionics Ltd.) agreed with the vendors for the transfer of the remaining non-controlling interests. The anticipated exercise price is 1,423 thousand euros. As at the balance sheet date, the anticipated cash outflows were revalued on the basis

of the currently available information and the resulting adjustment of the liability recognized through profit or loss. Applying an interest rate of 0.47, appropriate to the terms, produced a recognized current value of 1,284 thousand euros as at December 31, 2016.

The profits and losses arising from the available-for-sale financial assets which were allocated to level 1, were recognized in equity in the sum of 352 thousand euros (prior year 201 thousand euros) not affecting the income statement. In the fiscal year 2016 reclassification was carried out from equity to profit or loss in the sum of minus 601 thousand euros (prior year 0) as a result of an impairment loss applied to available-for-sale financial assets.

The development of assets and liabilities allocated to level 3 is shown in the following table:

n thousand euros	Available-for-sale	Contingent liabilities
Balance at 1/1/2016	299	1,423
Additions	345	0
Disposals	0	-539
Gains and losses recognized in operating result	0	-243
Gains and losses recognized in financial result	-283	643
Balance at 31/12/2016	361	1,284

Credit and Default Risks

A credit or default risk is the risk of a customer or a contract partner of the Jenoptik Group failing to fulfill its contractual obligations. This results in both the risk of creditworthiness-related impairment losses to financial instruments as well as the risk of a partial or a complete default on contractually agreed payments.

Credit and default risks primarily exist for trade receivables. These risks are countered by active receivables management and, if required, taken into account by creating allowances. In addition, the Jenoptik Group is exposed to credit and default risks to cash and cash equivalents as well as securities. Account is taken of these risks through constant monitoring

of the creditworthiness of our business partners based on the analysis of credit ratings, as well as through spreading the cash deposits between several banks within defined limits.

The maximum default risk corresponds to the carrying amount of the financial assets as at the reporting date in the sum of 297,628 thousand euros (prior year 234,695 thousand euros).

Impairments were recorded in the fiscal year for the the following financial assets:

in thousand euros	2016	2015
Financial investments	2,438	1,046
Trade receivables	2,289	4,399
Other financial assets	0	954
Total	4,727	6,399

Liquidity Risk

The liquidity risk entails the possibility of the Group being unable to meet its financial obligations. In order to ensure our ability to pay as well as our financial flexibility at all times, the lines of credit and level of utilization as well as the net cash and cash equivalents are planned by means of a five-year financial plan as well as a monthly, rolling 12 week liquidity forecast. The liquidity risk is mitigated by effective cash and working capital management as well as through an unused, guaranteed framework line of credit in the sum of 231,488 thousand euros (prior year 222,406 thousand euros).

The Group has stable long term financing and solid liquidity reserves. These comprise a syndicated loan in the sum of 230,000 thousand euros, in debenture loans in the sum of 114,000 thousand euros, as well as net cash and cash equivalents in the sum of 91,961 thousand euros and current financial investments in the sum of 50,540 thousand euros (details as at December 31, 2016 respectively). The contractually fixed extension option of the syndicated loan was exercised in 2016 and the term extended by one year to March 2021. A tranche of the debenture loans in the sum of 11,000 thousand euros was repaid in 2016. The next repayment in the sum of 11,000 thousand euros will take place in 2018. Further repayments are to be made in 2020 and 2022.

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in thousand euros	Interest rates (range in %)	Carrying amounts 31/12/2016	Cash outflows			
			Total	Up to 1 year	1 to 5 years	More than 5 years
Variable interest-bearing liabilities to banks	0.8–4.71 (0.8–5.41)	26,457 (30,124)	30,536 (31,614)	3,145 (3,969)	13,320 (13,431)	14,071 (14,214)
Fixed interest-bearing liabilities to banks	1.0–4.4 (1.0–4.4)	98,064 (97,851)	101,636 (106,843)	2,379 (12,966)	43,193 (37,422)	56,064 (56,455)
Fixed interest-bearing liabilities from lease agreements	0.9–7.6 (0.9–7.6)	86 (118)	86 (119)	41 (48)	45 (70)	0 (0)
Total		124,608 (128,093)	132,258 (138,576)	5,565 (16,983)	56,558 (50,923)	70,135 (70,669)

Prior year figures are in parentheses.

The cash outflows for a period of up to one year essentially include the interest payments on existing debenture loans, interest payments and repayment arising from the real estate financing newly concluded in the United States in 2016 as well as planned inflows arising from the use of short-term lines of credit for the operational business in China.

The cash outflows in the time frame of between one to five years include the repayment of a debenture loan tranche not renewed in 2015 in the sum of 11,000 thousand euros and the new debenture loans with a five-year term. The repayment of the new debenture loans with a 7-year term has been taken into consideration in the time frame over five years.

Further details are provided under Note 5.22 on page 165.

Interest Rate Fluctuation Risk

The Jenoptik Group is fundamentally exposed to the risks of changes in interest rates due to fluctuations in market interest rates, for all interest-bearing financial assets and liabilities. In the fiscal year 2016 this mainly affected debenture loans issued in the sum of 114,000 thousand euros as well as securities in the sum of 49,746 thousand euros and the major part of the cash and cash equivalents in the sum of 91,961 thousand euros (at the balance sheet December 31, 2016 respectively).

in thousand euros	Carrying amounts	
	31/12/2016	31/12/2015
Interest-bearing financial assets	82,805	86,695
Variable interest	5,109	84,623
Fixed interest	77,695	2,072
Interest-bearing financial liabilities	124,608	128,093
Variable interest	26,457	30,124
Fixed interest	98,151	97,969

The opportunity gains and losses arising from a change in the market interest rate as at December 31, 2016 within a bandwidth of 100 basis points, are shown in the following table:

in thousand euros	31/12/2016	31/12/2015
Increase by 100 basis points		
Interest-bearing financial assets	828	867
Interest-bearing financial liabilities	-1,247	-1,281
Effect on earnings before tax	-419	-414
Decrease by 100 basis points		
Interest-bearing financial assets	-828	-867
Interest-bearing financial liabilities	1,247	1,281
Effect on earnings before tax	419	414

Within the context of the interest rate risk control, Jenoptik deploys various interest rate hedging instruments, e.g. interest rate swaps, caps and floors, as well as combined interest rate

and currency swaps. The structure of the derivatives concluded for hedging against the risk of changing interest rates is shown below:

Interest swap	
Nominal amount	EUR 8,000 thousand
Term	April 28, 2012 to October 28, 2018
Fixed interest rate	1.985 percent p.a.
Variable interest rate	6-month Euribor
Interest and currency swap	
Nominal amount	CNY 17,980 thousand
Term	March 12, 2015 to March 12, 2025
Fixed interest rate	5.10 percent p.a.
Variable interest rate	6-month Euribor

As at the balance sheet date, there was one interest rate swap with a nominal volume of 8,000 thousand euros remaining from the hedging of debenture loans redeemed in 2015. As a result of the replacement of the underlying financing, there is no longer any direct reference to an underlying transaction for this interest rate derivative. The change in the market value of this interest rate swap in the sum of plus 122 thousand euros, as well as the change in the sum of 67 thousand euros in the market value of an interest rate swap with a nominal value of 4,000 thousand euros which expired in October 2016, was recorded through profit or loss in the statement of income.

In March 2015 a combined interest and currency swap in the amount of CNY 17,980 thousand with a term of ten years was concluded to hedge an internal group loan to finance real estate in Shanghai (China). Its market value of plus 361 thousand euros was recorded through profit or loss in the statement of income.

The interest rate hedging instruments are expected to give rise to the following outgoing payments:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Interest swap	174 (226)	86 (241)	0 (0)	260 (467)
Interest and currency swap	139 (127)	556 (510)	525 (574)	1,220 (1,211)

Prior year figures are in parentheses.

Foreign Currency Exchange Risk

Foreign currency risks are divided into two types: Conversion risk and transaction risk.

The conversion risk arises from the fluctuation in financial assets and liabilities denominated in foreign currencies caused by changes in foreign currency exchange rates. Since this is not associated with any cash flows that can be hedged, no hedging will be carried out.

The transaction risk is the result of the fluctuation of cash flows in foreign currencies caused by changes in currency exchange rates. Derivative financial instruments, primarily currency forward transactions and currency swaps are used to hedge this risk.

Hedging is provided for significant cash flows in foreign currencies arising from the operational business (in particular revenue and material purchases). Contractually agreed cash flows are hedged 1:1 via so-called micro-hedges. Planned future cash flows from pending transactions and transactions with a high probability of being realized are hedged within the framework of the anticipatory hedging.

JENOPTIK AG also hedges the expected cash flows from intra-group loans in foreign currencies, mainly JPY and GBP, using derivative financial instruments.

Forward exchange transactions with a nominal value of 81,536 thousand euros (prior year 65,586 thousand euros) existed as at the balance sheet date. A so-called cash flow hedge relationship with the respective underlying transaction was documented for the vast majority of these transactions. Where these are proven effective, their changes do not have to be recorded through profit or loss. The critical terms match method is used to measure the prospective effectiveness and the dollar offset method for the retrospective effectiveness.

Foreign exchange forward transactions are grouped according to sales and purchases in foreign currencies (against the EUR respectively) as follows:

in thousand euros	31/12/2016	31/12/2015
USD sale	59,556	32,632
USD purchase	122	3,471
GBP sale	21,010	28,389
GBP purchase	37	525
CNY sale	338	354
JPY sale	473	215

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These currency forward transactions give rise to the following market values:

in thousand euros	31/12/2016	31/12/2015
Positive market values		
Derivatives with hedging relations		
non-current	2	1
current	41	342
Derivatives without hedging relations		
non-current	1,374	0
current	16	0
Total positive market values	1,432	343
Negative market values		
Derivatives with hedging relations		
non-current	1,570	0
current	1,201	2,752
Derivatives without hedging relations		
non-current	67	0
current	150	0
Total negative market values	2,987	2,752

The market values for hedging transactions for intra-group loans are included in the derivatives without hedges as the underlying transaction comprising intra-group receivables and liabilities is eliminated. The positive market values of these derivatives as at the balance sheet date amount to 1,383 thousand euros (prior year 0), the negative market values sum up to 169 thousand euros (prior year 0). The changes in total result in income of 1,214 thousand euros (prior year 0) recognized through profit and loss in the financial result.

At the balance sheet date there were forward exchange transactions without hedging relations or with hedging relations being released. The positive market values of these derivatives of 6 thousand euros (prior year 0) as well as the negative market values of 48 thousand euros (prior year 0) were included in the above shown table within derivatives without hedging relations. The overall change of these derivatives resulted in expenses of 42 thousand euros (prior year 0) recorded within other operating result.

Gains and losses from cash flow hedges amounting to minus 2,252 thousand euros (prior year minus 570 thousand euros) were recognized in equity outside of profit or loss - a reclassification in the sum of 570 thousand euros (prior year minus 1,348 thousand euros) was carried out from other comprehensive income to profit or loss. This type of reclassification is normally associated with the recognition of the underlying transaction (e.g. recognition of revenue and booking of the corresponding receivable on billing) through profit or loss so the targeted netting effect of concluding the hedge transaction is recorded in the statement of income.

The foreign currency hedging transactions hedge against foreign currency risks in the sum of 33,210 thousand euros with a time frame up to the end of 2017. Foreign currency risks in the sum of 48,327 thousand euros are hedged with a time frame up to the end of 2020.

The main foreign exchange transactions of the Jenoptik Group involve US dollars. The table shows the net risk item based on US dollars:

in thousand euros	31/12/2016	31/12/2015
Financial assets	29,068	18,843
Financial liabilities	2,755	5,423
Foreign currency exchange rate risks resulting from items of the statement of financial position	26,313	13,419
Foreign currency exchange rate risks resulting from pending transactions	44,097	21,001
Transactions related to foreign currency items	70,410	34,420
Items effectively hedged by derivatives	59,434	29,161
Net risk item	10,976	5,259

As at the balance sheet date there was a net risk item based on US dollars in the sum of 10,976 thousand euros. A change in the US dollar exchange rate would have the following consequences:

	EUR / USD rate	Change of the net risk item (in thousand euros)
Closing date exchange rate 31/12/2016	1.0541 (1.0887)	
Increase by 5 percent	1.1068 (1.1431)	523 (250)
Decrease by 5 percent	1.0014 (1.0343)	-578 (-277)
Increase by 10 percent	1.1595 (1.1976)	998 (478)
Decrease by 10 percent	0.9487 (0.9798)	-1220 (-584)

Prior year figures are in parentheses.

8.3 Contingent Liabilities

The guarantee volume has decreased slightly compared to the prior year and as at December 31, 2016 amounted to 5,556 thousand euros (prior year 5,995 thousand euros).

in thousand euros	31/12/2016	31/12/2015
Guarantees for unconsolidated associates	5,556	5,662
Guarantees for third parties	0	333
Contingent liabilities from guarantees	5,556	5,995

There are no further guarantee obligations to third parties.

The guarantees for unconsolidated associates include the warranty bond in connection with the Klinikum 2000, Jena, in the sum of 5,500 thousand euros (prior year 5,500 thousand euros). The release from liability through the Free State of Thuringia remains pending. From Jenoptik's perspective, there are no longer any potential warranty claims, disputed claims have been reinsured 100 percent by the subcontractor.

8.4 Other Financial Obligations

The financial obligations resulting from rental contracts or lease agreements are shown in Note 5.4 from page 152 on.

In addition to order commitments for intangible assets and property, plant and equipment in the sum of 2,201 thousand euros (prior year 4,409 thousand euros) there are other financial liabilities in the sum of 73,552 thousand euros (prior year 54,724 thousand euros), in particular for order commitments for inventories in the sum of 61,603 thousand euros (prior year 47,671 thousand euros).

8.5 Legal Disputes

JENOPTIK AG and the entities of its Group are involved in court or arbitration proceedings. Provisions for litigation risks, respectively litigation expenses, were set up in the appropriate amounts in order to meet any possible financial burdens resulting from any court decisions or arbitration proceedings.

8.6 Related Party Disclosures in Accordance with IAS 24

Related parties are defined in IAS 24 "Related Party Disclosures" as being entities or persons that have control over or are controlled by the Jenoptik Group to the extent that they have not already been included in the consolidated financial statements as consolidated entities as well as entities or persons that, on the basis of the Articles of Association or by contractual agreements, are able to significantly influence the financial and corporate policies of the management of JENOPTIK AG or participate in the joint management of JENOPTIK AG. Control applies if a shareholder holds more than half of the voting rights in JENOPTIK AG. The largest single shareholder of JENOPTIK AG is Thüringer Industriebeteiligungs GmbH & Co. KG, Erfurt, which directly holds in total 11 percent of the voting rights and thus does not have control over JENOPTIK AG.

Members of the Executive Board and of the Supervisory Board of JENOPTIK AG also qualify as being related parties. In the 2016 fiscal year no exchange of goods or of services was transacted between the entity and members of these two bodies.

The following table shows the composition of the business relationships with unconsolidated entities and with the joint operation considered to be other related parties.

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in thousand euros	Total	Thereof with	
		Unconsolidated entities	Joint operations
Revenue	2,727 (2,592)	2,330 (2,181)	397 (411)
Purchased services	3,608 (2,662)	3,039 (2,277)	569 (385)
Receivables from operations	896 (2,252)	852 (2,230)	44 (23)
Payables from operations	2,166 (3,051)	600 (706)	1,566 (2,345)
Loans	1,294 (1,072)	1,294 (1,072)	0 (0)

Prior year figures are in parentheses.

In fiscal year 2016 impairments on receivables to unconsolidated entities were recognized in the amount of 226 thousand euros (prior year 806 thousand euros). Reversals of impairments of 896 thousand euros (prior year 8 thousand euros) countered this effect.

In addition, there are group guarantees to related parties in the sum of 5,556 thousand euros (prior year 5,662 thousand euros).

Information on the disclosure of the remuneration of the members of the Executive Board and the Supervisory Board as required by IAS 24.9 has been published in the Remuneration Report as part of the Combined Management Report in the section Corporate Governance on pages 47 ff. as well as in the section Required and Supplementary Disclosures under HGB in the Notes to the Consolidated Financial Statements on pages 181 und 184 .

9 Events after the Balance Sheet Date

On March 8, 2017 the Executive Board approved the submission of the consolidated financial statements to the Supervisory Board. The Supervisory Board has the task to review and approve the consolidated financial statements in its meeting on March 21, 2017.

Dividends. According to the Stock Corporation Act, the amount available for a dividend payment to the shareholders is based on the accumulated profit of the parent company JENOPTIK AG, as determined by the regulations of the HGB. For the 2016 fiscal year the accumulated profit of JENOPTIK AG totaled 73,807,624.13 euros, comprising net profit for 2016 in the amount of 39,387,813.03 euros plus retained profits of 34,419,811.10 euros.

On the basis of the good annual result for the past fiscal year 2016, the Executive Board recommends that the Supervisory Board propose at the 2017 Annual General Meeting a 14 percent increased dividend of 0.25 euros per qualifying no-par value share (prior year 0.22 euros). An amount in the sum of 14,309,528.75 euros should therefore be distributed from the JENOPTIK AG accumulated profit in the 2016 fiscal year and an amount of 59,498,095.38 euros should be carried forward.

Acquisition. In January 2017 the Jenoptik Group acquired all the shares in the British company Domestic and Commercial Security Limited (referred to below as: ESSA Technology), Sal-tash, Great Britain. For more detail information we refer to the information in Chapter 2.4 Corporate Acquisitions from page 132 on.

No further events of significance occurred after December 31, 2016.

10 Required disclosures under HGB

10.1 Required Disclosures in Compliance with § 315a of the HGB and § 264 (3) or § 264b of the HGB

The consolidated financial statements of JENOPTIK AG were prepared in accordance with the guidelines of the IASB, exempting an entity from preparing consolidated financial statements under HGB pursuant to § 315a of the HGB. Concurrently, the consolidated financial statements and the group management report are prepared in conformity with the Directive on Consolidated Accounting (83/349/EEC) of the European Union, with this directive being interpreted in accordance with its interpretation in the German Accounting Standard No. 1 (GAS 1)

“Exempting Consolidated Financial Statements in accordance with § 315a of the HGB” of the German Accounting Standards Committee e.V. (DRSC). In order to achieve comparability with a set of consolidated financial statements prepared in accordance with the commercial regulations of the HGB, all of the required disclosures and explanations under the HGB also disclosures above and beyond those needed to be in compliance with IFRS are to be published.

Through having been included in the consolidated financial statements of JENOPTIK AG, the following fully consolidated German associates have made use of the simplification relief measures defined in § 264 (3) or § 264b of the HGB:

- JENOPTIK Advanced Systems GmbH, Wedel
- JENOPTIK Automatisierungstechnik GmbH, Jena
- JENOPTIK Diode Lab GmbH, Berlin
- JENOPTIK Industrial Metrology Germany GmbH, Villingen-Schwenningen
- JENOPTIK Laser GmbH, Jena
- JENOPTIK Optical Systems GmbH, Jena
- JENOPTIK Power Systems GmbH, Altenstadt
- JENOPTIK Polymer Systems GmbH, Triptis
- JENOPTIK Robot GmbH, Monheim am Rhein
- JENOPTIK SSC GmbH, Jena
- SAALAEUE Immobilien Verwaltungsgesellschaft mbH & Co. Vermietungs KG, in liquidation, Pullach im Isartal.

10.2 Number of Employees

The breakdown of the average number of employees is presented in the following table:

	2016	2015
Employees	3,404	3,422
Trainees	116	120
Total	3,520	3,542

Of whom in the fiscal year 2016, an average of 32 (prior year 32) employees were employed in the proportionately consolidated entity.

10.3 Cost of Materials and Personnel Expenses

in thousand euros	2016	2015
Cost of materials		
Expenditures for raw materials, consumables and merchandise	220,775	207,263
Expenditures for services purchased	63,798	74,248
Total	284,574	281,511
Personnel expenses		
Wages and salaries	217,721	209,674
Social security, pension contributions and retirement benefits	28,406	29,955
Total	246,127	239,629

10.4 Financial Statement Auditor Fees

The fees for services rendered by our auditor as well as its affiliated companies or network companies amounted to:

in thousand euros	2016	2015
Financial statement audit services	732	974
Fees for other services	46	85
Other attestation services	0	60
Tax consulting services	3	9
Total	780	1,128


The fees for financial statement audit services relate to expenses for the audit of the consolidated financial statements of the Jenoptik Group as well as the statutory annual financial statements of the subsidiaries consolidated and the joint operations included in the consolidated financial statements.

Of the total expenses, financial statement services in the sum of 629 thousand euros (prior year 817 thousand euros), other services in the sum of 46 thousand euros (prior year 80 thousand euros), other attestation services in the sum of 0 thousand euros (prior year 60 thousand euros), as well as tax advisory services in the sum of 0 thousand euros (prior year 4 thousand euros) are attributable to the auditors of the consolidated financial statements Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Germany.

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11. Corporate Governance

11.1 German Corporate Governance Code

On December 14, 2016 the Executive Board and the Supervisory Board of JENOPTIK AG submitted a declaration of conformity  in accordance with § 161 of the German Stock Corporation Act as required by the recommendations of the Government Commission's German Corporate Governance Code in the version dated May 5, 2015. The declaration is included in the Corporate Governance Report from page 38 on and has been made permanently available to shareholders on the JENOPTIK AG website under www.jenoptik.com in the section Investors/Corporate Governance. The declaration can also be viewed in the offices of JENOPTIK AG (Carl-Zeiss-Straße 1, 07743 Jena).

11.2 Executive Board

The following persons were appointed as members of the Executive Board for the 2016 fiscal year:

	Other positions at:
Dr. Michael Mertin President & CEO of JENOPTIK AG	JENOPTIK Asia-Pacific Pte. Ltd. (GI; CCB member)
Hans-Dieter Schumacher Member of the Executive Board of JENOPTIK AG	None

CCB – comparable controlling body, GI – Group internal appointment

The following overview shows the remuneration of the Executive Board for the 2016 fiscal year. Along with direct and indirect remuneration components earned, this overview includes the fair value of share-based remuneration instruments used as long-term incentives (LTI).

in thousand euros	Dr. Michael Mertin (President & CEO)		Hans-Dieter Schumacher (Member of Executive Board)	
	2016	2015	2016	2015
Fixed remuneration	600.0	600.0	400.0	300.0
Variable remuneration	1,330.2	631.2	256.0	194.0
LTI of fiscal year – measured at issue price	0.0	631.2	256.0	194.0
LTI of fiscal year – share price development in fiscal year	0.0	230.9	5.5	71.0
Granted for protection of existing shares	61.3	50.8	4.7	0.0
Total remuneration	1,991.6	2,144.1	922.2	758.9
Retirement benefits	240.0	240.0	160.0	120.0
Fringe benefits	46.7	46.7	13.8	8.2
Total other benefits	286.7	286.7	173.8	128.2

Fringe benefits consist of contributions to disability and accident insurances as well as to the provision of company cars. For a more detailed explanation of the Executive Board remuneration system we refer to the chapter on Corporate Governance in the Remuneration Report which forms part of the Combined Management Report.

Retirement benefits paid to former Executive Board members amounted to EUR 210 thousand euros (prior year 290 thousand euros). The pension provisions for former Executive Board members totaled EUR 3,691 thousand euros (prior year as at the balance sheet date. 4,957 thousand euros). The expenses recorded for these existing provisions in the 2016 fiscal year comprised interest costs in the sum 80 thousand euros (prior year 69 thousand euros).

The market valuation of the LTI granted to executive board members in prior years resulted in the fiscal year in expenses of 1,132 thousand euros (prior year 506 thousand euros).

In the 2016 fiscal year – as in the preceding years – no loans or advances were granted to the members of either the Executive Board or the Supervisory Board. Consequently, there were no loans to be redeemed.

Details on the shareholdings or related financial instruments of the members of the Executive Board can be found in Chapter 11.2.



Further informations
look on page 38

11.3 Supervisory Board

The following persons were appointed as members of the Supervisory Board for the 2016 fiscal year:

	Member of	Additional positions at	Meetings attended			
			Supervi- sory Board	Audit Commit- tee	Personnel Commit- tee	Nomi- nation Commit- tee
Matthias Wierlacher Appointed since 2012, Chair since July 15, 2015 Chair of Thüringer Aufbaubank (Chair)	<ul style="list-style-type: none"> Personnel Committee (Chair) Nomination Committee (Chair) Mediation Committee (Chair) 	<ul style="list-style-type: none"> Mittelständische Beteiligungsgesellschaft Thüringen mbH (SB member) bm-t beteiligungsmanagement thüringen GmbH (GI, SB Chair) ThüringenForst – Anstalt öffentlichen Rechts – (CCB member) 	6/6		9/9	1/1
Michael Ebenau¹⁾ Appointed since 2007 Trade union secretary IG Metall Central Regional Office (Deputy Chair)	<ul style="list-style-type: none"> Personnel Committee Mediation Committee 	<ul style="list-style-type: none"> Samag Saalfelder Werkzeugmaschinen GmbH (CCB member) 	6/6		9/9	
Astrid Biesterfeldt¹⁾ Appointed since 2014 Head of Product Manage- ment and Deputy Head of Business Unit Energy & Drive at JENOPATIK Advan- ced Systems GmbH,		None	6/6			
Evert Dudok Appointed since 2015 Executive Vice President CIS Airbus Defense & Space		<ul style="list-style-type: none"> Dornier Consulting GmbH (GI, SB Chair) EURASSPACE Gesellschaft für Raumfahrttechnik mbH (GI, SB member) 	6/6			
Brigitte Ederer Appointed since 2012 Chair of the Supervisory Board of österreichische Bundesbahnen – Holding Aktiengesellschaft	<ul style="list-style-type: none"> Personnel Committee (until March 21, 2016) Nomination Committee (until March 21, 2016) 	<ul style="list-style-type: none"> Boehringer Ingelheim RCV GmbH, Austria (SB member) Infineon Technologies Austria AG, Austria (SB member) Österreichische Bundesbahnen-Holding Aktiengesellschaft (SB Chair) Österreichische Bundesbahn Personenverkehr AG, Austria (SB member) ÖBB Infrastruktur AG, Austria (SB member since September 2016, Chair since Oktober 2016) Rail Cargo Austria AG, Austria (SB member) Schoeller-Bleckmann Oilfield Equipment AG, Austria (SB member) Wien Holding GmbH, Austria (CCB Chair) 	4/6		1/2 (until March 21, 2016)	
Thomas Klippstein¹⁾ Appointed since 1996 Chairman of Group Works Council of Jenoptik	<ul style="list-style-type: none"> Personnel Committee Audit Committee 	None	6/6	5/5	8/9	

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	Member of	Additional positions at	Meetings attended			
			Supervisory Board	Audit Committee	Personnel Committee	Nomination Committee
Dieter Kröhn¹⁾ Appointed from October 1999 to June 2007 and since December 2010 Process coordinator at JENOPTIK Advanced Systems GmbH	<ul style="list-style-type: none"> • Audit Committee 	None	6/6	5/5		
Sabine Löttsch¹⁾ Appointed since 2012 Mathematician, Manager of IT Helpdesk of JENOPTIK SSC GmbH	<ul style="list-style-type: none"> • Personnel Committee (until March 21, 2016) 	None	6/6		2/2 (until March 21, 2016)	
Doreen Nowotne Appointed since 2015 Freelance Business Consultant	<ul style="list-style-type: none"> • Audit Committee (Deputy Chair) 	<ul style="list-style-type: none"> • Brenntag AG (SB member) 	6/6	5/5		
Heinrich Reimitz Appointed since 2008 Member of the Executive Board of HPS Holding GmbH, Austria	<ul style="list-style-type: none"> • Audit Committee (Chair) • Personnel Committee • Nomination Committee 	<ul style="list-style-type: none"> • Ühinenud Farmid AS, Estland (CCB member) 	6/6	5/5	9/9	1/1
Stefan Schaumburg¹⁾ Appointed since 2012 Division chair and trade union secretary of IG Metall Executive Board, Frankfurt	<ul style="list-style-type: none"> • Personnel Committee • Mediation Committee 	<ul style="list-style-type: none"> • GKN Holdings Deutschland GmbH (Deputy SB Chair) 	6/6		7/9	
Prof. Dr. rer. nat. habil., Dipl.-Physiker Andreas Tünnermann Appointed since 2007 Director of the Institute for Applied Physics and Lecturer for Applied Physics at the Friedrich Schiller University and Head of the Fraunhofer Institute for Applied Optics and Fine Mechanics, Jena	<ul style="list-style-type: none"> • Personnel Committee • Mediation Committee • Nomination Committee 	<ul style="list-style-type: none"> • Docter Optics GmbH (CCB member) 	6/6		9/9	1/1

¹⁾ Employee representative

Abbreviations: SB – Supervisory Board, CCB – Comparable controlling body, GI – Group internal appointment, Dep. – Deputy

Supervisory Board Remuneration

For the 2016 fiscal year the members of the Supervisory Board received the following remuneration in total:

in thousand euros	Total remuneration	Thereof			Value added tax ¹⁾
		Fixed annual remuneration 2016	Variable remuneration 2016	Meeting fees (plus reimbursement of expenses)	
Matthias Wierlacher (Chair)	111.3	71.4	23.8	16.1	17.8
Michael Ebenau (Deputy Chair)	73.8	41.7	17.9	14.3	11.8
Astrid Biesterfeldt	43.5	23.8	11.9	7.8	6.9
Evert Dudok	41.2	23.8	11.9	5.5	5.7
Brigitte Ederer	37.7	21.1	10.0	6.6	–
Thomas Klippstein	73.2	41.7	11.9	19.6	11.7
Dieter Kröhn	60.1	35.7	11.9	12.5	9.6
Sabine Lötzsich	45.9	25.1	11.9	8.9	7.3
Doreen Nowotne	69.3	41.7	11.9	15.7	11.1
Heinrich Reimitz	81.0	50.0	10.0	21.0	–
Stefan Schaumburg	57.3	29.8	11.9	15.6	9.1
Prof. Dr. rer. nat. habil. Andreas Tünnermann	63.1	35.7	11.9	15.5	10.1
Total	757.4	441.5	156.9	159.1	101.1

¹⁾ Included in fixed annual remuneration, variable remuneration and meeting fees; Mrs. Brigitte Ederer as well Herr Mag. Heinrich Reimitz have a limited tax liability in Germany due to their place of residence being abroad, since their remuneration is subject to a withholding tax in accordance with § 50 a (1) No. 4 of the German Income Tax Act, no value added tax was incurred.

For a more detailed explanation of the Supervisory Board remuneration system we refer to the chapter on Corporate Governance in the Remuneration Report which forms part of the Combined Management Report.

At the end of the 2016 fiscal year the members of the Executive Board and the Supervisory Board together held 42,507 shares or related financial instruments, consequently less than 1 percent of the share capital of JENOPTIK AG.

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12 List of Shareholdings of the Jenoptik Group as at December 31, 2016 in accordance with § 313 (2) of the German Commercial Code (HGB)

No.	Name and legal seat of company	Shareholding of JENOPTIK or shareholder directly in percent	Equity 31/12/2016 in thousand euros	Earnings for 2016 in thousand euros
1.1. Consolidated associates				
– direct shareholdings				
1	JENOPTIK Robot GmbH, Monheim am Rhein, Germany	100		
2	JENOPTIK Industrial Metrology Germany GmbH, Villingen-Schwenningen, Germany	100		
3	JENOPTIK Automatisierungstechnik GmbH, Jena, Germany	100		
4	JENOPTIK Advanced Systems GmbH (formerly ESW GmbH), Wedel, Germany	100		
5	JENOPTIK Optical Systems GmbH, Jena, Germany	100		
6	JENOPTIK Laser GmbH, Jena, Germany	100		
7	JENOPTIK Polymer Systems GmbH, Triptis, Germany	100		
8	SAALEAUE Immobilien Verwaltungsgesellschaft mbH & Co. Vermietungs KG, Pullach im Isartal, Germany, i.L. ⁷⁾	100		
9	JENOPTIK SSC GmbH, Jena, Germany	100		
10	JENOPTIK North America, Inc., Jupiter (FL), USA	100		
11	JENOPTIK Asia-Pacific Pte. Ltd., Singapore, Singapur	100		
– indirect shareholdings				
12	JENOPTIK Traffic Solutions Switzerland AG (formerly Multanova AG), Uster, Switzerland	100		
13	JENOPTIK ROBOT MALAYSIA SDN BHD, Kuala Lumpur, Malaysia	100		
14	ROBOT Nederland B.V., Riel, Netherlands	100		
15	JENOPTIK Holdings UK Ltd. (formerly Vysionics Ltd.), Milton Keynes, Great Britain	94.64		
16	Vysionics ITS Holdings Ltd., Milton Keynes, Great Britain	100 ¹⁾		
17	JENOPTIK Traffic Solutions UK Ltd. (formerly Vysionics ITS Ltd.), Camberley, Great Britain	100 ¹⁾		
18	Computer Recognition Systems Ltd., Milton Keynes, Great Britain	100 ¹⁾		
19	JENOPTIK Industrial Metrology Switzerland SA, Peseux, Switzerland	100		
20	JENOPTIK Industrial Metrology France S.A., Bayeux, France	100		
21	JENOPTIK Power Systems GmbH, Altenstadt, Germany	100		
22	PHOTONIC SENSE GmbH, Eisenach, Germany	100		
23	JENOPTIK Diode Lab GmbH, Berlin, Germany	100		
24	Traffipax, LLC, Jupiter (FL), USA	100		
25	JENOPTIK Automotive North America, LLC, Rochester Hills (MI), USA	100		
26	JENOPTIK INDUSTRIAL METROLOGY DE MEXICO, S. DE R.L. DE C.V., Saltillo, Mexico	100		
27	JENOPTIK Optical Systems, LLC, Jupiter (FL), USA	100		
28	JENOPTIK Advanced Systems, LLC, El Paso (TX), USA	100		
29	JENOPTIK (Shanghai) Precision Instrument and Equipment Co., Ltd., Shanghai, China	100		
30	JENOPTIK Australia Pty Ltd, Sydney, Australia	100		
31	JENOPTIK Korea Corporation, Ltd., Pyeongtaek, Korea	66.6		
32	JENOPTIK JAPAN CO. Ltd., Yokohama, Japan	66.58		

No.	Name and legal seat of company	Shareholding of JENOPTIK or shareholder directly in percent	Equity 31/12/2016 in thousand euros	Earnings for 2016 in thousand euros
1.2. Unconsolidated associates				
– direct shareholdings				
33	JENOPTIK Einundsiebzigste Verwaltungsgesellschaft mbH, Jena, Germany	100	23	³⁾
34	JENOPTIK MedProjekt GmbH, Jena, Germany	100	0	–1
35	FIRMICUS Verwaltungsgesellschaft mbH, Jena, Germany	100	41 ⁹⁾	3 ⁹⁾
36	SAALEAUE Immobilien Verwaltungsgesellschaft mbH, Pullach im Isartal, Germany, i.l. ⁷⁾	100	50 ⁹⁾	–7 ⁹⁾
37	LEUTRA SAALE Gewerbegrundstücksverwaltungsgesellschaft mbH, Grünwald, Germany, i.l. ⁷⁾	100	316	–1,474
– indirect shareholdings				
38	AD-Beteiligungs GmbH, Monheim am Rhein, Germany	100	229 ⁹⁾	–2 ⁹⁾
39	RADARLUX Radar Systems GmbH, Leverkusen, Germany	100	–415	–127
40	Traffipax do Brasil Ltda., Sao Paulo, Brazil	100	–1,086 ⁹⁾	–277 ⁹⁾
41	JENOPTIK KATASORB GmbH, Jena, Germany	100	300	³⁾
42	PHOTONIC SENSE, INC., Nashua (NH), USA	100	3	0
43	JENOPTIK Components LLC, St. Petersburg, Russia, i.l. ⁷⁾	100	–535	1
44	JENOPTIK India Private Limited, Bangalore, India	100 ⁴⁾	437	–105
45	JENOPTIK do Brasil Instrumentos de Precisão e Equipamentos Ltda., Sao Paulo, Brazil	100	388	239
46	JENOPTIK Saudi Arabia, LLC, Jeddah, Saudi Arabia	90		²⁾
2. Joint operations				
47	HILLOS GmbH, Jena, Germany	50		
3. Investments				
– direct shareholdings				
48	JENAER BILDUNGSZENTRUM gGmbH SCHOTT CARL ZEISS JENOPTIK, Jena, Germany	33.33	705 ⁹⁾	6 ⁹⁾
– indirect shareholdings				
49	JT Optical Engine Verwaltungs GmbH, Jena, Germany, i.l. ⁷⁾	50 ⁵⁾	25 ⁹⁾	1 ⁹⁾
50	JT Optical Engine GmbH+Co. KG, Jena, Germany, i.l. ⁷⁾	50 ⁵⁾	513 ⁹⁾	–51 ⁹⁾
51	JENOPTIK Robot Algérie SARL, Algiers, Algeria	49	146 ⁹⁾	–28 ⁹⁾
52	HOMMEL CS s.r.o., Teplice, Czech Republic	40	616 ⁹⁾	32 ⁹⁾
53	TELSTAR-HOMMEL CORPORATION, Ltd., Pyeongtaek, Korea	33.4	12 ⁹⁾	2 ⁹⁾
54	Dr. Teschauer AG, Chemnitz, Germany, i.l. ⁸⁾	24.99 ⁹⁾		²⁾
55	Zenteris GmbH, Jena, Germany, i.l. ⁸⁾	24.9 ⁵⁾		²⁾

1) Included in the financial statements of JENOPTIK Holdings UK Ltd. (formerly Vysionics Ltd.)

2) No data is available.

3) Profit and loss transfer agreement (HGB) with the parent company

4) Fiscal year not the calendar year – as of March 31

5) Fiscal year not the calendar year – as of June 30

6) Fiscal year not the calendar year – as of October 31

7) i.l. = in liquidation

8) i.l. = in insolvency

9) Disclosures for the financial statements 2015

Jena, March 8, 2017
JENOPTIK AG

The Executive Board

Assurance by the Legal Representatives

We give our assurance that, to the best of our knowledge and in accordance with the applicable accounting principles, the consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group and that the course of business, including the business

result and the position of the Group, are portrayed in such a way in the Group Management Report that a true and accurate picture is conveyed and that the significant opportunities and risks of the Group's future development are fairly described.

Jena, March 8, 2017



Dr. Michael Mertin
President & CEO



Hans-Dieter Schumacher
Chief Financial Officer

Audit Opinion

We have issued the following opinion on the consolidated financial statements and the group management report:

“We have audited the consolidated financial statements prepared by the JENOPTIK AG, Jena, comprising the statement of comprehensive income, the statement of financial position, the statement of changes in equity, the statement of cash flows 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 [“Handelsgesetzbuch”: “German Commercial Code”] 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 [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the 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 legal requirements and as a whole provides a suitable view of the Group’s position and suitably presents the opportunities and risks of future development.”

Stuttgart, March 8, 2017

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Blesch
Wirtschaftsprüfer
[German Public Auditor]

Pester
Wirtschaftsprüfer
[German Public Auditor]

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The Group's extended management board, the Executive Management Board, is supported by the JENOPTIK AG Scientific Advisory Council on strategic and operational decisions. This board of 13 scientists from prestigious institutions and universities as well as 13 Jenoptik employees was restructured in autumn 2016 to match the technological fields and business models in the group.

Executive Management Board

Dr. Michael Mertin, President & Chief Executive Officer

Dr. Michael Mertin had been COO since October 2006 and has been President & CEO of JENOPTIK AG since July 2007. He is responsible for the operational business as well as the areas of legal affairs, strategy, business development and innovation management, communication and marketing, quality, processes, procurement and supply chain management, internal audit, corporate governance, corporate social responsibility, data protection, Shared Services (including occupational safety, health protection and environmental protection) as well as Human Resources Director for HR.

In September 2016, Michael Mertin announced that he would not be extending his Executive Board contract of employment which runs up to June 30, 2017. The Supervisory Board appointed Dr. Stefan Traeger as the new Chairman of the Executive Board on December 14, 2016. He will take up the position in the 2nd quarter of 2017.

Hans-Dieter Schumacher, Chief Financial Officer

Hans-Dieter Schumacher has been the Chief Financial Officer of JENOPTIK AG since April 1, 2015. He is responsible for the areas of accounting and controlling, treasury, taxes, risk management and compliance, mergers and acquisitions, investor relations, strategic management of the real estate portfolio as well as the IT department. Hans-Dieter Schumacher is appointed until March 31, 2018.

Bernhard Dohmann

Mobility segment
Head of the Traffic Solutions division

Volkmar Hauser

Mobility segment
Head of the Automotive division

Melanie Jaklin

Head of Human Resources, Purchasing,
Supply Chain & Shared Services

Wolfgang Keller

Optics & Life Science segment
Head of the Healthcare & Industry division

Dr. Stefan Stenzel

Defense & Civil Systems segment
Head of the Defense & Civil Systems division

Scientific Advisory Council – External Members

(as at January 2017)

Prof. Dr.-Ing. habil. Jürgen Beyerer

Fraunhofer Institute IOSB, Karlsruhe

Prof. Dr. Ing. Joachim Denzler

Friedrich Schiller University Jena, Computer Vision Group

Prof. Dr. Gerhard Fettweis

Technical University Dresden, Faculty of Electrical Engineering

Prof. Dr. Ing. Georg Jacobs

RWTH Aachen, Institute for Machine Elements and Machine Design

Prof. Dr. Karsten Lemmer

German Aerospace Center (DLR),
Institute of Transportation Systems

Prof. Dr. rer. nat. habil. Jürgen Petzoldt

Technical University Ilmenau, Department of
Electrical Engineering and Information Technology,
Institute for Electric Power and Control Engineering

Prof. Dr. rer. nat. Jürgen Popp

Leibniz Institute of Photonic Technology IPHT, Jena

Prof. Dr. rer. pol. Michael Schefczyk

Technical University Dresden,
Faculty of Business and Economics,
Chair of Entrepreneurship and Innovation

Johannes Heinrich Schleifenbaum

RWTH Aachen, Digital Additive Production DAP
Fraunhofer Institute for Laser Technology ILT

Prof. Dr. Patrick Spieth

University of Kassel, Institute of
Management and Business Studies

Prof. Dr. Hartwig Steffenhagen

Aachen

Prof. Dr. Günther Tränkle

Ferdinand Braun Institute, Leibniz Institute for
High-Frequency Technology, Berlin

Prof. Dr. Andreas Tünnermann

Fraunhofer Institute for Applied Optics and
Precision Engineering IOF, Jena

Glossary

B

Book-to-bill ratio – Ratio of order intake to revenue for a fiscal year. A ratio of over 1.00 indicates that the order intake surpassed revenue for the fiscal year, likely leading to an increase in order backlog.

D

Debenture loan – In addition to bank loans and bonds, another form of (long-term) external financing for companies. The borrower is granted a loan against a debenture by large financial intermediaries (in general credit institutions) without having to access the organized capital market.

E

EBIT – Income from operations – earnings before interest and taxes.

EBITDA – Earnings before interest, taxes, depreciation and amortization (including impairment losses and reversals of impairment losses).

EBIT margin – Return on revenue – EBIT in relation to revenue.

Equity ratio – Indicator used in capital structure analysis stating the relative proportion of equity in total equity and liabilities (equity in relation to total equity and liabilities).

F

Frame contracts – These are contracts or framework agreements the amount and probability of occurrence of which cannot yet be determined exactly.

Free cash flow – Available cash flow. The free cash flow is regarded by financing institutions as an indicator of the ability to repay loans and is therefore often used as a basis to calculate financing capacity. It is calculated from the cash flows from operating activities (before income taxes and interest) less capital expenditure in property, plant, equipment and intangible assets.

G

Goodwill – Difference between the purchase price of a newly acquired company and its equity (assets minus liabilities).

Go Lean Program – Internal Group program launched in 2012 with aim of endtoend process improvements and an increase in operational performance. It will maximize farreaching synergies thanks to a lean production system, consolidation of functions in areas such as purchasing and support for operational units from central bodies.

Gross margin – The gross margin indicates how much (in percent of revenue) a company is earning after deducting cost of sales. The indicator helps to assess how efficiently a company is operating.

J

Jenoptik Excellence Program (JEP) – This internal Group program was launched in 2012. It is aimed at generating cost savings, primarily in production, development and logistical processes, as well as in supply chain management.

Jenoptik One ERP project (JOE) – The company's largest program for efficient standardization of processes and settlement systems throughout the company has been gradually rolled-out throughout the company.

L

Lean campus – Within the framework of the Go Lean Program employees and management receive training in the topics such as comprehensive lean methods expertise, the improvement tools and the personal development of the participants.

M

Market capitalization – Number of shares multiplied by the share price.

Market Excellence – A groupwide program aimed at optimizing the sales organization and processes. It combines major projects from the sales, after-sales/service as well as pricing. Its aim is to ensure the organization is consistently geared toward market requirements.

N

Net debt – Calculated by deducting cash and securities from the total of noncurrent and current financial debt.

P

PoC/Percentage of completion method – Procedure in accordance with IAS 11 which computes revenue, order costs and order results on a longterm customerspecific contract relative to the degree to which the project is completed.

R

ROCE (return on capital employed) – Is calculated by dividing EBIT by the average-tied operating capital. The average-tied operating capital includes non-current non-interest-bearing assets (such as intangible assets including goodwill, property, plant and equipment and investment properties) plus current non-interest-bearing assets (primarily inventories, receivables from the operating business activities and other current receivables) less non-interestbearing borrowings (such as provisions – excluding pensions and taxes – liabilities from the operating business activities and other non-interestbearing liabilities). The calculation of the average takes into account twelve month-end balances in the period under review and the opening balance at the start of the year.

E

Swap – An agreement between two companies to exchange cash flows. In the case of an interest swap, fixed interest payments are swapped for floating payments for a nominal fee.

Syndicated loan – The syndicated loan is a credit granted jointly by several banks (members of a consortium) to one debtor. One or several banks may take the lead.

W

Working capital – The total of trade receivables and receivables from construction contracts as well as inventories minus trade payables and payables from construction contracts as well as advance payments received.

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Historical Summary of Financial Data

		2010 ¹⁾	2011	2012 ²⁾	2013	2014	2015	2016
Statement of Income								
Revenue	million euros	478.8	543.3	585.0	600.3	590.2	668.6	684.8
Optics & Life Science	million euros	n/a	n/a	n/a	n/a	n/a	213.7	221.5
Mobility	million euros	n/a	n/a	n/a	n/a	n/a	244.6	247.7
Defense & Civil Systems	million euros	n/a	n/a	n/a	n/a	n/a	211.4	218.3
Foreign revenue	million euros	279.7	321.5	376.9	371.9	379.1	450.8	458.3
of revenue	%	58.4	59.2	64.4	62.0	64.2	67.4	66.9
Cost of sales	million euros	328.6	359.3	381.6	394.6	384.7	442.5	446.9
Gross profit	million euros	150.2	184.0	203.4	205.7	205.5	226.2	237.9
Gross margin	%	31.4	33.9	34.8	34.3	34.8	33.8	34.7
R + D expenses	million euros	28.1	32.0	36.0	39.8	39.4	41.8	42.3
Selling expenses	million euros	53.7	61.9	65.1	66.6	67.5	72.6	73.6
Administrative expenses	million euros	36.5	38.9	42.6	46.4	51.1	54.0	57.6
EBIT	million euros	29.0	49.2	54.8 ³⁾	52.7 ³⁾	51.6 ³⁾	61.2 ³⁾	68.5 ³⁾
Optics & Life Science	million euros	n/a	n/a	n/a	n/a	n/a	19.7	33.4
Mobility	million euros	n/a	n/a	n/a	n/a	n/a	27.0	24.4
Defense & Civil Systems	million euros	n/a	n/a	n/a	n/a	n/a	17.9	19.1
EBIT margin	%	6.1	9.0	9.4 ³⁾	8.8 ³⁾	8.7 ³⁾	9.2 ³⁾	10.0 ³⁾
Optics & Life Science	%	n/a	n/a	n/a	n/a	n/a	9.2	15.1
Mobility	%	n/a	n/a	n/a	n/a	n/a	11.0	9.9
Defense & Civil Systems	%	n/a	n/a	n/a	n/a	n/a	8.5	8.8
EBT	million euros	15.0	36.2	46.1 ³⁾	47.2 ³⁾	46.1 ³⁾	57.4 ³⁾	64.7 ³⁾
EBT margin	%	3.1	6.7	7.9 ³⁾	7.9 ³⁾	7.8 ³⁾	8.6 ³⁾	9.5 ³⁾
Earnings after tax	million euros	9.0	35.3	50.2	47.2	41.6	49.9	57.5
EPS	euros	0.16	0.62	0.88	0.82	0.73	0.87	1.00
Cost of materials	million euros	207.6	230.4	242.0	250.9	253.6	281.5	284.6
Material intensity	%	41.0	41.1	40.3	40.7	41.3	40.4	40.2
R + D output	million euros	43.1	46.7	50.6	52.2	50.4	53.1	57.4
R + D ratio	%	9.0	8.6	8.6	8.7	8.5	7.9	8.4
EBITDA	million euros	60.1	76.8	77.7 ³⁾	74.8 ³⁾	76.1 ³⁾	88.8 ³⁾	96.9 ³⁾
Financial result	million euros	-14.0	-13.0	-8.7	-5.5	-5.5 ³⁾	-3.8	-3.7 ³⁾
Cash Flows and Capital Expenditure								
Cash flows from operating activities	million euros	41.6	65.6	66.6	60.6	46.3	85.1	100.1
Free cash flow (before income tax)	million euros	31.6	44.0	43.7	47.0	22.5	71.8	80.4
Capital expenditures	million euros	14.5	25.1	31.2	24.4	29.9	24.7	27.5
Personnel								
Employees on average		2,800	2,894	3,066	3,233	3,375	3,421	3,404
Revenue per employee	thousand euros	171.0	187.7	190.8	185.7	174.9	195.4	201.2
Personnel expenses	million euros	177.5	183.8	201.2	210.9	219.7	239.6	246.1
Personnel intensity	%	37.1	33.8	34.4	35.1	37.2	35.8	35.9

		2010 ¹⁾	2011	2012 ²⁾	2013	2014	2015	2016
Statement of Financial Position								
Non-current assets	million euros	310.7	312.4	333.8	329.8	389.5	382.8	371.9
Intangible assets and property, plant and equipment	million euros	211.8	207.1	213.9	216.0	274.0	278.4	269.2
Investment property	million euros	22.1	20.6	19.6	19.1	16.4	4.5	4.4
Financial assets	million euros	16.8	22.8	27.2	20.1	21.1	21.7	19.0
Other non-current assets	million euros	9.1	4.9	4.8	4.4	1.8	4.5	5.0
Deferred tax assets	million euros	50.9	57.0	68.4	70.3	76.3	73.6	74.2
Current assets	million euros	318.2	331.1	335.8	362.6	382.2	386.3	441.2
Inventories	million euros	148.8	169.1	169.3	165.1	179.0	167.1	159.3
Trade and other receivables	million euros	103.3	111.9	120.7	125.3	133.4	135.0	139.3
Current financial assets and cash	million euros	66.1	50.1	45.9	72.2	69.8	84.2	142.5
Equity								
Share capital	million euros	148.8	148.8	148.8	148.8	148.8	148.8	148.8
Non-current liabilities	million euros	165.3	173.7	177.6	173.1	216.6	169.5	175.4
Pension provisions	million euros	6.4	18.4	31.2	28.2	41.0	36.1	37.6
Other non-current provisions	million euros	17.6	12.4	12.1	11.0	10.0	10.3	12.3
Non-current financial liabilities	million euros	125.9	123.1	115.8	115.2	156.8	113.2	120.5
Other non-current liabilities	million euros	11.7	15.8	15.4	16.9	7.0	7.9	4.8
Deferred tax liabilities	million euros	3.7	4.0	3.1	1.8	1.7	2.0	0.1
Current liabilities	million euros	181.1	171.3	161.7	152.3	168.5	164.5	161.3
Tax provisions	million euros	2.4	6.8	6.1	4.8	5.7	3.3	3.4
Other current provisions	million euros	61.9	49.7	52.1	37.4	37.7	42.7	46.2
Current financial liabilities	million euros	19.5	4.1	4.7	1.2	5.1	14.9	4.1
Trade payables and other liabilities	million euros	97.3	110.7	98.9	109.0	120.0	103.6	107.7
Total equity and liabilities	million euros	628.9	643.5	669.6	692.4	771.7	769.2	813.1
Balance sheet ratios								
Equity ratio	%	44.9	46.4	49.3	53.0	50.1	56.6	58.6
Asset coverage		202.6	216.0	230.7	261.0	256.5	279.5	301.7
Gross debt	million euros	145.3	127.2	120.5	116.4	161.9	128.1	124.6
Net debt	million euros	79.3	77.1	74.5	44.1	92.1	43.9	-17.9
Working capital	million euros	164.6	190.4	202.8	195.6	217.5	215.5	209.9
Working capital ratio	%	34.4	35.0	34.7	32.6	36.9	32.2	30.7
Debt to equity ratio		1.2	1.2	1.0	0.9	1.0	0.8	0.7
Total return on investment based on EBT	%	2.4	5.6	6.9	6.8	6.0	7.5	8.0 ³⁾
Return on equity based on EBT	%	5.3	12.1	14.0	12.9	11.9	13.2	13.6 ³⁾
ROCE			15.6	15.6	14.0	13.0	13.5	15.6 ¹⁾
Dividend key figures								
Dividend per share	euro		0.15	0.18	0.20	0.20	0.22	0.25 ⁴⁾
Pay out ratio on earnings attributable to shareholders	%		24.3	20.5	24.3	27.5	25.4	24.9 ⁴⁾
Dividend yield based on year-end stock exchange price	%		3.3	2.4	1.6	1.9	1.5	1.5 ⁴⁾

1) Continuing operations

2) Adjusted to initial application of IAS 19R

3) Including discontinued operations

4) Subject to the approval by the annual general meeting

Key Figures of Jenoptik by Segment

	in million euros	2016	2015	Change in %
Revenue	million euros	684.8	668.6	2.4
Optics & Life Science	million euros	221.5	213.7	3.7
Mobility	million euros	247.7	244.6	1.3
Defense & Civil Systems	million euros	218.3	211.4	3.2
Other ¹⁾	million euros	-2.7	-1.1	-160.4
EBITDA ²⁾	million euros	96.9	88.8	9.1
Optics & Life Science	million euros	41.7	28.3	47.3
Mobility	million euros	32.3	35.7	-9.4
Defense & Civil Systems	million euros	23.8	23.1	2.7
Other ¹⁾	million euros	-0.9	1.7	-151.7
EBIT ²⁾	million euros	68.5	61.2	11.8
Optics & Life Science	million euros	33.4	19.7	69.4
Mobility	million euros	24.4	27.0	-9.5
Defense & Civil Systems	million euros	19.1	17.9	6.8
Other ¹⁾	million euros	-8.5	-3.4	-150.1
EBIT margin ²⁾	%	10.0	9.2	
Optics & Life Science	%	15.1	9.2	
Mobility	%	9.9	11.0	
Defense & Civil Systems	%	8.8	8.5	
R + D OUTPUT	million euros	57.4	53.1	8.2
Optics & Life Science	million euros	21.9	21.0	4.5
Mobility	million euros	24.5	24.5	0.0
Defense & Civil Systems	million euros	10.6	7.5	42.4
Other ¹⁾	million euros	0.3	0.1	234.8
Order intake	million euros	733.8	636.7	15.2
Optics & Life Science	million euros	236.6	206.7	14.5
Mobility	million euros	267.4	253.5	5.5
Defense & Civil Systems	million euros	231.6	177.8	30.2
Other ¹⁾	million euros	-1.8	-1.3	-39.8
		31/12/2016	31/12/2015	Change in %
Order backlog	million euros	405.2	373.4	8.5
Optics & Life Science	million euros	80.7	73.7	9.5
Mobility	million euros	108.3	92.7	16.8
Defense & Civil Systems	million euros	217.8	209.7	3.9
Other ¹⁾	million euros	-1.6	-2.6	38.6
Employees		3,539	3,512	0.8
Optics & Life Science		1,123	1,144	-1.8
Mobility		1,229	1,207	1.8
Defense & Civil Systems		881	881	0.0
Other ¹⁾		306	280	9.3

¹⁾ Including consolidation

²⁾ Including discontinued operations

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