Seeing beyond

Thinking and acting sustainably

Annual Report 2021/22
ZEISS Group

Key Figures
(IFRS)

	2021/22		2020/21		2019/20	
	€ m	%	€ m	%	€ m	%
Revenue	**8,754**	**100**	7,529	100	6,297	100
» Germany	676	8	619	8	598	9
» Other countries	8,078	92	6,910	92	5,699	91
Research and development expenses	**1,151**	**13**	943	13	812	13
EBIT	**1,588**	**18**	1,479	20	922	15
Consolidated profit	**1,155**	**13**	1,047	14	616	10
Cash flows from operating activities	**1,421**		1,457		783	
Cash flows from investing activities	**-1,300**		-525		-338	
Cash flows from financing activities	**90**		-149		-313	

	30 Sep 2022		30 Sep 2021		30 Sep 2020	
	€ m	%	€ m	%	€ m	%
Total assets	**13,056**	**100**	10,656	100	9,172	100
Property, plant and equipment	**2,666**	**20**	2,069	19	1,623	18
» Capital expenditures	842		756		484	
» Depreciation	311		263		256	
Inventories	**2,522**	**19**	1,976	19	1,736	19
Equity	**7,173**	**55**	5,494	52	4,287	47
Net liquidity	**2,228**		2,120		1,532	

	30 Sep 2022	30 Sep 2021	30 Sep 2020
Employees	**38,770**	35,375	32,201
» Germany	17,058	14,848	13,692
» Other countries	21,712	20,527	18,509

For more information, visit:
www.zeiss.com/annualreport

Inhalt

Executive Board
of Carl Zeiss AG

Sven Hermann
Head of the Consumer Markets segment[2]

Dr. Markus Weber
Head of the Medical Technology segment[1]

Dr. Christian Müller
Chief Financial Officer

Susan-Stefanie Breitkopf
Chief Transformation Officer[2]

Dr. Karl Lamprecht
President and CEO

Dr. Jochen Peter
Head of the Industrial Quality & Research segment

Andreas Pecher
Head of the Semiconductor Manufacturing Technology segment[1]

[1] from 1 January 2022
[2] from 1 July 2022

Foreword by the Executive Board

Ladies and Gentlemen, dear Readers,

This year the ZEISS Group has achieved another new record: for the first time in our history our annual revenue has exceeded 8 billion euros and totaled **8,8 billion** euros. All four ZEISS segments have shown positive development over the last twelve months, and this has contributed to this significant growth.

In economic terms, we can look back with great satisfaction on a very successful fiscal year 2021/22. For this reason and on behalf of the entire ZEISS Executive Board team, I would like to express my sincere gratitude to all of our business partners and especially our customers for the successful collaboration. You are the ones we want to make successful. You are the ones who make us successful.

Dr. Karl Lamprecht

My special thanks also goes to our now more than 38,000 employees; this excellent result would not have been possible without their high degree of flexibility, considerable achievements and strong personal commitment.

The past fiscal year was certainly often very difficult and challenging. In particular, the war in Ukraine, the energy crisis in Europe, supply chain difficulties and the ongoing COVID-19 pandemic have left their mark across the world. Closely networked with the ZEISS segments and sites, the internal task forces at ZEISS monitor and evaluate current developments and take preventive measures – wherever possible – to safeguard business operations and support our global customers.

ZEISS segments on course for success.
All four ZEISS segments have grown with double-digit percentage growth in the past fiscal year.

In the last few years, the Semiconductor Manufacturing Technology segment has enabled an innovation leap in the entire semiconductor industry through its EUV technology and is working close to full capacity, with full order books. The ZEISS segments Industrial Quality & Research, Medical Technology and Consumer Markets are also reaping the benefits of increased demand, buoyed by the positive mood created by key accounts and were able to increase their revenue over that of the previous year once again.

With innovations it is working on in all four segments, ZEISS is continuing to drive global digitalization forward.

Powering innovation for the future
Our many technological milestones from the past 176 years show that ZEISS repeatedly challenges the limits of what is physically and technically feasible. This unique innovative spirit has imbued the company with real staying power, allowing us to help our customers be successful.

The most recent example of this is the Deutscher Zukunftspreis (German Future Prize) for the development of the ZEISS Lattice Lightsheet 7 microscope, which for the first time enables scientists to observe living cells through gentle 3D imaging over a longer period of time – a technology that opens up new possibilities in subcellular research such as cancer research.

As a global technology leader, one success factor has been our focused investment strategy. Our consistently high expenditure on research and development, which once again stands at 13 percent of revenue, represents our investment in the future – at 1,151 million euros, it has reached a new high! At research and development departments across the ZEISS Group, more than 5,200 employees are working hard every day to further expand our investment power. This is reflected in our many patents which totaled just under 10,500 worldwide as of the reporting date.

Scaling for growth
The ZEISS Group continues on its dynamic growth trajectory. All four segments und all regions contribute to profitable growth. We are on the right track with the #agenda25.

However, we are also looking ahead we want to set the course now so that we can continue to grow steadily in the coming years – and beyond the 10 billion euro threshold. Importantly, within the ZEISS Group, we are making key end-to-end processes more robust by designing and, most importantly, standardizing them from start to finish. This will help us reduce the current complexity and thus also support our further growth. This transformation requires an appropriate organizational setup and the incorporation of necessary cultural changes, especially in the ongoing, comprehensive digital transformation processes.

In order to further successfully align the company's development and, in particular, to accelerate the transformation of the digital infrastructure of the ZEISS Group, the Supervisory Board of Carl Zeiss AG resolved to expand the Executive Board to include the function of Chief Transformation Officer (CTO) and to appoint Susan-Stefanie Breitkopf to the Executive Board for this purpose effective 1 July 2022. ZEISS Digital Partners (ZDP), Corporate Information Technology (CIT), Corporate Human Resources (CHR), Management System, Operational Excellence, Shared Procurement & Logistic Services as well as US Shared Services fall under the remit of the Chief Transformation Officer.

Thinking and acting sustainably
As a foundation-owned company, social responsibility is part of our DNA. That is why we have firmly anchored the topic of sustainability in our strategic agenda, the #agenda25. We are striving to establish sustainability throughout the company in a pragmatic way, rendering it measurable and developing it further so that we can make our contribution to a sustainable and livable future. In light of this, ZEISS has placed value for society, climate action, and circular economy at the center of its sustainability efforts. Within this framework, various teams around the world are working across organizational boundaries to develop solutions for topics such as green infrastructure, green business models and social engagement in order to implement specific measures by 2025.

In fiscal year 2021/22, we came a significant step closer to attaining our goal of becoming CO_2 neutral in our own activities (Scope 1 and 2 emissions) worldwide by 2025: for example, ZEISS sites worldwide were almost entirely powered by green energy over the last twelve months. At the same time, we generated more sustainable energy ourselves. ZEISS is therefore making a contribution to the global targets set in the Paris Agreement of limiting global warming to well below 2°C. ZEISS launched its future-oriented initiative "A Heart for Science" in this fiscal year on the occasion of the company's 175th anniversary. This is an internal volunteering program with the aim of kindling interest in STEM among young people aged between 12 and 18 and therefore contributes to the development of innovative solutions in the future, too.

Shaping the future
Past growth is no guarantee of future success, especially in times of increasing geopolitical uncertainty. On the one hand, as a modern and innovative foundation-owned company, we have overcome many challenges in the past, achieved innovative milestones and always looked ahead. On the other hand, we are optimistic that we will not only continue to develop but also grow on the basis of our strategic agenda and our networked transformation activities. We can be optimistic about the future.

Yours, Karl Lamprecht

Dr. Karl Lamprecht
President and CEO of Carl Zeiss AG

Solutions to Shape the Future

Segments of the ZEISS Group

The ZEISS Group is one of the world's leading technology companies. It has a balanced portfolio that is geared toward attractive future-oriented markets in optics, precision mechanics and optoelectronics. For more than 175 years, the company has been shaping technological progress, advancing the world of optics with solutions from its four segments and meeting its customers' needs

Semiconductor Manufacturing Technology

- **Semiconductor Manufacturing Optics**
- **Semiconductor Mask Solutions**
- **Process Control Solutions**

Industrial Quality & Research

- **Industrial Quality Solutions**
- **Research Microscopy Solutions**

Medical Technology

- **Ophthalmic Devices**
- **Microsurgery**

Consumer Markets

- **Vision Care**
- **Consumer Products**

Semiconductor Manufacturing Technology
A large proportion of all microchips are produced using ZEISS technologies. As a technology leader in the field of semiconductor manufacturing equipment, ZEISS enables the production of ever smaller, increasingly powerful and more energy-efficient microchips, and thus plays a pivotal role in the age of micro- and nanoelectronics.

Industrial Quality & Research
ZEISS ensures quality standards and enables scientific research wherever maximum precision is indispensable: with coordinate measuring machines, optical and multisensory systems, microscope systems and smart software for industrial quality assurance, research and material inspection. ZEISS plays its part by ensuring that even the tiniest structures and processes become visible.

Medical Technology

With its products and solutions for ophthalmology, neurosurgery, spine surgery, ENT surgery, reconstructive surgery, dentistry and oncology, ZEISS helps drive progress in medicine and assists doctors all over the world in enhancing their patients' quality of life.

Consumer Markets

As one of the world's leading manufacturers of eyeglass lenses, ZEISS stands for maximum visual comfort. ZEISS movie and camera lenses, binoculars, spotting scopes and riflescopes offer outstanding optical quality for users with exacting requirements. In every moment that counts.

At Home
Across the Globe

A great deal has happened since ZEISS opened its first branch outside Germany in London in 1893. Today, the ZEISS Group is represented in around 50 countries. Over 38,000 employees work at more than 30 production sites, over 60 sales and service locations, and around 30 research and development facilities worldwide. The company is headquartered in Oberkochen (Germany).

More than
100
sites
worldwide

13
percent of
revenue is invested
in research and
development

More than
5,200
employees in
research and development

Around
10,500
patents
worldwide

Thinking and Acting Sustainably
Sustainability at ZEISS

As a foundation-owned company, sustainability and business success are inextricably linked at ZEISS. Sustainable value creation is an integral part of the company's business activity, which focuses on providing innovative solutions that contribute to positive development in society and enable long-term, profitable growth.

ZEISS understands that growth is only possible in an intact environment that is open to innovation. Only companies that respect the needs and motivations of others – particularly customers, business partners, employees and local communities – and cooperate with them on an ongoing basis can achieve long-term business success.

ZEISS is also making its contribution to the global Sustainable Development Goals that were adopted by the United Nations in 2015 and is contributing to the implementation of these sustainability goals. Therefore the company has identified a total of six goals that allow its business processes, product portfolio and services to have the greatest impact on people, the environment and society: Good Health and Well-being (SDG 3), Quality Education (SDG 4), Decent Work and Economic Growth (SDG 8), Industry, Innovation and Infrastructure (SDG 9), Responsible Consumption and Production (SDG 12) and Climate Action (SDG 13). The following three focus topics have been derived from this.

Sustainability in the ZEISS corporate strategy

As part of its corporate strategy, ZEISS has placed value for society, climate action and, circular economy at the focus of its sustainability efforts, and has set specific targets for the period up to 2025.

Value for society

As a foundation company, ZEISS has a responsibility to care for the environment and thus also for the people living near its sites, which means supporting them and improving quality of life for humanity. ZEISS contributes to creating a sustainable society that will provide as many people as possible with access to education, high-quality healthcare and rewarding job opportunities.

With its products and solutions, ZEISS also wants to generate added value for a more sustainable society. This includes providing as many people as possible with access to high-quality healthcare. ZEISS will therefore continue its existing activities and sponsorships, such as in education and research, human rights and diversity.

Climate action

Human greenhouse gases are the main reason for climate change. There is an overwhelming consensus among the scientific community that human activities are the leading cause of the Earth's warming in recent decades. Carbon emissions cause global warming, rising sea levels and threats to communities. They pose a threat to our livelihoods.

ZEISS aims to achieve carbon neutrality in its own activities (Scope 1 und 2 emissions) by 2025. An important lever in this regard is the switch to green power. Furthermore, ZEISS will be looking at the emissions in its upstream value chains. The company also intends to use energy as efficiently as possible. Here, too, ZEISS has set specific targets to be met by 2025.

Circular economy

The overexploitation of natural resources required to achieve economic growth and development has impacted the environment negatively. A circular economy is an economic system of closed loops in which raw materials, components and products generate added value as long as possible, renewable energy sources are used and systems thinking is at the core.

ZEISS strives for a circular use of resources with a view to reducing the impact on the environment. To achieve this, more renewable energy resources and recycled materials will be deployed, while loops are being closed. The aim is to reduce water consumption by 15 percent, waste generation by 10 percent and energy consumption by 20 percent relative to value added compared to fiscal year 2018/19.

"Sustainability has always been a fundamental principle for ZEISS. A commitment to the common good and to finding solutions for key societal issues are part and parcel of the company’s ethos."

Dr. Karl Lamprecht,
CEO, ZEISS Group

"ZEISS aims to operate in a carbon-neutral way in its own activities worldwide by 2025. ZEISS is therefore making a contribution to the global targets set in the Paris Agreement of limiting global warming to well below 2°C. We managed to power ZEISS sites worldwide almost entirely with green energy in fiscal year 2021/22."

Dr. Nicole Ziegler ,
Head of Sustainability at ZEISS

"We are working on sustainable and resource-efficient solutions and technologies that also go beyond the existing business fields. In this way, the environment, our customers and ZEISS can all benefit. A particular focus is on the sustainable use of resources in terms of the circular economy."

Dr. Benjamin Viering,
Head of Global Sustainability Program at ZEISS

The ZEISS sustainability program

ZEISS' commitment to sustainability is anchored in the strategic #agenda25. As part of this agenda, ZEISS launched a Group-wide sustainability program with the following five key topics.

» Sustainable energy supply and energy-efficient infrastructure
» Sustainable product development
» Implementation of new environmentally sustainable business models
» Sustainability in procurement and logistics
» Strengthening social engagement and social business models

With these five key topics, the focus in fiscal year 2021/22 was more than ever on sustainability. The program takes up the ZEISS sustainability goals and strategic focus topics and helps to develop measures and action plans across functional boundaries to implement sustainability at ZEISS. The goal of the program is to firmly anchor sustainability in all areas at ZEISS and integrate it as a mandatory and integral part of corporate processes. In addition, the company aims to develop new sustainable business areas through ZEISS technology and research and to further advance the implementation of environmental and social standards in the supply chain.

In order to achieve the climate action and circular economy goals, ZEISS has already expedited numerous measures and initiatives as part of the sustainability program. For example, ZEISS sites worldwide were almost entirely powered by green energy in fiscal year 2021/22. ZEISS also expanded its own project to generate sustainable energy at the same time and invested in sustainable infrastructure for both new buildings and existing ones. Optimizing the supply chain to make it more sustainable is another key area where ZEISS is stepping up to the plate.

Sustainability milestones at ZEISS

1846
The company is founded

1875
ZEISS establishes first company health insurance fund

1889
The Carl Zeiss Foundation is established

1900
The eight-hour day is introduced

1993
Annual environmental performance indicators are monitored

2007
ZEISS Code of Conduct comes into force worldwide

2011
Carl Zeiss Promotion Fund is established

2015
EU sites are certified to the ISO 50001 energy management standard

2019
ZEISS achieves sustainability targets for energy and water consumption, waste generation and CO_2 emissions

2020/21
ZEISS enshrines sustainability in Group strategy and launches Group-wide sustainability program

2022
ZEISS sets new environmental targets for 2025

More information: www.zeiss.com/sustainability

From 31 January 2023, you will find the Sustainability Report there.

The booklet “Insights on Sustainability” will be available at www.zeiss.com/sustainabilityinsights for more insights into the sustainability projects run at ZEISS.

Thinking and acting sustainably at ZEISS in fiscal year 2021/22

Sustainability at ZEISS has many facets ranging from projects that make water use more efficient, to microchips that are becoming increasingly more sustainable thanks to ZEISS, through to new materials in 3D printing that make the production of components more resource-efficient. ZEISS microscopes are being used in cancer, environmental, materials and climate research, while cooperations and partnerships are helping to protect animals and their habitats. The following examples provide a view into sustainability initiatives and projects at ZEISS.

A Heart for Science

Enthusiasm for nature and technology has always been an integral part of the ZEISS DNA. With this in mind, on the occasion of the company's 175th anniversary, ZEISS launched A Heart for Science - an international initiative run by ZEISS that aims to get young people aged 12 to 18 interested in STEM (science, technology, engineering and mathematics). All ZEISS employees can join the A Heart for Science team as volunteers and impart their knowledge to the explorers of tomorrow.

By introducing this initiative, ZEISS intends to grow an international network of internal and external project partners. Employees can work with educational institutions and places of learning such as schools, student labs or museums by teaching, conducting experiments or organizing STEM workshops. The vision behind the project is to kindle interest in STEM and therefore contribute to developing innovative solutions for the future.

There are currently more than 150 ZEISS employees from eleven countries actively volunteering. Their diverse projects range from STEM support for young people in remote schools in Australia to a student club in Germany where children can gain their first experience in programming with the help of a robot, and a mentoring program in cooperation with the local school authority at the newly founded ZEISS Innovation Center in California.

How can microchips become more sustainable?

If the energy consumption of smartphones were to increase at the same rate as their performance, they would have to be recharged every hour. High-precision optics for extreme ultra-violet lithography (EUV lithography), technologies for photo-mask production and process control from ZEISS Semiconductor Manufacturing Technology are making the system architecture of microchips ever more compact, which enables more powerful microchips while using the same amount of energy. Overall, EUV chips are about 30 percent more energy-efficient than chips produced with deep ultraviolet light (DUV light) optics. The next generation of EUV lithography systems, which ZEISS Semiconductor Manufacturing Technology is already working on at full speed, will enable an even greater improvement. In fiscal year 2021/22, good progress was made towards initial delivery.

At the same time, the new generation of microchips is enabling trends such as the Internet of Things (IoT), artificial intelligence and Industry 4.0, which can contribute to greater sustainability, efficiency and resource conservation. Sustainable technologies such as photovoltaic systems, wind turbines or electric cars build on these trends. Together with their suppliers, ZEISS Semiconductor Manufacturing Technology´s end customers are also working to further reduce the energy consumption of their microchips – while, at the same time, continuously increasing their performance by 2040. In doing so, they also rely on new materials, system architectures and on the innovations and product roadmaps of ZEISS Semiconductor Manufacturing Technology.

Eyeglasses for disadvantaged regions

Many people across the globe have no access to eyecare because they live in underserved regions where neither vision screening nor eye care services are available. Since 2015, ZEISS has been committed to improving this situation in one of the world's most affected regions in India. With the Aloka Vision Programme, ZEISS is working with non-governmental organizations and partners to establish a qualitative primary care service in rural areas in India. Local partners, simple digital platforms and an optimized supply chain make it possible to perform several thousand eye exams, sell several thousand pairs of glasses and carry out ophthalmic treatments each month. In fiscal year 2021/22, Aloka provided optical and ophthalmic care to over 300,000 patients.

A longtime partner is Lifeline Express in India, a hospital train that makes stops in remote parts of the country to provide treatment to those in need completely free of charge. ZEISS is a reliable partner offering eye exams and eyeglasses. Another practical example is the cooperation with Lions Club, the Optometry Council of India and universities teaching optometry. Together, ZEISS provides optical and ophthalmic care for many thousands of disadvantaged children who, thanks to this commitment, have access to eye tests and, if necessary, free glasses for the first time ever.

Taking retro to the future – ZEISS PerformanceFit

New is not always better – at least not for the climate. ZEISS Industrial Quality Solutions has therefore developed a solution that combines cost-effectiveness and sustainability: with the ZEISS PerformanceFit retrofitting program, ZEISS can bring 20-year-old coordinate measuring machines right up to date. With a particularly innovative product redesign, the experts at ZEISS Industrial Quality Solutions enable a complex and unique retrofit at the supposed end of a machine's life cycle. With a maximum of only one week's downtime, the machines are completely rebuilt on site and fitted with new modules. This way, the large components that are energy intensive to produce can continue to be used. This means that around 2.6 tons of carbon can be saved per machine with the retrofit. At the same time, this approach can also reduce material consumption, extend the life of the machines and increase their efficiency, realize lower running costs, and ultimately halve energy consumption while further saving CO_2 emissions during use.

The 2021 Baden-Württemberg Environmental Technology Award in the Material Efficiency category went to ZEISS for this exemplary achievement. In addition to retrofitting at the customer's site, ZEISS Industrial Quality Solutions buys back its own machines from the customer for general overhaul and sells them as ZEISS Originals on special terms. In this way, the ecological footprint of a device is even spread over several customers, and the system can remain in use for a longer period of time.

Hope in the fight against breast cancer

With ZEISS INTRABEAM, an intraoperative radiation device, ZEISS offers an alternative to conventional, external radiation in the fight against breast cancer. Intraoperative radiation therapy (IORT) is a highly effective and less invasive therapy: the irradiation is administered in the form of a single dose lasting approximately 30 minutes directly after surgical removal of the tumor and while surgery is still in progress. This means that conventional post-operative radiation treatment, which usually takes around six weeks, can be shortened or eliminated altogether, and healthy surrounding tissue and skin can also be spared. Clinical study results published in August 2020 prove that single, targeted intraoperative irradiation with ZEISS INTRABEAM is not inferior to external beam radiotherapy (EBRT) in terms of efficacy.[1] The TARGIT method with ZEISS INTRABEAM is the result of two decades of interdisciplinary research. Up to now, more than 45,000 people have already been treated with the TARGIT method. More than 260 breast cancer centers in 38 countries have adopted this method.[2] Another research and treatment area for the use of IORT is neuro-oncology.[3]

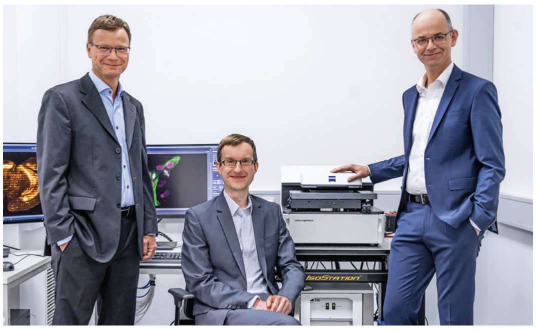
In addition to the significantly shorter duration of irradiation and the low level of radiation-related pain for those treated using ZEISS INTRABEAM can save 1,200 tons of carbon emissions annually in the UK alone.[4] Furthermore, less additional resources and hospital space are needed due to the fact that ZEISS INTRABEAM is portable.

[1] www.zeiss.com/meditec-ag/media-news/press-releases-hcp/2020/targit-a-breast-cancer-study.html
[2] https://doi.org/10.1038/s41416-020-01233-5
[3] ClinicalTrials.gov Identifier: NCT02685605, Giordano, F. A. (30 April 2021). Intraoperative Radiotherapy in Newly Diagnosed Glioblastoma Multiforme (INTRAGO-II). Available online: https://clinicaltrials.gov/ct2/show/NCT02685605
[4] Per year, based on nationwide use, for UK only https://pubmed.ncbi.nlm.nih.gov/27160842/

Impressions from the Fiscal Year

Shaping the future

Thanks to its long-term investment strategy, balanced portfolio, international setup and globally oriented value chains, the ZEISS Group can look forward to a bright future. In the previous fiscal year, targeted investments helped ZEISS shape the future. Here are just some impressions from fiscal year 2021/22.



ZEISS microscope developers win Deutscher Zukunftspreis 2022 (German Future Prize)
Dr. Thomas Kalkbrenner, Dr. Jörg Siebenmorgen and Ralf Wolleschensky have been awarded the 2022 Deutscher Zukunftspreis (German Future Prize) for their contribution to ZEISS Lattice Lightsheet 7. The novel microscope enables gentle 3D imaging of living cells and thus, for the first time, observation of subcellular dynamics in 3D over hours and days. This opens up new possibilities such as for cancer research.

ZEISS celebrates 175 years of innovation, passion and the courage to develop
On 17 November 1846, a young mechanic named Carl Zeiss opened his workshop for precision mechanics and optics in Jena, thus laying the foundation for what would become ZEISS. To mark the 175th anniversary, the company held a celebration event on 16 November 2021 in Jena where the Foundation was established – the highlight of a jam-packed anniversary year. During the virtual event, Dr. Karl Lamprecht praised the company's successful past, celebrated its present and shared his outlook on the future. There was a 24-hour live stream radio show during which ZEISS employees could contribute personal stories and share impressions of the local festivities around the world.

ZEISS Earns Intel’s 2022 EPIC Distinguished Supplier Award
As one of 26 prize winners, ZEISS Semiconductor Manufacturing Technology was awarded Intel’s 2022 EPIC Distinguished Supplier Award in April 2022. Through this award, Intel recognizes ZEISS Semiconductor Manufacturing Technology´s consistently high performance in various performance criteria. According to Intel, ZEISS Semiconductor Manufacturing Technology has been instrumental in the company's success, always proving agile and flexible while championing safety, quality, diversity and integration.

11th ZEISS Women Award 2021
In October 2021, the 11th ZEISS Women Award was presented in Dresden to three accomplished young students in IT who engage with social and community issues alongside their studies and have personalities that make them ideal role models. The award serves as a platform to publicly recognize successful young women in IT and to encourage more women to consider a career in the digital sector.

A Heart for Science
The new corporate volunteering program A Heart for Science was initiated in June. ZEISS launched the global initiative for promoting STEM called A Heart for Science on the occasion of its 175th anniversary. The program aims to encourage young people to go into science and technology. Employees are participating in this corporate volunteering program across the world and are passing on their knowledge to the explorers of tomorrow.

ZEISS ClearView – milestone for optics and aesthetics in stock lenses
With ZEISS ClearView eyeglass lenses, the ZEISS Consumer Markets segment has found a way to transfer complex freeform designs to single-vision stock lenses, making complex lens surfaces possible for stock lenses as well. The surface of the lens is optimized using over 700 free calculation parameters, a significant advance over spherical or aspherical single vision lenses. As a result, ZEISS ClearView eyeglass lenses offer high optical quality from the center to the periphery of the lens, while being significantly thinner and flatter than conventional stock lenses.

ZEISS Medical Technology acquires two manufacturers for surgical instruments
ZEISS Medical Technology acquired two manufacturers of surgical instruments: Kogent Surgical, LLC,and Katalyst Surgical, LLC, based in Chesterfield (US). ZEISS Medical Technology expects this strategically important acquisition to scale its business and expand its offering in the field of surgical solutions. With FDA approval for MTLawton – a new generation of bipolar forceps for electrosurgery – the first surgical instrument from this acquisition was recently launched on the market.

More information:
www.zeiss.com/newsroom

The Carl Zeiss Foundation

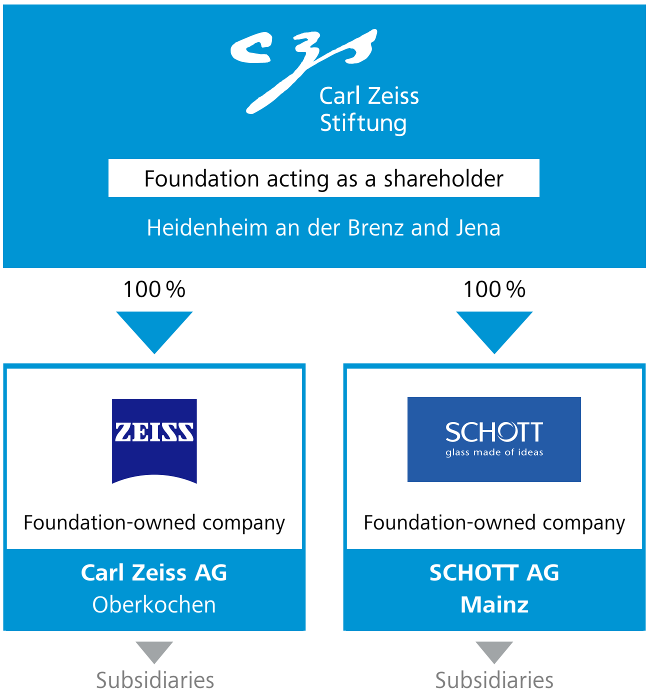
Promoting science

The Carl Zeiss Foundation is the sole shareholder of Carl Zeiss AG. This special ownership structure ensures stability and enables the company to create long-term perspectives. The Foundation statutes prohibit the sale of shares through an initial public offering, for example. For that reason, the company's shares are not listed on any stock exchange.

In 1889, physicist and entrepreneur Ernst Abbe created the Carl Zeiss Foundation to which both Carl Zeiss AG and SCHOTT AG belong. The objectives of the foundation stipulated by Abbe remain valid to this very day:

» Safeguarding the future and responsible management of the two Foundation companies
» Fulfilling its special responsibility toward employees
» Meeting its responsibility toward society through the commitment of its member companies to non-profit activities in their surrounding regions
» Promoting science

With this unique corporate model, the Carl Zeiss Foundation and its two member companies made industrial and social history in Germany. Since 2004, the Foundation has received dividends of 429 million euros from Carl Zeiss AG in order to achieve its goals. The Foundation uses the dividends from Carl Zeiss AG and SCHOTT AG to promote science – particularly the natural and engineering sciences, mathematics and information technology – at universities in the German federal states of Baden-Württemberg, Rhineland-Palatinate and Thuringia. Today, the Carl Zeiss Foundation is one of Germany's largest foundations focused on the promotion of science.



Further information:
www.carl-zeiss-stiftung.de/en

Corporate Governance

For ZEISS, acting lawfully and responsibly and managing the company in a transparent manner that is focused on its long-term success are fundamental principles of its corporate policy.

With its corporate governance structure, ZEISS ensures that legal provisions, the Carl Zeiss Foundation statutes and the company's internal directives are observed in line with compliance provisions.

The Code of Conduct is a core element of the compliance management system of the ZEISS Group. It summarizes the rudiments and principles of action that form the basis of responsible conduct. The Code of Conduct is binding upon all ZEISS employees and is published on the company's website.

Report of the Supervisory Board

Ladies and Gentlemen,

Despite the ongoing COVID-19 pandemic, which primarily impacted the ZEISS businesses in the first half of fiscal year 2021/22, and the immense geopolitical challenges, which have been accelerated by the war in Ukraine in particular, ZEISS achieved record-breaking revenue of around 8.8 billion euros in fiscal year 2021/22 with growth in all segments. Continuous progress in digitalization ensured continued above-average development in the Semiconductor Manufacturing Technology segment, with growth of 20%. The direct-to-market segments also succeeded in further increasing their revenues. ZEISS has thus proved that sustainable sizeable investments in digitalization and in research and development are the foundation for further growth.

Dr. Michael Bolle

In the past fiscal year, the Supervisory Board oversaw and advised the Executive Board in accordance with the duties entrusted to supervisory boards by law, the articles of association and rules of internal procedure. The Executive Board provided the Supervisory Board with written and verbal information about the business situation and development, the current earnings situation, risk factors and risk management, short-term and long-term planning, investments and organizational measures. The Chairman of the Supervisory Board was in close contact with the Executive Board and was regularly informed about the development of the business situation and important business transactions. The Supervisory Board was involved in all decisions of importance and passed the resolutions required by law, the articles of association and rules of internal procedure. The decisions of the Supervisory Board were based on the reports and decisions proposed by the Executive Board, which the Supervisory Board subjected to in-depth scrutiny. The Executive Board and Supervisory Board have joined forces to ensure ZEISS continues to develop successfully.

Supervisory Board meeting topics

The Supervisory Board held a total of six meetings during fiscal year 2021/22.

During the previous fiscal year, it approved the annual budget for fiscal year 2021/22 on 30 September 2021. In December 2021, it discussed and approved the annual financial statements. The new Chairman of the Supervisory Board was elected at an extraordinary meeting on 10 January 2022.

During the meeting on 17 May 2022, the particular topics of discussion were the impact resulting from the war in Ukraine and the effects on ZEISS, along with the results of the efficiency audit conducted by the Supervisory Board. In addition, new targets for the representation of women on the Supervisory Board and on the Executive Board of Carl Zeiss AG were set during this meeting. In another extraordinary meeting on 31 May 2022, the expansion of the Executive Board to include the role of Chief Transformation Officer was approved, including deciding who would hold this office.

During the July 2022 strategy meeting, a comprehensive presentation of the company's strategic portfolio was given to the Supervisory Board. The respective heads of the strategic business units were involved and particular focus was placed on the challenges facing ZEISS that have arisen for the company out of the geopolitical situation. At the strategy meeting, the Executive Board presented a clear strategic plan that continues the long-term positive development of the individual segments with the support of the management and employees. At the same time, it also looked at the changes that might occur in the company's respective markets, while considering the foreseeability of any expected changes.

The budget plan for 2022/23 was approved at the final meeting of fiscal year 2021/22 on 29 September 2022.

Changes to the Executive Board

The Supervisory Board's key concern is the optimal ongoing development of the company. Stability and continuity in the management of the company play an important role here.

In order to accommodate the comprehensive transformational changes at the company and thus continue the successful implementation of the strategic growth trajectory, the Supervisory Board decided to expand the Board by adding the role of Chief Transformation Officer (CTO) in May 2022. The main tasks for supporting the digital transformation at ZEISS are consolidated in this department. The Supervisory Board appointed Ms. Susan-Stefanie Breitkopf to the Executive Board of Carl Zeiss AG effective 1 July 2022.

By mutual agreement, the Executive Board contract with Dr. Matthias Metz was terminated as of 30 June 2022. The office was filled internally by appointing Mr. Sven Hermann as a member of the Executive Board with responsibility for the Consumer Markets segment as of 1 July 2022.

By mutual agreement, the Executive Board contract with Dr. Ludwin Monz was terminated as of 31 December 2021. The office was filled internally by appointing Dr. Markus Weber as member of the Executive Board with responsibility for the ZEISS Medical Technology segment as of 1 January 2022. In addition, the Supervisory Board appointed Mr. Andreas Pecher as a new member of the Executive Board with responsibility for the ZEISS Semiconductor Manufacturing Technology segment as of 1 January 2022.

The Supervisory Board would like to thank Dr. Metz and Dr. Monz for his excellent work as Executive Board member of Carl Zeiss AG and wishes Ms. Breitkopf, Mr. Hermann, Dr. Weber and Mr. Pecher all the best in their new roles.

Work of the Supervisory Board committees
The Audit Committee met three times as scheduled during the period under review. It evaluated the efficacy of risk management and discussed the topics compliance, internal auditing, the internal control system, accounting and the key issues of the annual audit, as well as the annual and consolidated financial statements. The Chairman's Committee convened four times. The achievement of targets and Executive Board remuneration were subject to regular review. In the Supervisory Board meetings, the Chairmen of the Audit and Chairman's Committees provided regular reports on the work of their committees. Effective 1 September 2022, an additional committee was created, the Digital Committee, to act as a sounding board, in particular to assist the CTO in an advisory capacity; and to foster an exchange between experts, especially as concerns the Digital Committee members' professional experiences within the companies.

The Mediation Committee did not convene during the year under review.

Changes to the Supervisory Board
The previous Chairman of the Supervisory Board, of the Chairman's Committee and of the Mediation Committee, as well as member of the Audit Committee, Dr. Dieter Kurz, left the Supervisory Board on 31 December 2021. Also effective 31 December 2021, member of the Supervisory Board and Chairman of the Audit Committee, Dr. Lothar Steinebach, left the Supervisory Board.

Effective 1 January 2022, Dr. Michael Bolle was elected to the Supervisory Board at the Shareholders' Meeting. In an extraordinary meeting of the Supervisory Board on 10 January 2022, Dr. Bolle was elected Chairman of the Supervisory Board. He is therefore Chairman of both the Chairman's and the Mediation Committees according to the rules of internal procedure of the Supervisory Board. He was also elected member of the Audit and the Digital Committees by the Supervisory Board.

Also effective 1 January 2022, Mr. Jan Brecht was elected to the Supervisory Board at the Shareholders' Meeting.

Effective 24 November 2021, Mr. Kai Bliesener was appointed to the Supervisory Board as the union representative. Mr. Bliesener informed the company that he would resign from his office as member of the Supervisory Board of Carl Zeiss AG effective 20 November 2022. The company then applied to the court of registration for the court appointment of a representative nominated by the union to succeed him on the Supervisory Board. The court of registration had not yet ruled on this matter by the editorial deadline for this report.

In order to provide more intensive support for the digital transformation of the company on the part of the Supervisory Board, the Supervisory Board resolved at its meeting on 13 July 2022 to form a Digital Committee as of 1 September 2022 and elected Supervisory Board members Hariolf Abele, Dr. Michael Bolle, Jan Brecht and Dr. Klaus Dieterich to the Digital Committee. Mr. Brecht was elected Chairman by the members of the Digital Committee in the constitutive meeting on 20 October 2022.

Mr. Gert-Hartwig Lescow was elected by the Supervisory Board to the Audit Committee in the meeting on 30 September 2021 and elected its Chairman on 1 January 2022.

Audit of the annual and consolidated financial statements
Auditing firm Ernst & Young GmbH, Stuttgart, has audited the consolidated financial statements of Carl Zeiss AG, including the Management Report, for fiscal year 2021/22 prepared pursuant to Sec. 315e (3) of the German Commercial Code (HGB) in accordance with International Financial Reporting Standards (IFRS) and issued an unqualified auditor's report in each case. Auditing firm Ernst & Young GmbH, Stuttgart, also audited the dependent company report prepared by the Executive Board.

All members of the Supervisory Board received the independent auditor's documents and audit reports in good time. We examined the documents and discussed the annual and consolidated financial statements at the meeting of the Audit Committee on 12 December 2022 and at the Supervisory Board meeting held on 13 December 2022. The independent auditor attended both meetings, presented the major results of the audit, provided supplementary information and answered questions. At the plenary assembly, the Chairman of the Audit Committee reported on the result of the examination of the consolidated financial statements by the Audit Committee. After examining the documents, the Supervisory Board endorsed the result obtained by the auditor and approved the financial statements prepared by the Executive Board. The Carl Zeiss AG financial statements were thereby adopted, effective 30 September 2022.

Pursuant to Sec. 312 German Stock Corporations Act (AktG), the Executive Board has prepared the above-mentioned dependent company report for the period from 1 October 2021 to 30 September 2022. The independent auditors have issued the following opinion on the findings of their audit of the dependent company report: "Based on our audit, which was carried out in accordance with professional standards, we confirm that

1. The actual disclosures contained in the report are correct and

2. The payments made by the Company in the legal transactions listed in the report were not unreasonably high."

The Supervisory Board agreed with the results of the audit presented by the independent auditors. Following the final result of the review by the Supervisory Board, there were no objections to the Executive Board's concluding statement in the dependent company report.

We will also be paying out a dividend this year to our sole shareholder, the Carl Zeiss Foundation.

On behalf of the Supervisory Board, I would like to thank the members of the Executive Board and all ZEISS employees for their exceptional dedication and outstanding achievements that are at the foundation of our success.

I personally would also like to thank all members of the Supervisory Board and members of the Executive Board for the constructive and successful cooperation, which has made for a very smooth start in my role as Chairman of the Supervisory Board.

Oberkochen, December 2022

On behalf of the Supervisory Board

Dr. Michael Bolle
Chairman of the Supervisory Board:

Supervisory Board of Carl Zeiss AG

Supervisory Board of Carl Zeiss AG

Dr. Dieter Kurz (Chairman)[1] | Lindau
Chairman of the Shareholder Council of the Carl Zeiss Foundation, Heidenheim an der Brenz and Jena

Dr. Michael Bolle (Chairman)[2] | Leonberg
Chairman of the Shareholder Council of the Carl Zeiss Foundation, Heidenheim an der Brenz and Jena

Angelika Franzke (Deputy Chair)[3] | Oberkochen
Chairwoman of the Group Employee Representative Council of Carl Zeiss AG, Oberkochen

Hariolf Abele[3] | Aalen
Deputy Chairman of the Employee Representative Council of Carl Zeiss Industrielle Messtechnik GmbH, Oberkochen

Prof. Dr. Martin Allespach[3] | Kelkheim
Director and Head of the European Academy of Labour at the University of Frankfurt am Main

Kai Bliesener[3, 4] | Schwäbisch Gmünd
First Authorized Representative of the IG Metall union, Aalen Administration Office

Gerhard Bösner[3] | Aalen
Chairman of the Employee Representative Council of Carl Zeiss SMT GmbH, Oberkochen

Jan Brecht | Stuttgart
Chief Information Officer of the Mercedes-Benz Group AG, Stuttgart

Dr. Klaus Dieterich | Stuttgart
Former President of Corporate Research and Advanced Engineering at Robert Bosch GmbH, Stuttgart

Dr.-Ing. Mathias Kammüller | Gerlingen
Member of the Executive Board and Managing Partner of TRUMPF SE + Co. KG, Ditzingen, Germany

Andreas Kopf[3] | Bad Wurzach
Head of Services Accounting and Tax of Carl Zeiss AG, Oberkochen

Michael Kramer[3] | Jena
Production supervisor at Carl Zeiss Jena GmbH, Jena

Dr. Joachim Kreuzburg | Hanover
CEO and Chairman of the Executive Board of Sartorius AG, Göttingen

Gert-Hartwig Lescow | Lübeck
Deputy Chairman of the Board and Chief Financial and IT Officer at Drägerwerk Verwaltungs AG, Lübeck

Prof. Jürgen Mlynek | Berlin
Chairman of the Board of the Falling Walls Foundation gGmbH, Berlin

Silke Müller[3] | Jena
Patent Counsel at the Jena site of Carl Zeiss AG, Oberkochen

Dr. Lothar Steinebach[1] | Leverkusen
Former Member of the Management Board of Henkel AG & Co. KGaA, Düsseldorf

Dr. Eberhard Veit | Göppingen
Managing Partner of 4.0-Veit GbR, Göppingen

Committees of the Supervisory Board

Chairman's Committee
Dr. Dieter Kurz[1] (Chairman)
Dr. Michael Bolle[2] (Chairman)
Dr. Klaus Dieterich
Angelika Franzke[3]
Gerhard Bösner[3]

Audit Committee
Dr. Lothar Steinebach[1] (Chairman)
Gert-Hartwig Lescow[2] (Chairman)
Hariolf Abele[3]
Dr. Michael Bolle
Dr. Dieter Kurz[1]
Silke Müller [3]

Digital Committee[5]
Jan Brecht (Chairman)[6]
Hariolf Abele
Dr. Michael Bolle
Dr. Klaus Dieterich

Mediation Committee
Dr. Dieter Kurz[1] (Chairman)
Dr. Michael Bolle[2] (Chairman)
Dr. Mathias Kammüller
Andreas Kopf[3]
Angelika Franzke[3]

[1] Until 31 December 2021
[2] From 1 January 2022
[3] Employee Representatives
[4] Until 20 November 2022
[5] From 1 September 2022
[6] Chairman from 20 October 2022

Last updated: December 2022

Group Management Report

THE ZEISS GROUP

Company profile

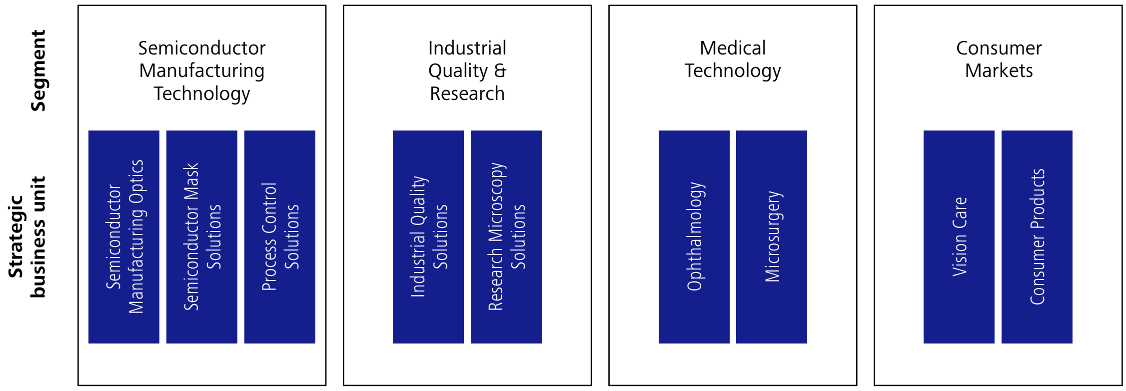
ZEISS is an internationally leading technology enterprise operating in the optics and optoelectronics industries. The ZEISS Group emerged from a workshop for precision mechanics and optics established by company founder Carl Zeiss in Jena (Thuringia) in 1846. Today, ZEISS is headquartered in Oberkochen (Baden-Württemberg).

The ZEISS Group is represented in around 50 countries and has more than 60 sales and service locations, more than 30 manufacturing sites and some 30 research and development centers around the globe.

Carl Zeiss AG is the strategic management holding company that manages the ZEISS Group. It develops the ZEISS Group's corporate business activities and portfolio and provides central management and service functions.

ZEISS comprises 4 segments: Semiconductor Manufacturing Technology, Industrial Quality & Research, Medical Technology and Consumer Markets. The ZEISS Group has a business portfolio that is divided into 9 strategic business units. These strategic business units are allocated to the respective segments.

Business portfolio



The sole owner of the company is the Carl Zeiss Foundation (Carl-Zeiss-Stiftung). As a company operating under the umbrella of the Carl Zeiss Foundation, ZEISS has been implementing the stipulations anchored in the Foundation statutes for over 130 years and constantly develops them further in the present context. For ZEISS as a foundation company, sustainability and business success are inextricably linked. Sustainable value added is an integral part of the corporate strategy, which aims to provide innovative solutions, contribute to a positive development in society and enable both long-term and profitable growth.

ZEISS aims to advance the world of optics and other related fields with its solutions. The ZEISS Group develops, produces and sells semiconductor manufacturing equipment, measuring technology, microscopes, medical technology, eyeglass lenses as well as camera and cine lenses, binoculars and planetarium technology.

Semiconductor Manufacturing Technology
With its product portfolio and globally leading expertise, the Semiconductor Manufacturing Technology segment covers a variety of key processes in the production of microchips. ZEISS develops and manufactures products using semiconductor manufacturing technology, including lithography optics, photomask systems and process control solutions, key technologies for the manufacture of extremely fine structures on silicon wafers – the material from which the microchips are made. The technologies from ZEISS enable further miniaturization of semiconductor structures, making microchips smaller, more powerful and more energy-efficient. These electronic applications foster global advancement in a variety of disciplines, including technology, electronics, communications, entertainment, mobility, energy and artificial intelligence.

Industrial Quality & Research
The products and solutions developed in the Industrial Quality & Research segment are focused on quality assurance in production, increasing productivity and visualizing and manipulating the tiniest of structures in science and research. The range of coordinate measuring machines, optical and multisensory systems, software solutions, comprehensive service offerings and innovative technologies, such as 3D X-ray measurement in quality assurance, are used in the automobile industry, aircraft construction and mechanical engineering as well as in the plastics industry and medical technology. In the fields of science and research, the segment also covers the entire spectrum of microscopy with light, ion, electron and X-ray microscopes. The products and solutions are used in the life sciences and materials research, as well as in workflows in the electronics and pharmaceutical industries.

Medical Technology
The Medical Technology segment develops, manufactures, markets and sells diagnostic and treatment systems, as well as implants and consumables for ophthalmology. The portfolio also includes visualization systems for neuro/ENT and spine surgery as well as for dentistry. Solutions for intraoperative radiotherapy supplement the product offering. The segment’s objective is to help drive progress in medicine and assist doctors all over the world in enhancing their patients' quality of life. Digital technologies with which the segment wants to shape the market for medical technology also play a role here.

Consumer Markets
The Consumer Markets segment operates in the areas of vision care, photography, cinematography, nature observation and sports optics. ZEISS develops, produces and sells solutions for the entire eyeglass value chain. Alongside ZEISS precision eyeglass lenses, this includes devices for eye examinations and vision testing, digital consultation and measurement applications as well as comprehensive services for eye care professionals. ZEISS is one of the world’s largest manufacturers of eyeglass lenses and offers a combined competence in eye and vision care. With its camera and cine lenses, technologies for smartphone photography and binoculars, spotting scopes and sports optics, ZEISS offers discerning customers high-end products and applications for their hobbies and professional needs.

Strategy

The ZEISS mission statement is: “As the pioneer of science in optics, we continue to challenge the limits of our imagination. With our passion for excellence, we create value for our customers and inspire the world in new ways.” With our passion for excellence, we create value for our customers and inspire the world in new ways.” This statement encapsulates the ZEISS Group’s fundamental objectives: ZEISS aims to leverage its customer focus to consolidate and expand its position as a global technology leader.

ZEISS has a broad and balanced business portfolio focusing on the attractive future-oriented markets of optics, precision mechanics and optoelectronics. The objective of portfolio management is the lasting business success of the ZEISS Group. This requires a systematic strategy geared to continuously enhancing value added.

By focusing on shaping markets, creating networks and making an impact, #agenda25 provides direct impetus for the future strategic development of the ZEISS Group. In addition, it pools the key elements of the portfolio strategy and the individual segments. The ZEISS Agenda underscores the aspiration of ZEISS to be a global technology leader and market shaper. Through these areas of focus, the global Team ZEISS aims to significantly contribute to the success of its customers.

To achieve its objectives, ZEISS relies on the commitment and expertise of its employees, its innovative strength, its culture of innovation and its strong brand.

Corporate management

The ZEISS Group is managed using a comprehensive system of indicators. For ZEISS, revenue growth and EBIT are the most important financial indicators. Other financial indicators are Economic Value Added (EVA®) and Free Cash Flow (FCF). These indicators define the balance between growth, profitability and financial strength as the basis for the company's sustainable development. Alongside these financial indicators, "innovation", "employees" and "sustainability" are important non-financial indicators.

REPORT ON ECONOMIC POSITION

Macroeconomic and segment-specific environment

Macroeconomic environment
Fiscal year 2021/22 continued to be impacted by the COVID-19 pandemic, albeit to a varying extent from region to region. In addition to existing capacity and supply bottlenecks, the war in Ukraine led to a shortage of supply in certain areas and consequently to massive increases in the price of grain, energy and especially natural gas. In accordance with the packages of sanctions imposed by the European Union, at the end of February ZEISS stopped all orders, deliveries and other services to Russia until further notice. Exceptions include the deliveries that are explicitly allowed to continue under the regulations of the EU packages of sanctions, such as in the medical sector. While global economic growth deteriorated steadily over the course of the year, the global inflation rate was on the increase. As a result, the US Federal Reserve and the European Central Bank (ECB) significantly raised the key interest rate during the year.

Segment-specific environment

Semiconductor Manufacturing Technology
The electronics and semiconductor market, which is relevant to the Semiconductor Manufacturing Technology segment, has benefited from the continuing digitalization drive. Despite increasing global uncertainties affecting the security of supply of the industry and consumer confidence, sales in the global semiconductor market have risen again due to the overall still strong global demand for chips. The capacity utilization of the factories for the production of microchips was correspondingly high in the reporting period. In light of the positive market

environment chip manufacturers invested as planned in the reporting period. The very high demand for semiconductor manufacturing equipment had a positive effect on ZEISS. This is driven by digital transformation and trends such as artificial intelligence and autonomous driving. Incentive programs in the US and Europe for the expansion of their own chip production aim to reduce the dependence of chip production on Asia and to further expand their own technological sovereignty.

Industrial Quality & Research

The recovery seen in the area of industrial quality assurance of the Industrial Quality & Research segment in fiscal year 2020/21 continued. The automobile sector further upped its spend on alternative drive technologies. Markets continued to develop very dynamically. Global spending in the area of research and science remained at the high prior-year level. Positive impetus stemmed from central research institutions (Core Facilities) and the fast-growing electronics industry.

Medical Technology

The development of the market for medical equipment and accessories is based on generally stable growth drivers. These include medical advances as well as megatrends such as demographic development as a result of increasing life expectancy and population growth. Growing per capita income is increasing demand for basic medical care in the rapidly developing economies. Solutions that increase the efficiency of diagnosis and treatment, improve the effectiveness of patient treatments and reduce the costs for the healthcare system are becoming more crucial in the face of rising health costs and patient numbers. A particular focus is on the intelligent use of diagnosis and treatment data. In addition, the increasing regulatory requirements, and their variance from one region to another, are a growing challenge in the context of product development and licensing.

Consumer Markets

Global market growth in the vision care market remains stable. Even though further measures implemented to contain the COVID-19 pandemic cannot be completely ruled out in some countries and regions, the market has largely recovered from the effects of the pandemic. The main growth drivers are increased purchasing power in emerging economies, the global rise in demand for vision care from an aging population, innovations in branded eyeglass lenses and digital customer service as well as the significant increase in short-sightedness (myopia). The global market for eyeglass lenses continues to be characterized by fierce price and competitive pressure and ongoing consolidation activities. The market for cine lenses has largely recovered from the pandemic-related global interruption of film production. In the long term, the uninterrupted demand will have a positive effect. On the other hand, the market for camera lenses declined significantly and irreversibly to a low level. The Consumer Products strategic business unit is making greater use of the opportunities offered by technology partnerships for smartphone photography. The markets for sports optics and nature observation are growing slightly. Rising inflation may cause consumers to hold back on buying, especially in the areas of hunting optics and nature observation, mobile imaging and cine lenses.

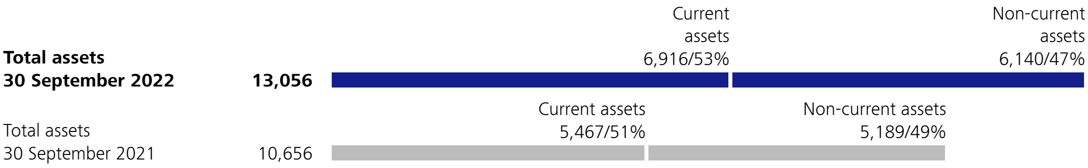
Overall statement on the economic situation of the Group as of fiscal year end

The ZEISS Group closed fiscal year 2021/22 with record revenue of €8,754m (prior year: €7,529m) with an EBIT margin of 18% (prior year: 20%). The prior-year forecast of revenue growth in the low-single digit percentage range and an EBIT margin of around 15% was significantly exceeded.

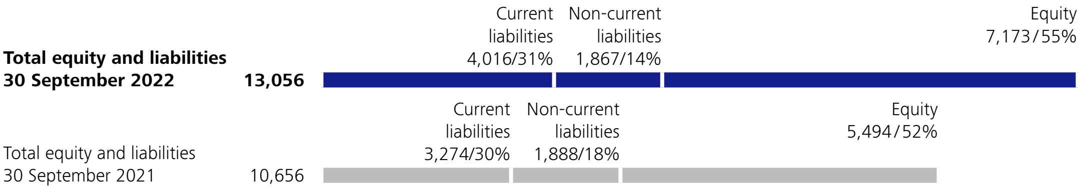
Net assets

Total assets increased by €2,400m in the reporting period to €13,056m (prior year: €10,656m).

Structure of the statement of financial position – assets in € m/as a % of total assets



Structure of the statement of financial position – equity and liabilities in € m/as a % of total equity and liabilities



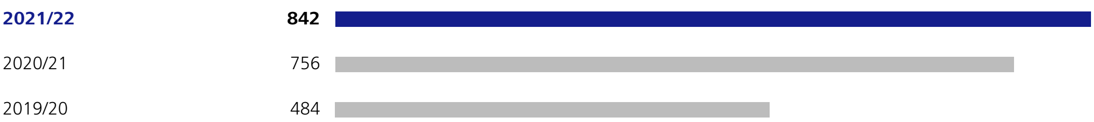
Intangible assets

Intangible assets of €1,881m (prior year: €1,613m) mainly contain goodwill of €1,430m (prior year: €1,285m). The impairment tests performed in the reporting period did not give rise to the need to recognize any impairment losses on goodwill.

Property, plant and equipment

In fiscal year 2021/22, ZEISS invested a total of €842m in property, plant and equipment (prior year: €756m), mainly in expansion and modernization measures relating to infrastructure, production plants and in furniture and fixtures. The investments in the ZEISS high-tech site in Jena (Germany) and the investments of the Semiconductor Manufacturing Technology segment in the production of the next generation of EUV lithography are particularly noteworthy in this regard. Depreciation in the reporting period amounted to €311m (prior year: €263m).

Capital expenditures on property, plant and equipment in € m



Other non-current assets

The sundry non-current assets amounted to €921m (prior year: €647m) and mainly consist of securities, shares in non-consolidated subsidiaries, loans as well as assets of entities within and outside Germany from pension plan surpluses and assets in connection with financing or securing short-term obligations to employees.

Working capital
The change in inventories, current trade receivables and trade payables is attributable particularly to the increase in business volume compared to the prior year. Inventories came to €2,522m as of the reporting date (prior year: €1,976m). Current trade receivables increased by 19% to €1,582m. Trade payables came to €693m as of the reporting date (prior year: €531m).

Other current assets amounted to €975m (prior year: €583m) and include securities with a short-term investment horizon.

Current provisions came to €174m (prior year: €175m) and essentially comprise provisions for warranty obligations.

Accruals of €1,367m (prior year: €1,066m) mainly include personnel-related and sales-related obligations as well as outstanding invoices.

Other current liabilities of €1,250m (prior year: €949m) mainly contain advances received on account of orders and deferred income.

Increase in equity
Equity amounted to €7,173m as of the reporting date (prior year: €5,494m). The consolidated profit of €1,155m generated in the reporting period increased equity. In addition to this, the remeasurement of defined benefit plans of €532m through other comprehensive income as well as the differences arising from currency translation of €254m recognized in other reserves through other comprehensive income had a positive effect. The dividends paid of €290m reduced equity accordingly. The equity ratio stood at 55% (prior year: 52%).

Pension obligations
The financing of pension obligations in Germany is largely structured in the form of a contractual trust arrangement (CTA), under which assets are transferred to a dedicated trust that serves exclusively to meet pension obligations, thus clearly separating the funds for operations from those for the pension obligations. This has increased the transparency and international comparability of the Group’s financial reporting. The legally independent trust invests the assets transferred to it on the basis of an appropriate long-term investment strategy. The pension obligations of the corresponding entities remain unchanged.

The CTA assets in Germany, which are separated from operating funds, amounted to €1,649m on the reporting date (prior year: €1,724m). This change resulted from the negative value development of the assets. Benefit obligations in Germany decreased on account of the interest rate applied under IFRS, which increased to 3.75% (prior year: 1.35%), resulting in an overfunding of the pension plan. For reasons relating to the cut-off date, the pensions obligations had a funded status of 118% (prior year: 83%).

The Group also has pension obligations toward employees of subsidiaries outside of Germany.

In accordance with IAS 19, the pension obligations reported in the statement of financial position match the actual obligations and therefore correspond to the present value of benefit obligations after deducting the fair value of plan assets as of the reporting date. Provisions for pensions of €662m (prior year: €1,142m) are reported in the consolidated statement of financial position. This equates to 5% of total assets (prior year: 11%).

Financial liabilities

The financial liabilities of €1,379m (prior year: €905m) primarily contain loans and liabilities from dividends and purchase price obligations in conjunction with acquisitions and lease liabilities. Among other things, the increase stems from investment loans from ASML and the European Investment Bank.

Financial position

The financial position was mainly shaped by the good consolidated profit in the reporting period as well as payments for capital expenditures on property, plant and equipment and dividend payments and proceeds from loans.

The cash outflows from investing activities were covered in full by the cash inflows from operating activities.

Cash flows from operating activities were primarily determined by the profit for the year and amounted to €1,421m in the reporting period (prior year: €1,457m).

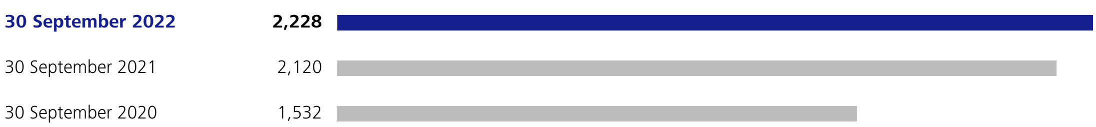
Cash flows from investing activities came to minus €1,300m in the reporting period (prior year: minus €525m). Payments for capital expenditures on property, plant and equipment and intangible assets of €858m (prior year: €623m) are partly counterbalanced by proceeds from the disposal of intangible assets and property, plant and equipment of €25m (prior year: €25m). The payments in connection with the acquisition of shares in entities amounted to €99m (prior year: €59m). The net cash flow changes of financial assets amounted to minus €369m (prior year: €132m).

Cash flows from financing activities came to €90m in the reporting period (prior year: minus €149m) and contains cash received from investment loans from ASML and the European Investment Bank. Cash received is counterbalanced cash paid to repay loans and lease liabilities as well as dividend payments. Dividends of €280m (prior year: €177m) were paid out in the reporting period.

Liquidity

Cash and cash equivalents[1] came to €2.846m as of the reporting date (prior year: €2.296m) and loans payable[2] amounted to €618m (prior year: €176m). Net liquidity thus stood at[3] €2.228m (prior year: €2.120m).

Net liquidity in € m



In addition, the ZEISS Group has access to a revolving credit facility with a total volume of €500m that was concluded between Carl Zeiss AG and a syndicate of banks to finance its business operations. It matures on 2 August 2026. The revolving credit facility serves as a strategic liquidity reserve for the ZEISS Group and was not utilized in the reporting period.

[1] Cash and cash equivalents plus securities and fixed-term deposits
[2] Repayments of liabilities to banks plus ASML loans
[3] Cash and cash equivalents less loans payable

Goals and principles of financial management

ZEISS has a global financial management system that incorporates all subsidiaries and is coordinated centrally at Group level. The primary objective is to secure and effectively manage the liquidity of the ZEISS Group. In addition, ZEISS strives to continuously improve its financial strength and minimize financial risks. Investments are made principally in securities from issuers with good credit ratings. ZEISS is mainly funded through the operations of the segments, with which the financial activities and strategic orientation are aligned. Even against the background of any other effects (e.g. COVID-19 pandemic, the geopolitical situation), the ZEISS Group currently has sufficient cash and cash equivalents and lines of credit to finance its operational and strategic objectives.

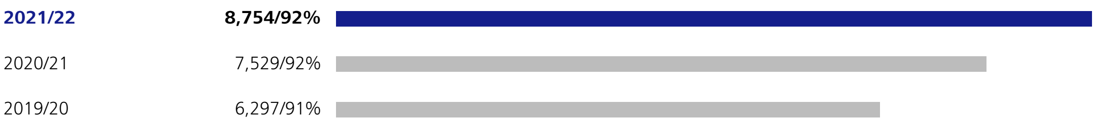
Results of operations

The income statement has been prepared using the cost of sales method that is widely used internationally.

The results of operations are characterized by an increase in revenue in all segments and regions as well as an EBIT margin of 18 % (prior year: 20%). Currency effects had a positive impact on the results of operations of the ZEISS Group in the reporting period.

At €8,754m, the ZEISS Group's revenue in the reporting period was 16% higher than the prior-year figure (€7,529m). At 92%, the share of international revenue remained unchanged at the level seen in prior years. The prior-year's forecast of an increase in revenue in the low single-digit percentage range was significantly exceeded.

Revenue in € m/international share as a %



The ZEISS Group's incoming orders increased by 19% (adjusted for currency effects: 15%) in the reporting period to €10,664m (prior year: €8,974m). Incoming orders in the instrument segments changed by a total of 18% (adjusted for currency effects: 13%). The Semiconductor Manufacturing Technology segment recorded an increase in incoming orders of 19% (adjusted for currency effects: 18%) compared to the prior year.

Consolidated revenue by segment

Revenue by segment	**2021/22**	2020/21	Change compared to prior year as a %	
	€ m	€ m		Adjusted for currency effects
Semiconductor Manufacturing Technology	2,757	2,298	20	19
Industrial Quality & Research	2,066	1,801	15	10
Medical Technology	2,251	1,951	15	9
Consumer Markets	1,569	1,394	13	7
Other	111	85	31	32
ZEISS Group	**8,754**	**7,529**	**16**	**12**

Semiconductor Manufacturing Technology
The Semiconductor Manufacturing Technology segment generated revenue of €2,757m. That is equivalent to an increase of 20% (adjusted for currency effects: 19%) compared to the prior year (€2,298m).

The strategic business units for Semiconductor Manufacturing Optics and Semiconductor Mask Solutions in particular contributed to this renewed revenue record of the Semiconductor Manufacturing Technology segment, with both units generating increases in deliveries compared to the prior year. The high customer demand for manufacturing equipment for semiconductor fabrication and in particular for deep ultraviolet (DUV) and extreme ultraviolet (EUV) lithography systems continued once again in fiscal year 2021/22. DUV lithography systems are still a key revenue driver in the segment, in part due to demand from the expansion of the semiconductor industry in China. EUV lithography is the key technology in the semiconductor industry enabling further miniaturization of microchips. The manufacturers are therefore increasing their EUV capacities with substantial investment programs. A major focus of the business activities of the segment and its strategic partner ASML is the extremely challenging development and ramp-up of the next generation of EUV lithography. This future-oriented technology should enable the semiconductor industry to produce even more powerful and energy-efficient microchips at a lower cost in the future.

In the segment’s other business with optical components and modules for lithography lasers, demand remained at a high level in fiscal year 2021/22. Products for optical wafer inspection are in particularly high demand due to their increased importance in the chip manufacturing process. The sale of solutions used in the metrology, inspection and repair of photomasks, particularly in the Chinese market, contributed to the segment's growth by setting a new revenue record. In the process control products business, the segment focuses on technologies for the analysis of three-dimensional structures of microchips and on advanced process control solutions.

As of 30 September 2022, the segment had 6,215 employees (based on full-time equivalents) worldwide (prior year: 5,211).

Industrial Quality & Research
The Industrial Quality & Research segment generated revenue of €2,066m. That is equivalent to an increase of 15% (adjusted for currency effects: 10%) compared to the prior year (€1,801m).

Demand for products from the Industrial Quality & Research segment continued to increase following the recovery in fiscal year 2020/21. In the area of industrial quality assurance, substantial investments in alternative drive technologies by the automobile industry played a key role here. Business in the customer segments of the electronics and medical technology industries also developed positively. In addition to traditional tactile measuring technology, new solutions such as fast multi-sensor machines and computer tomography for non-destructive testing were in particularly high demand. Demand for optical measuring technology, high-resolution light, electron and X-ray microscopes as well as new technologies such as machine learning also developed positively. All regions made a positive contribution, with business in China and North America growing particularly strongly. Overall, however, the potential for revenue growth was hampered by the strained supply chain situation. Business in the area of industrial quality assurance in Russia was discontinued from March 2022 onwards.

Business with microscopy systems for research and science developed positively compared to the prior year and increased in all regions during the reporting period, especially in the APAC region. Demand for X-ray microscopes continued to develop well. Demand in the areas of light and electron microscopy as well as in the service business also rose year on year. The further expansion of remote service offerings also made it possible to leverage the installed base, which has grown steadily over the past years, for profitable growth in the service business.

As of 30 September 2022, the segment had 7,534 employees (based on full-time equivalents) worldwide (prior year: 7,363).

Medical Technology

The Medical Technology segment generated revenue of €2,251m. That is equivalent to an increase of 15% (adjusted for currency effects: 9%) compared to the prior year (€1,951m).

The Ophthalmic Devices strategic business unit, which offers products and solutions to diagnose and treat eye diseases as well as systems and consumables, mainly for cataract, retina and refractive surgery, profited from a significant increase in recurring revenue, such as consumables for refractive laser treatment, implants such as intraocular lenses for the treatment of cataracts, and the service business. The equipment business also recovered despite the ongoing tense situation within the supply chains. The Microsurgery strategic business unit , which offers visualization solutions for minimally invasive surgical treatments, developed positively despite the strained supply chain situation.

The APAC region reported strong growth on the one hand thanks to good contributions to growth, especially from China, and on the other hand due to the dynamic development in India and South East Asia. Revenue in the Americas region was stable, with Latin America in particular experiencing accelerated growth. The core markets in the EMEA region, namely Germany, the UK, Spain and Italy, saw a solid development.

As of 30 September 2022, the segment had 6,829 employees (based on full-time equivalents) worldwide (prior year: 5,866).

Due to different bases of consolidation, the figures for the Medical Technology segment deviate from those published for Carl Zeiss Meditec AG.

Consumer Markets

The Consumer Markets segment generated revenue of €1,569m in fiscal year 2021/22. That is equivalent to an increase of 13% (adjusted for currency effects: 7%) compared to the prior year (€1,394m).

The Vision Care strategic business unit generated growth in all regions, in particular with ZEISS branded eyeglass lenses, innovations and digital offerings. In some countries, measures implemented to contain the pandemic still led in part to restrictions, but these remained limited in time and scope. Its customer-oriented strategic positioning also aided new customer acquisition. The US, as the largest market, continued to be a challenge, mainly as a result of market entry barriers. Here, revenue with independent eye care professionals increased in particular.

Business in the Consumer Products strategic business unit was characterized by fierce competition in all categories and high price pressure in some. The market for camera lenses has irreversibly shrunk to a niche market around the world due to consumers switching to smartphone photography. ZEISS is taking advantage of new possibilities and market opportunities through strategic partnerships for smartphone photography. After overcoming the pandemic-related restrictions that had shaped the market since 2020, the market for hunting and nature observation is growing steadily. With innovations and expanded market development, revenue for sports optics and nature observation is developing positively. The cine lenses business also grew year on year as film productions resumed.

As of 30 September 2022, the segment had 13,008 employees (based on full-time equivalents) worldwide (prior year: 12,721).

Consolidated revenue by region and cooperations

Revenue by region and cooperations	2021/22	2020/21	Change compared to prior year as a %	
	€ m	€ m		Adjusted for currency effects
EMEA	2,090	1,953	7	7
» thereof Germany	661	602	10	10
Americas	1,679	1,416	19	9
APAC	2,467	2,020	22	15
Cooperations	2,518	2,140	18	18
ZEISS Group	**8,754**	**7,529**	**16**	**12**

In the region Europe/Middle East/Africa (EMEA), ZEISS reported a rise in revenue in the reporting period of 7% (adjusted for currency effects: 7%) to €2,090m (prior year: €1,953m), with revenue in Germany increasing by 10% to €661m (prior year: €602m).

Revenue in the Americas region came to €1,679m, an increase of 19% (adjusted for currency effects: 9%) compared to the prior year (€1,416m).

Revenue in the Asia-Pacific region (APAC) increased by 22% compared to the prior year (adjusted for currency effects: 15%) to €2,467m (prior year: €2,020m).

Direct business with supra-regional cooperation partners increased by 18% to €2,518m in fiscal year 2021/22 (prior year: €2,140m). This was mainly due to capacity expansions in the semiconductor sector, especially in the area of EUV lithography.

Functional costs

Cost of sales increased by €610m in comparison to the prior year and came to €3,912m (prior year: €3,302m). Gross profit rose by €615m from €4.227m to €4,842m in the reporting period. The gross margin was 55% (prior year: 56%).

Sales and marketing expenses in fiscal year 2021/22 amounted to €1,588m (prior year: €1,348m) and, at 18% of revenue, were at the prior-year level. General administrative expenses stood at €514m (prior year: €462m), accounting for 6% of revenue as in the prior year.

Research and development expenses recognized in the consolidated income statement came to €1,151m in the reporting period (prior year: €943m).

	2021/22	2020/21
	€ m	€ m
Research and development expenses before subsidies and IAS 38	1,321	1,106
Government and third-party grants	127	125
Capitalized development costs (IAS 38)	43	38
Research and development expenses according to consolidated income statement	**1,151**	**943**

Research and development expenses before subsidies and capitalized development costs (IAS 38) totaled €1,321m (prior year: €1,106m). Representing 15% of revenue and on a par with the prior year (15%), this figure testifies to the ZEISS Group's continued strong focus on innovation.

Development of earnings

Earnings before interest, taxes, depreciation and amortization (EBITDA) amounted to €1,979m in the reporting period (prior year: €1,814m).

Earnings before interest and taxes (EBIT) of €1,588m (prior year: €1,479m) with an EBIT margin of 18% (prior year: 20%) were generated in the reporting period. The EBIT margin was below the level of the prior year due to a lower gross margin and higher research and development expenses. The EBIT margin of around 15% projected in the prior year was significantly exceeded due in particular to the revenue growth.

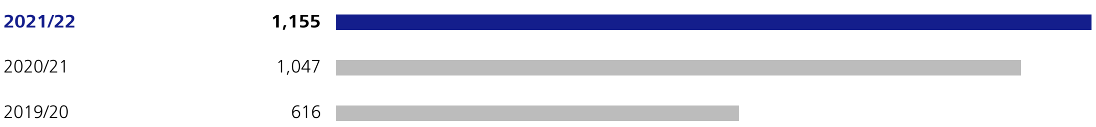
	2021/22	2020/21	2019/20
	€ m	€ m	€ m
EBITDA	1,979	1,814	1,260
» EBITDA margin as a %	23	24	20
EBIT	1,588	1,479	922
» EBIT margin as a %	18	20	15

The financial result deteriorated by €10m compared to the prior year to minus €26m (prior year: minus €36m). The interest result changed by €11m to minus €7m (prior year: minus €18m). The other financial result changed by minus €1m to minus €19m (prior year: minus €18m). This is essentially attributable to effects from the measurement of financial assets and financial liabilities at fair value through profit or loss.

The tax expense for fiscal year 2021/22 totaled €407m (prior year: €395m), which resulted in a group tax rate of 26% (prior year: 27%).

ZEISS thus achieved a consolidated profit of €1,155m (prior year: €1,047m).

Consolidated profit/loss in € m



Other financial indicators

Other financial indicators are Economic Value Added (EVA®)[4] and Free Cashflow (FCF)[5].

ZEISS measures the value added that is generated using the Economic Value Added (EVA®) indicator. This is the internal measure of the company's success. In fiscal year 2021/22, EVA® amounted to €862m (prior year: €818m). ZEISS therefore once again achieved considerable value added, which significantly exceeds the level forecast in the prior year, in particular due to the development of earnings.

The Free Cash Flow (FCF) indicator used for internal control amounted to €1,045m in the reporting period (prior year: €1,125m). The level of the prior-year forecast was also clearly exceeded in this regard, in particular due to the development of earnings.

NON-FINANCIAL KEY PERFORMANCE INDICATORS

Innovation

ZEISS strives to be a global technology leader in the field of optics and optoelectronics and aims to drive technological and social progress with its highly innovative solutions for its customers. Optical technologies are key technologies of the future.

ZEISS invests heavily in innovation as it is the foundation for further growth of the company and is firmly anchored in the corporate identity as part of the strategy and culture. ZEISS often conducts research and development together with partners and customers and encourages employees to suggest innovative ideas to the company and thus contribute to its business success.

ZEISS is constantly working on developing new and innovative solutions and improving existing products and services, in order to help customers achieve long-lasting success and help shape the future. ZEISS is a market shaper that is continuously developing the world of optics and other related fields with its solutions. Digital solutions are playing an increasingly important role in this context. For this reason, the company will focus even more strongly on digital innovations in the future. In this way, ZEISS intends to drive forward technology-supported change and make digitalization part of its DNA. The company is continuously improving its manufacturing and processing procedures and constantly evaluating its areas of application, business models and processes.

Innovation management

ZEISS uses Group-wide innovation management to ensure that its ongoing and planned activities meet its customers' needs. ZEISS uses various tools to this end: the company evaluates each research and development project using a standardized process and incorporates the findings made into current and future projects.

[4] Calculation: EVA® = operating profit (EBIT) after taxes plus amortization of intangible assets from purchase price allocations less cost of capital. Cost of capital is the average capital employed multiplied by the cost of capital rate. Capital employed is the committed business assets adjusted for amortization of intangible assets resulting from purchase price allocations ("gross" asset base). The internal interest rate used to determine weighted average of cost of capital ranges between 6.5% and 10%, depending on the business involved

[5] Calculation: Free Cash Flow (FCF) = EBIT ± changes in trade receivables ± changes in inventories ± changes in provisions (excluding provisions for pensions) ± changes in current accruals ± changes in trade payables ± changes in advances received ± changes in lease liabilities ± changes in other assets and liabilities - capital expenditures on intangible assets and property, plant and equipment + amortization and depreciation of intangible assets and property, plant and equipment.

Employees can submit their ideas for improvement via the company-wide suggestion scheme. The objective is to simplify processes in a cost-efficient way, so as to raise ZEISS' competitiveness in the long term. Ideas are converted into bonus points that can be exchanged for cash or non-cash rewards.

In fiscal year 2021/22, expenses for research and development made up 13% of revenue (prior year: 13%). and, as forecast, are at the high level of prior-years. The ZEISS Group's research and development departments have 5,254 employees (prior year: 4,502 employees), or 14% of the workforce, working on new solutions and technologies for the optics and optoelectronics industries and digital business models.

As of the reporting date, ZEISS held about 10,500 patents worldwide (prior year: 10,900) and applied for new patents for approx. 630 inventions (prior year: approx. 500).

ZEISS Ventures

The strategic business units of the ZEISS Group operate in attractive target markets with long-term growth perspectives. Their focus is supported by megatrends which should open up significant possibilities for ZEISS, primarily for future growth.

ZEISS Ventures, a unit of the ZEISS Group, uses these possibilities by making investments and managing a portfolio of start-ups. It focuses on possibilities that lie between or beyond the activities of the strategic business units or that would potentially be a disruptive innovation. The aim is to invest in start-ups and form partnerships to establish long-term and sustainable businesses.

The portfolio of ZEISS Ventures contains a range of partnerships and investments. For instance, tooz technologies works with the application potential and future of data glasses for everyday use. Scantinel Photonics advances the development of second-generation high-performance light detection and ranging (LiDAR) sensors. Light detection and ranging technology is used in autonomous vehicle technologies. The inhouse smart glass technology of the ZEISS MicroOptics unit has made it possible to utilize transparent glass or transparent plastic in a whole range of different ways. The see-through surfaces with integrated, invisible micro-structured optics permit a range of different applications, enabling innovations like gesture recognition or eye tracking without visible optical systems. Use in smart homes is also conceivable.

Strategic partnerships and cooperations

The closer networking between business and science allows ZEISS – as an active promoter of science – to more intensively leverage synergy effects.

This includes, for example, the collaboration with the start-up MakerVerse, a joint venture between Siemens Energy and ZEISS as well as financial and venture capital investors, which provide a new digital platform for on-demand services in the field of additive manufacturing.

This year, ZEISS continued its cooperation with Dresden University of Technology (TU Dresden) with the intention of consolidating their long-standing relationship in the areas of research, teaching and innovation, advanced training and internationalization as well as recruiting. With the ZEISS Innovation Hub, ZEISS has further expanded its presence in Dresden in order to benefit from the local research and innovation environment.

Digital transformation

The business-supporting function, ZEISS Digital Partners, supports the ZEISS segments and external customers in implementing their digital ecosystem strategies. The establishment of the ZEISS Group's Digital Competence Center, which now employs more than 800 digital experts, and the integration of digital solutions at ZEISS Group level enables the scaling of digital solutions. The integration, strengthening and global scaling of digital skills offers the ZEISS Group great opportunities to support business success and accelerate the transformation of its business.

Employees

Highly qualified, dedicated and motivated employees are the foundation for the long-term success of the ZEISS Group. The Group endeavors to ensure this remains the case. As of 30 September 2022, the total headcount of the ZEISS Group stood at 38,770, a global increase of 3,395 (prior year: 35,375). The increase in headcount is therefore in line with the prior-year forecast.

The ZEISS Group views diversity as a prerequisite for innovation, which is why it is actively supported and strengthened by ZEISS. Around 56% (prior year: 58%) of the ZEISS workforce – equivalent to 21,712 employees (prior year: 20,527) – work outside Germany. At the same time, ZEISS in convinced that diversity in its different forms is the key to global success at an international company, as employees know the markets, understand the different needs of customers and know how to deal with the cultural customs of their business partners. According to ZEISS, this makes a huge difference in terms of local acceptance and confidence in the company.

Education and training is a top priority at ZEISS. As of the reporting date, the ZEISS Group had 528 trainees and students of universities offering dual degree programs (prior year: 474). The professional training of employees and leadership development are further areas of focus for ZEISS. Employees can select from a large number of internal and external courses that are available through the global digital learning platform. In addition, ZEISS supports off-the-job training and personnel development measures.

ZEISS promotes occupational health and safety through comprehensive measures. In addition to offering employees and managers advice from occupational health and safety professionals and company doctors, ZEISS also provides corporate healthcare management. Both of the above focus on the health, motivation and performance of employees. Workplace design and the prevention of occupational accidents are central fields of action for all stakeholders. ZEISS and the statutory health insurance provider BARMER have been cooperating as healthcare partners since the start of 2021. Since then, all employees in Germany have been offered free health services related to exercise, nutrition and mental health. The development of health literacy among employees continues to be strengthened and advanced through this cooperation.

ZEISS attaches great importance to protecting the health of its employees – especially during the COVID-19 pandemic. In this context, the company implemented various measures aimed at helping to protect its workforce as best as possible. Among other things, these include modifications to the shift systems to avoid contact between shifts, the transition to mostly virtual meetings and the expansion of opportunities for working remotely, which were further expanded on the basis of a group-wide works council agreement. ZEISS provided face masks and hand sanitizer to its employees. In fiscal year 2021/22, ZEISS again offered its employees vaccination for protection against influenza and against the COVID-19 virus.

This year, ZEISS will once again allow its employees to participate in the company's success in Germany and, on the basis of country-specific regulations, also in some entities outside Germany.

Sustainability

For ZEISS as a foundation company, sustainability and business success are inextricably linked. Sustainable value added is an integral part of operations, which aims to provide innovative solutions, contribute to a positive development in society and enable both long-term and profitable growth.

Environment
ZEISS attaches great importance to the sustainable and economical use of resources as well as to protecting the climate and the environment. Sustainability is a key consideration – from the development and manufacture of its products, through to packaging, shipment and disposal. To this end, the ZEISS Group has defined corresponding requirements for its segments and for its suppliers. Furthermore, ZEISS has set clear targets for reducing energy consumption, carbon emissions, water consumption and waste. Where possible, ZEISS does justice to its identity as a foundation company by taking concrete measures to reduce carbon emissions and promote climate protection: ZEISS aims to operate in a carbon-neutral way in its own activities worldwide by 2025 (Scope 1 and 2 emissions). ZEISS is focusing on energy efficiency measures, the purchase of green electricity and the expansion of its own generation of renewable energies. ZEISS offsets certain emissions that cannot be avoided or are very difficult to avoid for economic reasons, for example when purchasing gas and district heating, by supporting selected projects. In this way, ZEISS is making a contribution to the global target set in the Paris Agreement of limiting global warming to significantly below 2°C.

Product responsibility
At ZEISS, product safety starts during development, goes hand in hand with procurement and production process and is a key aspect for customers when they use the products and for the after sales service. The product safety warranty is subject to a range of statutory requirements for the development, manufacture, approval and sale of products. Defective products can result in serious damage, primarily for the user, but also to the company's reputation. For ZEISS product responsibility does not only mean that products are innovative, effective and safe. ZEISS also makes sure to use commodities and materials that are harmless to human health and the environment, as well as to produce as few effluents and emissions and as little waste as possible during the manufacture and use of its products. ZEISS aspires to rigorously implement all product safety laws relating to product use and disposal.

Supplier management
Procurement is a key process for the long-term success of the ZEISS Group due to its considerable contribution to added value in the supply chain. Around the globe, the local procurement organizations purchase materials used both for production and for non-production from local and international suppliers. The company demands that its new and existing principal suppliers recognize the Code of Conduct of the Responsible Business Alliance (RBA) and implement ongoing measures to meet these requirements. The internationally recognized Code of Conduct is based on the UN Guiding Principles for Business and Human Rights and was derived from international labor and environmental standards. The protection of human rights is becoming increasingly important due to global supply chains and increasing regulation – for example through the Act on Corporate Due Diligence Obligations in Supply Chains (LkSG). ZEISS uses a risk-based approach to monitor suppliers and implement sustainability standards.

Societal and social engagement
Millions of people around the world are threatened by preventable blindness or cannot access medical care. ZEISS wants to set new standards in the healthcare sector with solutions in Vision Care and Medical Technology and thus promote medical progress. The aim is to contribute to the life quality of patients. For many years, ZEISS has worked with non-profit organizations and given donations in money and in kind to ensure that medical care is available to everyone in developing and emerging countries and that their medical professionals receive training.

In addition, ZEISS plays responsibility and an active role in society. The ZEISS Group supports educational measures and scientific projects and institutions as well as selected social and cultural initiatives and facilities at its locations. As part of the future initiative "A Heart for Science", ZEISS launched a company volunteer program in June 2022 to bundle and further expand its social commitment in the field of STEM advancement.

Professional associations involved in nature conservation activities and educational programs for children and adults are also supported.

Dividends distributed to the Carl Zeiss Foundation are used within the framework of its aims to promote, in particular, scientific, engineering and mathematical studies in research and teaching.

RISK AND OPPORTUNITY REPORT

Groups with global operations face a large number of entrepreneurial and regulatory risks and opportunities that can have a sustained impact on planned business performance. The assessment of opportunities and risks and the conscientious handling of entrepreneurial uncertainty are an important part of corporate governance and sustainable operating policies at ZEISS. The following statements in the risk and opportunity report refer to fiscal year 2022/23.

Risk management

The central risk management system at ZEISS stipulates uniform rules and processes to detect, assess and manage risks at an early stage. The key objective is to exploit business opportunities and manage the associated risks as well as to detect going concern developments at an early stage.

Risk management coordinators apply the central policies and procedures. The management of the segments and strategic business units detects, manages and reports on operating and strategic risks. Overall responsibility lies with the Executive Board, which regularly assesses possible scenarios, risks and opportunities and their management at Group level in addition to the risk-bearing capacity of the ZEISS Group. While the Executive Board examines the appropriateness of the risk management system, the Supervisory Board’s Audit Committee monitors the effectiveness of the risk management system.

Internal control system.
ZEISS’ internal control system is based on the COSO Enterprise Risk Management Model (COSO ERM model). It integrates organizational, process-related and technical measures to ensure proper operating activities and correct reporting. This enterprise risk management system of the ZEISS Group covers strategic and operational risks, i.e. it does not merely monitor financial risks. For central processes, there are defined key risks and defined control mechanisms, which are evaluated with regard to their effectiveness.

The Executive Board ensures that an adequate and effective internal control system is in place and that it is continuously enhanced. The Supervisory Board’s Audit Committee monitors the effectiveness of the internal audit function, risk management and the internal control system as well as the financial reporting process.

Strategic and operational risks

ZEISS systematically analyzes and evaluates risks. Special emphasis is placed on potential economic effects and on probability of occurrence. In this way, risks are quantified and classified, and the overall risk is determined. This range of potential developments is compared with the defined risk-bearing capacity, thus determining the potential credit risk for ZEISS. Due to its broad portfolio and global presence, the ZEISS Group’s strategic and operational risks are highly diversified.

General risks and opportunities
ZEISS regularly checks for risks and opportunities that can arise from changes in markets and within the supplier and customer environment, including consolidation within the industry, new technologies and competitors, and lower entry barriers for alternative vendors. Risks and opportunities arising from general demands made of entities by society and opportunities due to megatrends, such as digitalization, sustainability and demographic change are also assessed at regular intervals. In addition, ZEISS analyzes economic, legal and political developments or economic sanctions in the economic regions relevant for the ZEISS Group and evaluates possible scenarios. In the event of a crisis, an existing crisis team coordinates measures to minimize the negative effects. International orientation, sustainable operating policies and a balanced portfolio help spread the risk. However, the introduction of trade barriers, customs duties and increasing geopolitical and economic uncertainty, government intervention and restrictions as well as protectionism could make conditions for ZEISS more difficult.

Innovation risks and opportunities
The success and reputation of ZEISS are heavily dependent on the development of innovative products and solutions. New technical possibilities, trends and changing customer requirements as well as stricter regulatory requirements can give rise to abrupt technology shifts and make new business models necessary. Current findings from science and research accelerate this development. In order to take advantage of these opportunities at an early stage and to minimize the probability of occurrence and the economic impact of the risk, ZEISS cooperates with customers and research institutes, engages in development partnerships including participations and makes targeted technology acquisitions. ZEISS seeks and engages in the targeted promotion of opportunities to extend the existing portfolio with market-shaping innovations. ZEISS Ventures, a business segment of the ZEISS Group, is invested in the development and commercialization of new business models. The business-supporting function, ZEISS Digital Partners, supports the segments in making the opportunities offered by digitalization available to customers and partners. The economic impact and probability of occurrence inherent in digitalization risks are therefore both low.

Personnel risks and opportunities
Labor markets around the world remain tense. Demographic developments such as the departure of employees from the baby boomer generation from the active workforce in Germany and the US are reducing the potential workforce. Employees’ demands on companies with regard to flexibility in terms of location and time, remuneration and other working conditions are changing more and more in the wake of the COVID-19 pandemic combined with the current high inflation in various core ZEISS countries. At the same time, ZEISS is continuing to expand its global workforce, in particular to further advance digitalization within the company. These give rise to moderate economic risks. In order to counter these risks, ZEISS is strengthening its global positioning as an attractive employer in relevant target groups, further differentiating its recruitment strategy to cover the different requirements of the countries, and significantly expanding its recruitment capacity worldwide. Consequently, the probability of occurrence is low. The ZEISS Group offers a broad spectrum of opportunities for development to attract professionals and managers and to retain them in the long term. In addition, a variety of location-based initiatives and social benefits are offered, including health promotion programs, hybrid work models and models for reconciling work and family life.

During the COVID-19 pandemic, opportunities arose from the new ways of working, mainly related to diversity and attractiveness for current and future employees. ZEISS counters negative effects, such as the blurring of boundaries between personal and professional lives, by complying with regulations on working hours, new models for working time accounts, individual consultations and enhanced employee management. The probability of occurrence and the economic impact of personnel risks are therefore estimated to be low.

Risks and opportunities in procurement and production

ZEISS ensures compliance with national and international standards, laws and regulations by means of an integrated management system that addresses the issues of quality, environmental protection, occupational health and safety, and energy management.

The tense situation on the procurement markets, caused by the war in Ukraine among other things, and the growing demand at ZEISS for electronics, special plastic, chemicals and semi-finished metal products as well as available transport capacities, pose a moderate risk for the ZEISS supply chain, which could have a negative impact on production supply and cost. As a preventive measure, ZEISS has increased its inventories of critical materials in the supply chain through longer-term purchase obligations or stockpiling. ZEISS addresses existing disruptions to the supply chain in task force mode. By employing predictive models, system-based risk management, escalations, requalifications or purchases via brokers, this enables the company to keep disruptions to a minimum. As a result, the effects on business activities are currently low. ZEISS expects the critical capacity situation in the supply chain to persist for an extended period of time. Identified energy supply risks are addressed and actively managed by supply chain analyses and the expansion of own capacities. Due to the complexity of the supply chain and the dependence on third parties, a medium risk is expected due to production downtimes and unavailability of materials. The probability of occurrence is rated as medium-high.

The effects of COVID-19 continue to reduce global ocean and air freight capacity. Working groups are in place to address this risk. The anticipated effects on the supply chain are higher processing costs and longer transportation times. ZEISS assesses the effects as being low and the probability of occurrence as high.

With regard to the procurement of energy such as electricity and gas ZEISS is taking a carbon neutral approach. This results in a moderate risk from significantly rising procurement prices for green electricity and due to the conclusion of Power Purchase Agreements (PPAs) and carbon compensation with CO_2 certificates. There is still a moderate risk on account of increasing energy prices, potential pricing of emission allowances as well as industry-dependent capacity bottlenecks in the supplier chain. ZEISS has further reduced its dependence on gas and can compensate some of this dependence through alternative energies such as electricity and oil. If gas volumes are restricted by the Federal Ministry for Economic Affairs and Climate Protection, there is a medium risk for production at German sites.

The regulatory requirements for commodities and materials, the growing uncertainty in international trade, unilateral technology restrictions, the growing complexity of purchased parts and the limited number of suppliers (single source) for some technologies give rise to higher costs and a moderate procurement risk. To mitigate this risk, ZEISS continuously adapts its strategic supplier pool as part of product group management. ZEISS conducts systematic audits for these suppliers that also include social standards and environmental aspects. ZEISS classifies the risk of breaches and associated reputational damage in the area of environmental health and safety in the supply chain as low as its partners are monitored regularly and the probability of breaches is low on account of the characteristics of ZEISS supply chains.

Risks and opportunities of information technology (IT)

ZEISS constantly examines and utilizes the opportunities of digitalization in order to offer customers additional and enhanced services. At the same time, the dependence on a stable IT infrastructure with high availability is constantly increasing. During the COVID-19 pandemic and since, ZEISS has focused increasingly on remote working models, in part to ensure the safety of all employees. The ZEISS Group is therefore constantly optimizing its existing IT systems and structures to ensure greater protection, security and availability. Some ZEISS IT systems are operated by external IT service providers. For these service providers, high technical and legal standards regarding the hardware and software deployed, process monitoring, data security and data protection have been defined and contractually agreed. ZEISS continuously monitors the implementation of and compliance with these standards. The effects of sanctions due to regional events are continuously being assessed and appropriate measures are implemented promptly. The probability of occurrence of relevant IT risks is low and is further lowered by appropriate technical and organizational measures. However, the economic impact, for example from cyberattacks, may be considerable if they occur.

Risks and opportunities from acquisitions and investments

Acquisitions and investments offer ZEISS the opportunity to better meet customers' needs. Assessments are made as to how to enlarge the competencies and technology portfolio or increase access to the regional markets. They also help to open up markets faster and accelerate processes. ZEISS systematically checks the associated risks and opportunities. Due diligence reviews aimed at assessing the business development that can be expected and reducing the economic risks and the likelihood of their occurrence are a key element prior to closing transactions. The economic impact and probability of occurrence are therefore low.

Acquisitions made in this fiscal year open up the following opportunities for ZEISS:

With the acquisition of Capture 3D, Inc., Santa Ana (US), (hereinafter: Capture 3D), ZEISS is expanding the market presence of its Industrial Quality & Research segment in the US. Capture 3D is the leading sales partner for optical 3D measurement technology of Carl Zeiss GOM GmbH, Braunschweig (Germany), in the US. Combining the product portfolio of ZEISS with the competence of Capture 3D will further strengthen the entities' position on the US market and open up new opportunities for ZEISS.

With the acquisition of Preceyes B.V., Eindhoven (Netherlands), the Group is able to strengthen its technological position and product portfolio in the field of cataract surgery through robotic technologies and implants.

With the acquisition of Katalyst Surgical LLC, Chesterfield (US), (hereinafter: Katalyst) and Kogent Surgical LLC, Chesterfield (US), (hereinafter: Kogent), the Group is able to further strengthen its position as a solution provider. Katalyst develops and manufactures solutions and instruments for ophthalmic surgery. Kogent specializes in technical solutions and instruments for microsurgery.

In addition, Carl Zeiss Venture Beteiligungsgesellschaft mbH, among others, acquires minority shares in innovative, early-stage start-ups in order to achieve overarching strategic goals as well as to reduce internal technological risks through cooperation. An investment in an early-stage start-up entails inherent risks, which are mitigated by means of a careful due diligence review. For this reason, the risk from these investments is low. High inflation and rising interest rates lead to lower valuations and offer attractive investment opportunities.

Goodwill totaling €1,430m from acquisitions is shown in the consolidated statement of financial position. This goodwill is subject to regular impairment tests. It cannot be ruled out that impairment losses on goodwill may need to be recognized on account of changes in economic conditions, business models or technologies.

Legal risks, patents and intellectual property

ZEISS safeguards its technologies and products through a comprehensive intellectual property rights strategy. If patent and brand rights are infringed by third parties, ZEISS takes legal steps in order to counter the associated high economic risk. The probability of such cases occurring is low.

When developing new products and technologies, ZEISS systematically checks whether the rights of a third party could be affected, develops non-protected solutions if necessary, and acquires the requisite licenses and rights, or seeks other solutions by legal contract. Due to the complexity of possible industrial rights and the increased activity of institutional patent assertion entities, there is a moderate risk of litigation with a moderate economic risk.

There is no pending litigation that poses any risk to the continued existence of ZEISS at present.

Financial risks and opportunities

The liquidity risk of the ZEISS Group represents the risk that Carl Zeiss AG or subsidiaries may not be able to meet their financial obligations (for example, to repay financial liabilities or make interest payments). ZEISS has sufficient liquidity reserves in the form of cash and lines of credit. An appropriate and conservative investment strategy is in place with a focus on security and short-term availability. In addition, ZEISS ensures that the investments are broadly diversified.

Credit risk stems from an adverse development in the economic conditions of the company's borrowers or counterparties. On the one hand, this gives rise to the risk of default, in full or in part, on contractually agreed payments or performance and, on the other, potentially a need to recognize credit-risk-related impairment losses on financial instruments. These risks may increase as a result of the COVID-19 pandemic and geopolitical developments. Risks of default are limited by choosing counterparties with good credit ratings given by external rating agencies. To limit and manage concentration risks, transactions are on principle conducted with various banks.

Generally, ZEISS is exposed to risk of a default on customer receivables or insolvencies. This risk is being monitored. ZEISS intensified its receivables management in order to minimize the risk. However, a significant increase in defaults has not yet been identified. The risk is thus deemed to be low.

On account of its global orientation, the ZEISS Group is exposed to financial market price risks in its operations and the financial results and cash flows reported. This includes currency and interest rate risks. The associated opportunities and risks of the ZEISS Group are managed centrally. ZEISS uses defined risk strategies to minimize risks resulting from changes in exchange rates, interest rates or the value of assets. The ZEISS Group exclusively uses derivative financial instruments to hedge interest rates and currency risks. For this purpose, it enters into forward exchange contracts and interest rate swaps. These cover the underlying goods and services transactions of Group entities and non-derivative financial transactions (underlying transactions).

Financial risks also arise from current geopolitical developments and their consequences such as price increases and interest rate hikes. In conjunction with long delivery times, this could have additional negative effects on margins or purchasing power. Overall, the ZEISS Group's financial risks are classified as low with a low probability of occurrence.

In the context of pension obligations, risks could also arise from the further increasing life expectancy of the beneficiaries, from general interest rate developments and from the obligation to regularly adjust the amount of the pensions paid. As capital market interest rates rise, the required pension fund allocations decrease. In the event of a reversal, the existing pension agreements could give rise to risks with regard to equity which could in turn restrict scope for strategic action. ZEISS has transferred the funds to cover pension obligations toward active employees in Germany to a contractual trust arrangement (CTA). The investment strategy is based on long-term commitments.

In principle, further financial risks and risks relating to the statement of financial position can arise from changes to accounting standards.

Market risks and opportunities

ZEISS's broad and balanced business portfolio maintains the stability of the ZEISS Group, especially in times of crisis, and is currently helping to diversify risk against the backdrop of the war in Ukraine, supply chain restrictions and lockdowns in China. The search for opportunities to expand the portfolio horizontally or vertically results in further market opportunities and a broader risk diversification. The economic risk arising from the differing development of the segments is classified as moderate with a moderate probability of occurrence. Accordingly, there are different financial effects depending on the segment and the individual risk.

In order to further reduce both the probability of occurrence and the economic risk, ZEISS is undertaking measures designed to increase competitiveness and resilience in certain areas.

The global pandemic, macroeconomic and geopolitical uncertainties and volatility of the semiconductor sector entails risks and opportunities for the Semiconductor Manufacturing Technology segment, which ZEISS adapts to in a flexible manner. The market success of EUV lithography in particular offers great potential. The same applies to politically motivated and subsidized establishment of semiconductor factories in the US and Europe. Seeing as demand for the segment’s products is greater than current production capacities, ZEISS is working with its partners to significantly expand capacity. Risks may arise from lockdowns and the Ukraine war, which affect the industry’s security of supply of raw materials and energy, as well as from further geopolitical uncertainties such as the situation with regard to China and Taiwan and uncertainties in value chains. It can also not be ruled out that negative trends on the demand side could lead to a cooling of the market for equipment manufacturers. At the same time, there are inherent technological risks for the field in the realization of the next generation of EUV lithography. In this context, ZEISS therefore collaborates closely with its strategic partner ASML and other development partners.

The Industrial Quality & Research segment is exposed to risks arising from the dependence on the capital goods industry, particularly the automobile, aerospace and the associated supplier industries. These industries – especially the automobile industry – are undergoing a structural transformation. The further development of these industries with regard to their technology roadmap (electromobility) and willingness to invest also harbor risks for the segment. Further risks arise from the deteriorating geopolitical situation and the resulting risks for the already fragile supply chains and sharply rising energy costs, some of which have a negative impact on the aforementioned customer segments. The Industrial Quality & Research segment is also exposed to risks from the general development of the international research expenditure in academia. These risks are reduced by continuously developing new application areas, through an innovative product portfolio as well as by stringently expanding the segment's business with customer services and by using digital sales and service options. The segment is therefore improving its product portfolio to tap into new market and customer potential, in part by integrating digital solutions. Opportunities arise for Industrial Quality & Research from more intense research in the life sciences and pharmaceuticals worldwide as well as from increasingly networked production processes (Smart Production), from the unrelenting pursuit of increased productivity as well as from its positioning as a one-stop provider and the expansion of local value chains in the key economic regions.

In the Medical Technology segment, political and regulatory decisions can have a long-term effect on the reimbursement of costs for medical treatment and thus on willingness to invest in new treatment systems. Cuts in public budgets and government interventions (lockdown, prioritizing treatments) can have similar consequences. Refractive surgery is an elective procedure that patients pay for themselves. Demand therefore hinges on the general economic development and access to doctors, especially during a lockdown. Furthermore, new product launches can be delayed or even rejected due to changes in product approval requirements. In principle, patients may be harmed due to malfunctions or misuse of medical devices or may be injured due to improper handling of personal data. This can result in substantial litigation costs and can cause long-term damage to the company’s reputation. The steadily growing world population and rising life expectancy, which is likely to lead to increased demand for medical technology, are giving rise to growth opportunities for the Medical Technology segment. The rapidly developing economies offer further potential for growth due to the growing demand for basic medical care.

The Consumer Markets segment is exposed to risks arising from the fact that local or regional measures implemented to contain the pandemic, including store closures, cannot yet be fully be ruled out as well as from fundamental changes in the market, increasing inflation risks, ongoing consolidation in the industry, the change in consumer behavior and the horizontal and vertical integration of large competitors. Other risks include persistent pressure on prices, the potential market entry of new providers previously unknown in the sector, as well as competitors who use alternative sales channels or deploy new technologies to establish their own production capacity. There is also the long-term risk of substitutes to traditional eyeglass lenses being developed. Adjusting the market to the pandemic and substitution effects can also lead to risks from a change in consumer behavior. This could create challenges at manufacturing sites and potentially the portfolio. The licensing business in the market for cine, camera and smartphone lenses depends on the attractiveness of the ZEISS brand for partners of the segment. ZEISS counters this risk by means of a consistent brand strategy. There are also opportunities inherent in the technological and systematic digitalization in vision care, the growing global demand to correct visual impairment and, in connection with this, innovative, individualized branded eyeglass lenses, the optimization of the value chain, new industry and technology trends, such as smartphone photography, as well as new digital business and service models.

Overall statement on the risks faced by the company

When this report was prepared, no risks or combination of risks were discernible that could jeopardize the ability of the ZEISS Group to continue as a going concern. In terms of the overall assessment, the risk-bearing capacity has improved year on year, while the overall risk has increased. This is mainly due to the effects of the COVID-19 pandemic, fragile supply chains, a strained energy supply situation as well as the structural transformation in the automobile industry. The Executive Board believes that the ZEISS Group has a solid foundation for further development and uses a systematic strategy and planning process to provide the resources required in order to leverage the opportunities and overcome the risks.

REPORT ON EXPECTED DEVELOPMENTS

Future conditions of business development

Economists expect only moderate growth in the global economy in the coming year, although varied from region to region, and fear a recession in Europe in particular. It is possible that key interest rates will be raised further to tackle inflation. The increase in interest expenses compared to prior years, combined with high inflation, may lead to increased defaults and restraint in consumption and investment, thereby hampering economic growth. Capacity and supply bottlenecks are expected to continue to have adverse effects in the coming year. The ongoing COVID-19 pandemic may also pose risks, but these are currently considered low.

The geopolitical situation associated with the war in Ukraine is tense. Furthermore, the tensions between the US and China entail a greater risk for the free movement of goods and could thus negatively impact global economic developments. High energy prices could have a positive effect on the economies of gas and oil-producing countries, while these prices place a burden on importing countries and energy-intensive sectors. High food prices affect countries that depend on food imports in particular and can lead to social tension.

Expected development of the markets and industries relevant for ZEISS

Semiconductor Manufacturing Technology
Despite an uncertain global economic situation, the Semiconductor Manufacturing Technology segment still finds itself in a healthy market environment. The forecast for the semiconductor equipment market is positive. ZEISS continues to see long-term impetus for growth in the accelerated global digitalization, multi-year

investment programs of chip manufacturers and national incentive programs. This is driven by technologies such as 5G connectivity, a higher proportion of semiconductors in vehicles, artificial intelligence and more powerful data centers. Leading chip manufacturers therefore want to continue investing in new manufacturing technologies and capacities. A healthy order backlog in all the segment's units provides a healthy foundation for fiscal year 2022/23. These orders carry with them a great responsibility towards customers and the semiconductor industry to meet the demand for ZEISS's unique technologies. In the medium term, the semiconductor market will not be able to decouple from the slowdown in the global economy as a result of the current crises. However, the extent to which the equipment market and Semiconductor Manufacturing Technology segment will also be affected is currently not foreseeable.

Industrial Quality & Research

ZEISS expects business development in the Industrial Quality & Research segment in a competitive environment that is developing at different speeds to be largely stable. Although the good order backlog should get the new fiscal year 2022/23 off to a good start, the overall outlook is fraught with a high degree of uncertainty due to geopolitical conflicts, inflationary developments and increasing recession risks. In the APAC region, especially in China, the Industrial Quality & Research segment anticipates continued growth in business albeit weaker. In other regions, ZEISS predicts a moderately positive or flat development for fiscal year 2022/23. Overall, however, ZEISS anticipates growth through forward-looking projects, for example in additive manufacturing and electromobility. Additional positive impetus is expected for the industrial application of microscopes, especially in the area of electronics, and for public subsidies for research, particularly in the life sciences.

Medical Technology

Medical devices and medical equipment will remain an attractive business field in the healthcare sector. ZEISS expects that growth drivers in the market for the Medical Technology segment, such as demographic trends and population growth as well as rising demand from the rapidly developing economies, will continue to exist. They will be supplemented by new technologies and applications, particularly in the area of minimally invasive surgery, which will contribute to the growth of the industry. From the customer's perspective, a better cost-benefit balance for medical technology products as well as increasing digitalization and systems integration are playing a key role in day-to-day work in doctors' offices and hospitals. Growth in the low to mid single-digit percentage range is forecast for the medical technology industry as a whole for the coming years. The Medical Technology segment generally expects further growth in the fiscal year 2022/23, especially if procurement difficulties due to the tense global supply chain situation subside.

Consumer Markets

For business in the Consumer Markets segment, ZEISS expects that global growth for vision care, film, hunting and nature observation will remain stable and that consumer behavior will be changed by digital offerings. Major drivers of the continued positive development of the vision care market are demographic trends, the significant increase in short-sightedness, rising income in the rapidly developing economies, increasing health awareness and growing demand for individualized branded eyeglass lenses for the modern lifestyle. ZEISS expects the advancing digitalization across the entire value chain of vision care – from consumption habits, in the eye care business, in production, lens fitting and eyeglass manufacturing as well as logistics, marketing, sales and customer service – to result in major changes. ZEISS expects the Consumer Products strategic business unit to face even tougher competition. Sales of camera lenses have irreversibly shrunk to a niche market around the world due to consumers switching to smartphone photography. ZEISS counters this by expanding its strategic partnerships for mobile imaging. Despite growth in the market for cine lenses, increased competitive pressure is expected due to the entry of new competitors from Asia. ZEISS expects the market for hunting and nature observation to be stable and grow slightly in the long term and is therefore continuing to expand its product portfolio in this area.

Future research and development

The ZEISS Group makes significant investments in research and development projects. Efficient and targeted development processes play a central role here. The company is looking for new technologies and market trends to then be able to establish new solutions on the market and shape markets. In order to achieve this, ZEISS includes regional market circumstances and customer needs in the development process from the very beginning. For fiscal year 2022/23, ZEISS aims to further intensify its research and development activities to tap future potential, resulting in a significantly higher research and development ratio compared to already the high prior-year level.

Future personnel development

In order to continue to innovate and make a profit in the future, qualified and highly motivated employees are indispensable for the company’s success. In addition, it is extremely important to invest in the professional development of existing employees and hire qualified professionals and managers in the future. For the next fiscal year, the company therefore expects a further increase in the headcount that correlates with the business development and makes future investments possible.

Overall statement on anticipated development

Based on the strategic focus and positioning of the segments in their respective markets, which ZEISS established and expanded in the past, mainly through its innovative strength, ZEISS plans revenue growth in the mid-single-digit percentage range with an EBIT margin of around 15% for fiscal year 2022/23. Furthermore, ZEISS forecasts a slightly negative Free Cash Flow (FCF) and projects Economic Value Added (EVA®) to be below the level of the current fiscal year in the mid triple-digit million range. At the time of publication, there was no indication that the forecast is not attainable.

Consolidated Financial Statements

Consolidated Income Statement

for the period from 1 October 2021 to 30 September 2022

	Note	2021/22	2020/21
		€ k	€ k
Revenue	7	**8,754,410**	**7,528,928**
Cost of sales		3,911,926	3,302,083
Gross profit		**4,842,484**	**4,226,845**
» Sales and marketing expenses		1,588,177	1,347,561
» General administrative expenses		514,388	461,982
» Research and development expenses		1,151,255	943,286
» Other income	8	12,468	5,867
» Other expenses	9	12,978	1,253
Earnings before interest and taxes (EBIT)		**1,588,154**	**1,478,630**
» Interest income	10	31,172	14,311
» Interest expenses	10	38,666	32,443
» Other financial result	10	-18,667	-18,103
Financial result		**-26,161**	**-36,235**
Earnings before taxes (EBT)		**1,561,993**	**1,442,395**
» Income taxes	11	406,644	395,298
Consolidated profit/loss		**1,155,349**	**1,047,097**
» thereof profit/loss attributable to non-controlling interests		291,356	265,224
» thereof profit/loss attributable to the stockholder of the parent company		863,993	781,873

Consolidated Statement of Comprehensive Income

for the period from 1 October 2021 to 30 September 2022

	Note	2021/22	2020/21
		€ k	€ k
Consolidated profit/loss		**1,155,349**	**1,047,097**
Other comprehensive income that may be reclassified to consolidated profit/loss in subsequent periods:			
» Currency translation differences		253,694	46,664
» Gains/losses from financial assets, at fair value through other comprehensive income		-13,604	203
» Deferred income tax		969	76
Other comprehensive income that will not be reclassified to consolidated profit/loss in subsequent periods:			
» Remeasurement of defined benefit plans		776,389	421,478
» Deferred income tax		-244,829	-88,524
Other comprehensive income (after taxes)		**772,619**	**379,897**
Total comprehensive income		**1,927,968**	**1,426,994**
» thereof profit/loss attributable to non-controlling interests		375,176	297,705
» thereof profit/loss attributable to the stockholder of the parent company		1,552,792	1,129,289

Consolidated Statement of Financial Position
as of 30 September 2022

Assets	Note	**30 Sep 2022**	30 Sep 2021
		€ k	€ k
Non-current assets			
» Intangible assets	12	1,880,760	1,613,196
» Property, plant and equipment	13	2,666,207	2,068,828
» Trade and other receivables	24	44,842	51,790
» Other non-current financial assets	14	913,230	638,319
» Other non-current non-financial assets	15	7,904	9,150
» Deferred tax assets	11	627,021	807,513
		6,139,964	**5,188,796**
Current assets			
» Inventories	16	2,522,345	1,975,984
» Trade and other receivables	24	1,582,292	1,330,287
» Other current financial assets	14	737,847	411,707
» Income tax refund claims		25,310	11,536
» Other current non-financial assets	15	237,250	171,758
» Cash and cash equivalents	17	1,811,280	1,565,870
		6,916,324	**5,467,142**
		13,056,288	**10,655,938**

Equity and liabilities	Note	**30 Sep 2022**	30 Sep 2021
		€ k	€ k
Equity	18		
» Issued capital		120,000	120,000
» Capital reserves		52,770	52,770
» Retained earnings and sundry reserves		6,008,647	5,191,222
» Other reserves		-23,186	-711,766
» Non-controlling interests		1,015,098	841,704
		7,173,329	**5,493,930**
Non-current liabilities			
» Provisions for pensions and similar obligations	19	662,026	1,141,994
» Other non-current provisions	20	95,010	93,258
» Non-current financial liabilities	22	975,889	540,527
» Other non-current non-financial liabilities	23	50,381	45,294
» Deferred tax liabilities	11	83,456	67,047
		1,866,762	**1,888,120**
Current liabilities			
» Current provisions	20	173,932	174,736
» Current accruals	21	1,366,571	1,065,645
» Current financial liabilities	22	402,764	364,058
» Trade payables	24	692,831	530,771
» Current income tax payables		129,969	189,326
» Other current non-financial liabilities	23	1,250,130	949,352
		4,016,197	**3,273,888**
		13,056,288	**10,655,938**

Consolidated Statement of Changes in Equity
for fiscal year 2021/22[1]

	Issued capital	Capital reserves	Retained earnings and sundry reserves	Other reserves			Equity attributable to the stockholder of the parent company	Non-controlling interests	Consolidated equity
				from currency translation	from the remeasurement of defined benefit plans	from financial assets, at fair value through other comprehensive income			
	€ k	€ k	€ k	€ k	€ k	€ k	€ k	€ k	€ k
1 October 2020	**120,000**	**52,770**	**4,442,908**	**-22,583**	**-1,036,262**	**-337**	**3,556,496**	**730,859**	**4,287,355**
» Consolidated profit/loss	0	0	781,873	0	0	0	781,873	265,224	1,047,097
» Other comprehensive income	0	0	0	44,059	302,977	380	347,416	32,481	379,897
Total comprehensive income	**0**	**0**	**781,873**	**44,059**	**302,977**	**380**	**1,129,289**	**297,705**	**1,426,994**
Dividends	0	0	-30,000	0	0	0	-30,000	-186,860	-216,860
Changes in basis of consolidation	0	0	-3,559	0	0	0	-3,559	0	-3,559
30 September 2021	**120,000**	**52,770**	**5,191,222**	**21,476**	**-733,285**	**43**	**4,652,226**	**841,704**	**5,493,930**
» Consolidated profit/loss	0	0	863,993	0	0	0	863,993	291,356	1,155,349
» Other comprehensive income	0	0	0	227,895	473,008	-12,104	688,799	83,820	772,619
Total comprehensive income	**0**	**0**	**863,993**	**227,895**	**473,008**	**-12,104**	**1,552,792**	**375,176**	**1,927,968**
Dividends	0	0	-78,200	0	0	0	-78,200	-212,241	-290,441
Changes in basis of consolidation	0	0	58	-582	363	0	-161	-10	-171
Other changes	0	0	31,574	0	0	0	31,574	10,469	42,043
30 Setember 2022	**120,000**	**52,770**	**6,008,647**	**248,789**	**-259,914**	**-12,061**	**6,158,231**	**1,015,098**	**7,173,329**

[1] For more information on the changes in equity, please refer to Note 18 of the notes to the consolidated financial statements.

Consolidated Statement of Cash Flows
for the period from 1 October 2021 to 30 September 2022[1]

	2021/22	2020/21
	€ k	€ k
Consolidated profit/loss	1,155,349	1,047,097
Income taxes	406,644	395,298
Income tax paid	-539,213	-343,459
Amortization, depreciation and impairment net of reversals of impairment losses	391,202	334,868
Other non-cash income and expenses	41,086	4,831
Change in pension provisions and assets from overfunded pension plans	30,148	-43,514
Changes in other provisions	-9,000	-9,515
Gain/loss from the disposal of intangible assets and property, plant and equipment	-455	-1,999
Gain/loss from the disposal of current securities	833	-43
Changes in inventories	-456,284	-219,539
Changes in trade and other receivables	-164,537	-147,160
Changes in other assets	-34,268	570
Changes in trade payables	136,771	106,376
Changes in current accruals	253,440	134,358
Changes in advances received	247,807	137,750
Changes in other liabilities	-38,247	61,281
Cash flows from operating activities	**1,421,276**	**1,457,200**
Proceeds from the disposal of intangible assets and property, plant and equipment	25,323	25,139
Purchases of intangible assets and property, plant and equipment	-857,819	-622,829
Changes in financial assets	-368,701	132,080
Acquisition of subsidiaries, net of cash and cash equivalents received	-99,248	-59,418
Cash flows from investing activities	**-1,300,445**	**-525,028**
Dividend paid to the Carl Zeiss Foundation	-78,200	-30,000
Dividends paid to non-controlling interests	-201,478	-147,009
Proceeds from sale and leaseback transactions	0	32,206
Proceeds from loans	460,000	124,400
Repayment of loans	-17,427	-73,212
Changes in other bank liabilities	-285	904
Repayment of lease liabilities	-72,162	-56,200
Cash flows from financing activities	**90,448**	**-148,911**
Changes in cash and cash equivalents	211,279	783,261
Changes in cash and cash equivalents from exchange rate movements and changes in the basis of consolidation	34,131	16,770
Cash and cash equivalents as of 1 October	1,565,870	765,839
Cash and cash equivalents as of 30 September	**1,811,280**	**1,565,870**

Additional information on the statement of cash flows	2021/22	2020/21
	€ k	€ k
Payments of		
» Interest	16,761	12,153
» Dividends	279,678	177,009
Proceeds from		
» Interest	15,904	13,387
» Dividends	1,233	2,216

[1] For more information on the statement of cash flows, please refer to Note 25 of the notes to the consolidated financial statements.

Notes to the Consolidated Financial Statements
for fiscal year 2021/22

BASIS OF PRESENTATION

1 General principles

Carl Zeiss AG is a non-listed stock corporation incorporated under German law and parent company of the ZEISS Group, headquartered at Carl-Zeiss-Strasse 22, 73447 Oberkochen (Germany), and has been entered in the commercial register of Ulm district court (HRB 501555). The Carl Zeiss Foundation, Heidenheim an der Brenz and Jena (Germany), is the sole stockholder of Carl Zeiss AG.

ZEISS is an internationally leading technology enterprise operating in the optics and optoelectronics industries. The ZEISS Group develops, produces and sells semiconductor manufacturing equipment, measuring technology, microscopes, medical technology, eyeglass lenses as well as camera and cine lenses, binoculars and planetarium technology. ZEISS comprises 4 segments: Semiconductor Manufacturing Technology, Industrial Quality & Research, Medical Technology and Consumer Markets.

Carl Zeiss AG exercises the option afforded by Sec. 315e (3) German Commercial Code (HGB) which, based on the member state option set out in the EU Regulation dated 19 July 2002, also allows non-capital-market-oriented entities to issue their consolidated financial statements for publication in accordance with International Financial Reporting Standards with exempting effect as defined by this regulation.

The accompanying consolidated financial statements of Carl Zeiss AG, comprising the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of financial position, the consolidated statement of changes in equity, the consolidated statement of cash flows and the notes to the consolidated financial statements, have been prepared in accordance with International International Financial Reporting Standards (IFRSs) and the interpretations of the IFRS Interpretations Committee, as adopted by the EU, and the additional requirements of German commercial law in accordance with Sec. 315e (1) HGB. All pronouncements of the International Accounting Standards Board (IASB) whose adoption is mandatory have been considered.

The consolidated financial statements are presented in euros (€). Unless otherwise specified, all amounts are stated in thousands of euros (€ k) and rounded in line with common business practice.

In order to improve clarity and transparency, individual items have been combined in the consolidated statement of financial position and the consolidated income statement and broken down and explained separately in these notes.

The consolidated financial statements and group management report prepared as of 30 September 2022 were authorized for issue to the Supervisory Board by the Executive Board on 12 December 2022.

2 Basis of consolidation

The consolidated financial statements comprise the financial statements of Carl Zeiss AG as well as the financial statements of all material subsidiaries, including structured entities, that are directly or indirectly controlled by Carl Zeiss AG. Control exists when the Group can directly or indirectly exercise power over the investee, is exposed to variable returns on its involvement with the investee and has the ability to use its power over the investee to affect the amount of those returns. Subsidiaries that, on account of their lack or low level of business activity, are immaterial for the presentation of a true and fair view of the Group's net assets, financial position and results of operations, either individually or in their totality, are generally included in the consolidated financial statements at cost.

The consolidated financial statements contain 40 (prior year: 40) fully consolidated German entities (including Carl Zeiss AG) and 121 (prior year: 115) fully consolidated entities in other countries. The entities are generally included in the consolidated financial statements from the date on which control is obtained.

Two special funds are included in the consolidated financial statements as structured entities because the funds' activities are prescribed by the investment strategy defined by Carl Zeiss Financial Services GmbH. Carl Zeiss Financial Services GmbH is solely entitled to the earnings generated by the funds.

The entities included in consolidation and shareholdings are all contained in the list of shareholdings in accordance with Sec. 313 (2) HGB.

The number of fully consolidated entities changed as follows in the reporting period:

	Germany	Other countries	**Total**
1 October 2021	40	115	155
Additions in the reporting period	2	8	10
Disposals in the reporting period	2	2	4
30 September 2022	**40**	**121**	**161**

Additions to the basis of consolidation

The following entities were included in the consolidated financial statements for the first time:

» Capture 3D, Inc., Santa Ana (US)
(from 8 October 2021)
» Carl Zeiss Digital Innovation GmbH, Dresden (Germany)
(from 1 October 2021)
» Carl Zeiss Holding Co., Ltd., China, Shanghai (China)
(from 25 February 2022)
» Carl Zeiss Industrial Quality Solutions, LLC (formerly: Carl Zeiss Metrology Services Inc.), Minneapolis (US)
(from 1 October 2021)
» Carl Zeiss Meditec Holding (Shanghai) Co., Ltd., Shanghai (China)
(from 24 February 2022)
» Carl Zeiss Vision International China Holding GmbH, Aalen (Germany)
(from 1 October 2021)
» Preceyes B.V., Eindhoven (Netherlands)
(from 10 March 2022)
» PT Carl Zeiss Indonesia, South Jakarta, DKI Jakarta (Indonesia)
(from 1 October 2021)
» Katalyst Surgical LLC, Chesterfield (US)
(from 14 April 2022)
» Kogent Surgical LLC, Chesterfield (US)
(from 14 April 2022)

Apart from the acquisitions presented separately below, the additions to the basis of consolidation had no material impact on the net assets, financial position and results of operations of the ZEISS Group.

Disposals from the basis of consolidation
The following entities were no longer included in the basis of consolidation in the reporting period:
» Carl Zeiss 3D Automation GmbH, Aalen (Germany)
» Carl Zeiss Fixture Systems (Changchun) Co., Ltd., Changchun City (China)
» Carl Zeiss Fixture Systems GmbH, Tholey (Germany)
» Carl Zeiss LLC, Minsk (Belarus)
Apart from the disposal of Carl Zeiss Fixture Systems GmbH, Tholey (Germany), the disposals from the basis of consolidation had no material impact on the net assets, financial position and results of operations of the ZEISS Group. Carl Zeiss Fixture Systems GmbH, Tholey, was sold under an agreement dated 20 May 2022 and effective 7 June 2022 for a purchase price of €1 plus a contingent purchase price component of at least €1.5m. The disposal resulted in other expenses of €7.0m.

Additions to the basis of consolidation from acquisitions in fiscal year 2021/22

Capture 3D, Inc., Santa Ana (US)
Under an agreement dated 7 May 2021 and effective as of 8 October 2021, Carl Zeiss Inc., White Plains (US), acquired 100% of the shares in Capture 3D, Inc., Santa Ana (US) (hereinafter: Capture 3D).

Capture 3D is the leading sales partner for optical 3D measurement technology of Carl Zeiss GOM GmbH, Braunschweig (Germany), in the US. With the acquisition of Capture 3D, ZEISS expands its market presence in the Industrial Quality & Research segment in the US. Combining the product portfolio of ZEISS with the competence of Capture 3D will further strengthen the entities' position on the US market and open up new opportunities for ZEISS.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. The purchase price was €49.2m and comprises a fixed component (including an escrow amount) of €29.8m and discounted contingent purchase price components of €19.4m. The contingent purchase price components are dependent on the achievement of contractually defined financial and non-financial objectives (for example with regard to the integration of Capture 3D). If all the targets are met, a maximum amount of €23.1m will be payable for these components. Delays or non-fulfillment reduce the maximum amount of contingent purchase price components payable. If the objectives are not achieved, the contingent purchase price components is reduced to a minimum of zero. In the reporting period, a payment of €1.5m was made for the achievement of non-financial objectives. As of 30 September 2022, ZEISS expects a fair value of €21.9m for the performance-related components and has recognized this under financial liabilities.In addition to a pro rata temporis contribution from the unwinding of the discount, this amount also includes the discount rate adjustment effect as of the reporting date of minus €0.8. Goodwill contains inseparable intangible assets, in particular from expected synergy effects from the integration of the entity into the existing operations of the strategic business unit Industrial Quality & Solutions. The identified goodwill is expected to be tax deductible.

Capture 3D generated revenue of €32.8m and contributed €12.4m to the revenue recognized in the consolidated income statement and minus €4.9m to consolidated profit/loss in the period between the acquisition date and the reporting date.

Preceyes B.V., Eindhoven (Netherlands)
Under an agreement dated and effective as of 10 March 2022, Carl Zeiss Meditec AG, Jena (Germany), acquired 100% of the shares in Preceyes B.V., Eindhoven (Netherlands) (hereinafter: Preceyes).

Preceyes is a company specializing in the development of products and procedures in the field of cataract surgery. The acquisition serves to strengthen the technology position and cataract surgery product portfolio of ZEISS.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. The purchase price is €42.4m and comprises a fixed component (including an escrow amount) of €18.9m and discounted performance-based components totaling €23.5m. The performance-based components reward the achievement of defined revenue and development targets. The components include milestones for successfully completing clinical trials, obtaining approval and for the sale of a certain initial number of products. An earn-out component was also arranged for when revenue targets are met. If all the targets are met, a maximum amount of €41.4m will be payable for these components. If there are delays or targets are not met, the amount payable is reduced in increments down to a minimum of zero. As of 30 September 2022, ZEISS expects a fair value of €22.8m for the performance-related components and has recognized this under financial liabilities. In addition to a pro rata temporis contribution from the unwinding of the discount, this amount also includes the discount rate adjustment effect as of the reporting date of minus €1.6m. Goodwill from the acquisition mainly relates to expected synergies from the integration of the entity into the existing strategic business unit Ophthalmic Devices. The goodwill is not expected to be tax deductible.

Preceyes contributed €0.1m to the revenue recognized in the consolidated income statement and €0.0m to consolidated profit/loss in the period between the acquisition date and the reporting date.

Katalyst Surgical LLC, Chesterfield (US)
Under an agreement dated 25 March 2022 and effective as of 14 April 2022, Carl Zeiss Meditec Inc., Dublin (US), acquired 100% of the shares in Katalyst Surgical LLC, Chesterfield (US) (hereinafter: Katalyst).

Katalyst develops and manufactures solutions and instruments for ophthalmic surgery. With the acquisition, the Group is able to further strengthen its position as a solution provider.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. The purchase price is €25.9m and comprises a fixed component (including an escrow amount) of €22.8m and discounted performance-based components totaling €3.1m. The performance-based components reward the achievement of defined development targets. The components include milestones for the successful completion of certain goals in the product development and production processes. If all the targets are met, a maximum amount of €4.6m will be payable for these components. If there are delays or targets are not met, the amount payable is reduced down to a minimum of zero. As of 30 September 2022, ZEISS expects a fair value of €3.3m for the performance-related components and has recognized this under financial liabilities. In addition to a pro rata temporis contribution from the unwinding of the discount, this amount also includes the discount rate adjustment effect as of the reporting date of minus €0.2m. Goodwill from the acquisition mainly relates to expected synergies from the integration of the entity into the existing strategic business unit Ophthalmic Devices. The goodwill is expected to be tax deductible.

Katalyst contributed €3.8m to the revenue recognized in the consolidated income statement and minus €0.5m to consolidated profit/loss in the period between the acquisition date and the reporting date.

Kogent Surgical LLC, Chesterfield (US)
Under an agreement dated 25 March 2022 and effective as of 14 April 2022, Carl Zeiss Meditec Inc., Dublin (US), acquired 100% of the shares in Kogent Surgical LLC, Chesterfield (US) (hereinafter: Kogent).

Kogent specializes in technical solutions and instruments for microsurgery. With the acquisition, the Group is able to further strengthen its position as a solution provider.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. The purchase price is €45.1m and comprises a fixed component (including an escrow amount) of €21.6m and discounted performance-based components totaling €23.5m. The performance-based components reward the achievement of defined revenue and development targets. The components include milestones relating to obtaining approvals and the successful completion of certain goals in the product development and production processes. An earn-out component was also arranged for when revenue targets are met. If all the targets are met, a maximum amount of €30.4m will be payable for these components. If there are delays or targets are not met, the amount payable is reduced down to a minimum of zero. As of 30 September 2022, ZEISS expects a fair value of €26.7m for the performance-related components and has recognized this under financial liabilities. In addition to a pro rata temporis contribution from the unwinding of the discount, this amount also includes the discount rate adjustment effect as of the reporting date of minus €0.3m. Goodwill from the acquisition mainly relates to expected synergies from the integration of the entity into the existing strategic business unit Microsurgery. The goodwill is expected to be tax deductible.

Kogent contributed €2.6m to the revenue recognized in the consolidated income statement and minus €0.1m to consolidated profit/loss in the period between the acquisition date and the reporting date.

Acquired assets and liabilities assumed at fair value

The fair values of the identifiable assets and liabilities as of the acquisition date are as follows:

	Capture 3D	Preceyes	Katalyst	Kogent	**Total**
	€ k	€ k	€ k	€ k	€ k
Identifiable intangible assets	26,859	27,100	10,900	21,430	86,289
Property, plant and equipment	2,208	227	1,168	82	3,684
Non-current financial assets	9	0	0	0	9
Deferred tax assets	0	443	0	0	443
Inventories	2,945	74	2,603	1,100	6,722
Trade receivables	9,210	4	1,152	774	11,141
Other current financial assets	3,615	539	5	0	4,159
Other current non-financial assets	888	125	0	0	1,013
Cash and cash equivalents	1,896	258	261	1,473	3,888
Assets	**47,630**	**28,770**	**16,089**	**24,859**	**117,348**
Non-current financial liabilities	0	995	768	0	1,763
Deferred tax liabilities	0	6,761	0	0	6,761
Current accruals	950	328	136	0	1,414
Current financial liabilities	80	462	923	33	1,498
Trade payables	6,904	72	619	168	7,763
Other current non-financial liabilities	3,365	270	6	0	3,641
Liabilities	**11,299**	**8,888**	**2,452**	**201**	**22,840**
Identifiable net assets	**36,331**	**19,882**	**13,637**	**24,658**	**94,508**
Goodwill from acquisition	12,850	22,490	12,226	20,399	67,965
Purchase price	**49,181**	**42,372**	**25,863**	**45,057**	**162,473**
Cash received	1,896	258	261	1,473	3,888
Cash outflow due to acquisition	-29,760	-18,873	-22,814	-21,595	-93,042
Actual cash outflow from acquisition	**-27,864**	**-18,615**	**-22,553**	**-20,122**	**-89,154**

Pro forma presentation of acquisitions

ZEISS does not present pro forma consolidated revenue and pro forma consolidated profit/loss as though the acquisitions during the year had taken place on the first day of the fiscal year since no precise figures can be calculated owing to the immateriality, the companies' different fiscal years, seasonal business and different accounting policies.

Additions to the basis of consolidation due to the altered significance of the company

Carl Zeiss Digital Innovation GmbH, Dresden (Germany)
With effect from 1 October 2021, Carl Zeiss Digital Innovation GmbH, Dresden (Germany) (hereinafter: CZ Digital Innovation) was included in the basis of consolidation because, in the course of the regular review of the materiality of the non-consolidated subsidiaries, it was determined that the company was no longer immaterial for providing a true and fair view of the Group's net assets, financial position and results of operations. Since its full acquisition on 1 March 2020, CZ Digital Innovation has been included in the shares in affiliates as an non-consolidated subsidiary with a purchase price of €38.2m.

CZ Digital Innovation is a specialist for individual software solutions. With this acquisition, ZEISS systematically expanded its software competence and secured the expertise and resources for the realization of strategically important digital projects.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. The initial consolidation values were determined retrospectively at the acquisition date and the intangible assets identified as part of the purchase price allocation were posted at amortized cost in the amount of €18.3m. In this context, the originally acquired investment of 25% of the shares was retrospectively revalued at fair value due to the business combination achieved in stages, resulting in income of €2.0m. Goodwill from the acquisition mainly relates to expected synergies from the integration of the entity into the ZEISS Group. The goodwill is not expected to be tax deductible.

CZ Digital Innovation generated revenue of €63.9m in the reporting period and contributed €15.1m to the revenue recognized in the consolidated statement and €6.9m to consolidated profit/loss.

The fair values of the assets and liabilities identified as of the date of the inclusion in the consolidated financial statements are as follows:

	€ k
Identifiable intangible assets	18,407
Property, plant and equipment	4,859
Non-current financial assets	2,702
Inventories	1,121
Trade receivables	15,904
Other current financial assets	5,230
Income tax refund claims	1,117
Other current non-financial assets	234
Cash and cash equivalents	108
Assets	**49,682**
Other non-current provisions	860
Deferred tax liabilities	5,387
Current accruals	2,742
Current financial liabilities	11,580
Income tax payables	590
Trade payables	5,218
Other current non-financial liabilities	519
Liabilities	**26,896**
Identifiable net assets	**22,786**
Goodwill from acquisition	17,406
Carrying amount of the shares	**40,192**

3 Consolidation principles

The consolidated financial statements are based on the financial statements of the subsidiaries included in the Group as of 30 September 2022, which have been prepared according to uniform accounting policies.

Acquisition accounting was performed using the purchase method in accordance with IFRS 3 *Business Combinations*.

The identifiable assets acquired and liabilities assumed in a business combination are measured at their fair values as of the acquisition date regardless of the extent of any non-controlling interests. Non-controlling interests are measured either at fair value (full goodwill method) or the proportionate share of fair value of the assets acquired and liabilities assumed (partial goodwill method).

The cost of the interests acquired is offset against the Group's proportionate share in the subsidiary's net assets measured at fair value. Any acquisition-related costs incurred are immediately expensed. Any excess of cost over the Group's interest in the net fair value remaining after offsetting is recognized as goodwill under intangible assets. Any excess of the Group's interest in the net fair value over cost is recognized through profit or loss. For business combinations prior to 14 May 2002, the option set forth in IFRS 1.18 in connection with IFRS 1.C1 was exercised by including the previous GAAP accounting for these business combinations in the consolidated financial statements in accordance with IFRSs. Transactions under common control are accounted for by rolling forward the carrying amount. Changes to the investment ratio in a subsidiary which do not lead to a loss of control are treated as transactions between equity providers that do not affect income.

The profit or loss of the subsidiaries acquired is included in the consolidated income statement based on their group affiliation, i.e. from the date on which the Group obtains control.

A subsidiary is deconsolidated on the date on which Carl Zeiss AG loses control over the entity.

The shares in net assets that are attributable to non-controlling interests are reported under non-controlling interests within consolidated equity.

If reciprocal put and call options with the same terms and conditions are agreed in a business combination for the remaining non-controlling interests, an anticipated purchase of these shares is assumed. The same applies to purchase options that can be exercised at any time if their exercise would be advantageous at the current time. As such, no non-controlling interests are recognized. Instead, the conditional purchase price for these shares is reported as a financial liability at fair value.

Intercompany receivables and liabilities between consolidated entities are netted.

Intercompany profits from intercompany trade are eliminated.

The income tax implications are considered in the course of consolidation by recognizing deferred taxes.

Internal revenue and other intercompany income are offset against the corresponding expenses in the consolidated income statement.

Significant entities where the Group is able, directly or indirectly, to significantly influence financial and operating policy decisions (associates), or directly or indirectly shares control (joint ventures), are accounted for using the equity method. Associates and joint ventures that are immaterial are generally carried at cost.

When using the equity method in accordance with IAS 28 *Investments in Associates and Joint Ventures*, the shares are initially recognized at cost in the statement of financial position and subsequently measured at amortized cost to reflect changes in the Group's share of the equity (net assets) after the acquisition date and impairment losses.

4 Summarized financial information of material subsidiaries with non-controlling interests

The summarized financial information presented in the following corresponds to the financial information in the published consolidated financial statements of Carl Zeiss Meditec AG, Jena (Germany). The share of non-controlling interests in Carl Zeiss Meditec AG amounts to 40.9%.

	2021/22	2020/21
	€ k	€ k
Revenue	1,902,836	1,646,785
Consolidated profit/loss	295,911	237,519
Other comprehensive income	140,755	35,191
Total comprehensive income	436,666	272,710

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Non-current assets	1,030,964	791,950
Current assets	1,791,853	1,604,018
Non-current liabilities	253,410	270,467
Current liabilities	539,316	448,118
Equity	2,030,091	1,677,383

	2021/22	2020/21
	€ k	€ k
Cash flows from operating activities	188,199	362,663
Cash flows from investing activities	-148,894	-75,200
Cash flows from financing activities	-38,236	-285,889
Changes in cash and cash equivalents from exchange rate movements and changes in the basis of consolidation	-779	-337
Changes in cash and cash equivalents	290	1,237

	2021/22	2020/21
	€ k	€ k
Consolidated profit/loss attributable to non-controlling interests	121,028	97,145
Total comprehensive income attributable to non-controlling interests	178,596	111,538
Dividends paid to non-controlling interests	32,893	18,274
Equity attributable to non-controlling interests	830,307	686,050

The partnership between the Semiconductor Manufacturing Technology segment and ASML was intensified further in fiscal year 2016/17. In connection with this, ASML acquired 24.9% of the shares in Carl Zeiss SMT Holding GmbH & Co. KG and thus participated financially in the business of the Semiconductor Manufacturing Technology segment.

The summarized financial information (IFRS) for Carl Zeiss SMT Holding GmbH & Co. KG and Carl Zeiss SMT GmbH breaks down as follows:

	Carl Zeiss SMT Holding GmbH & Co. KG		Carl Zeiss SMT GmbH	
	30 Sep 2022	30 Sep 2021	**30 Sep 2022**	30 Sep 2021
	€ k	€ k	€ k	€ k
Non-current assets	44,963	45,273	1,039,845	641,604
Current assets	891,743	805,430	2,106,265	1,758,115
Non-current liabilities	107,699	3,225	362,179	289,593
Current liabilities	777,559	797,023	2,302,589	1,882,910
Equity	51,448	50,455	481,342	227,216
Other comprehensive income	823	179	150,333	74,689
Revenue	0	3,821	2,710,424	2,265,271
Profit/loss for the year	727,765	665,251	61,749	60,680

5 Currency translation

The consolidated financial statements are presented in euros. In the annual financial statements of those entities included in consolidation, transactions in foreign currencies are translated at the relevant exchange rate prevailing on the date of the transaction. Monetary items in foreign currencies are revalued at the mean closing rate, with exchange rate gains and losses being recognized in the consolidated income statement under financial result.

Financial statements denominated in foreign currency of the subsidiaries included in the consolidation are translated into euros on the basis of the functional currency concept in accordance with IAS 21 *The Effects of Changes in Foreign Exchange Rates*. All assets and liabilities are translated using average closing rates prevailing on the reporting date, whereas equity is translated at historical rates. The income and expense items from the income statement are translated using annual average rates. Any exchange differences arising are recognized through other comprehensive income within other reserves from currency translation.

The functional currencies of Carl Zeiss Meditec Medikal Cözümler Tic. ve San. A.S., Ankara (Türkiye), and Carl Zeiss Vision Argentina S.A., Buenos Aires (Argentina), which are included in the consolidated financial statements, are considered to be hyperinflationary in accordance with IAS 29 *Financial Reporting in Hyperinflationary Economies*. IAS 29 was initially adopted by Carl Zeiss Meditec Medikal Cözümler Tic. ve San. A.S., Ankara (Türkiye), in fiscal year 2021/22. However, the effects on the consolidated financial statements are immaterial.

The following key exchange rates for the consolidated financial statements as of 30 September 2022 were used for currency translation:

		Closing rate		Average rate	
	1 € =	**30 Sep 2022**	30 Sep 2021	**2021/22**	2020/21
China	CNY	6.94	7.48	7.10	7.78
UK	GBP	0.88	0.86	0.85	0.87
Japan	JPY	141.01	129.67	134.45	128.48
South Korea	KRW	1,400.69	1,371.58	1,349.99	1,348.88
US	USD	0.97	1.16	1.09	1.20

6 Accounting policies

The financial statements of the entities included in the consolidated financial statements are prepared in accordance with the accounting policies of the ZEISS Group. Adjustments are made as necessary where the local GAAP financial statements of individual entities diverge from these policies. Where the reporting date of subsidiaries is different from the reporting date for the consolidated financial statements, interim financial statements are used.

New and revised financial reporting standards
The following financial reporting standards were to be adopted for the first time in the reporting period:

Date of issue	**Standard/interpretation**	**Amendment/new standard or interpretation**
25 June 2020	Amendments to IFRS 4 *Insurance Contracts*	Temporary exemption from applying IFRS 9 until the initial application of IFRS 17
27 August 2020	Amendments to IFRS 4 *Insurance contracts*, IFRS 7 *Financial Instruments: Recognition*, IFRS 9 *Financial Instruments*, IFRS 16 *Leases* and IAS 39 *Financial Instruments: Recognition and Measurement*	Interest Rate Benchmark Reform — Phase 2: Additional relief from applying IAS 39 and IFRS 9 for hedge accounting

The adoption of new and revised financial reporting standards (including agenda decisions) did not have any significant impact on the net assets, financial position and results of operations.

The other accounting policies used were the same as in the prior year.

The IASB and the IFRS Interpretations Committee have issued a number of revised and new standards or interpretations, which did not come into effect in the reporting period. The new or amended rules and regulations mentioned in the following table have not been early adopted in the accompanying consolidated financial statements of Carl Zeiss AG. They are not currently expected to have any significant impact on the net assets, financial position and results of operations of the ZEISS Group. They will be applied when they become mandatory.

Date of issue	Standard/interpretation	Amendment/new standard or interpretation	Effective date	Endorsed by the EU
14 May 2020	Improvements to IFRS (2018 - 2020)	Amendments to IAS 41, IFRS 1, IFRS 9 and the illustrative examples for IFRS 16	Periods beginning on or after 1 January 2022	Yes
14 May 2020	Amendments to IFRS 3 *Business Combinations*	Update of a reference to the Conceptual Framework	Periods beginning on or after 1 January 2022	Yes
14 May 2020	Amendments to IAS 16 *Property, Plant and Equipment*	Clarification that revenue arising while preparing an asset for use must be recognized in profit or loss	Periods beginning on or after 1 January 2022	Yes
14 May 2020	Amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*	Clarification of what costs should be considered in assessing whether a contract is onerous	Periods beginning on or after 1 January 2022	Yes
18 May 2017	IFRS 17 *Insurance Contracts*	Principles for the recognition, measurement, presentation and disclosure of insurance contracts (replaces IFRS 4)	Periods beginning on or after 1 January 2023	Yes
23 January 2020	Amendments to IAS 1 *Presentation of Financial Statements*	Clarification of the criteria to classify liabilities as current or non-current	Periods beginning on or after 1 January 2023	No
12 February 2021	Amendments to IAS 1 *Presentation of Financial Statements*	Guidance on deciding which accounting policies to disclose in the financial statements	Periods beginning on or after 1 January 2023	Yes
12 February 2021	Amendments to IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*	Clarification of the distinction between changes in accounting policies from changes in accounting estimates	Periods beginning on or after 1 January 2023	Yes
7 May 2021	Amendments to IAS 12 *Income Taxes*	Income Taxes Narrowing of the scope of an exemption from recognizing deferred taxes in specific cases	Periods beginning on or after 1 January 2023	Yes
9 December 2021	Amendments to IFRS 17 *Insurance Contracts* and IFRS 9 *Financial Instruments*	Transitional solution for initial application of IFRS 17 by presenting comparative information	Periods beginning on or after 1 January 2023	Yes
22 September 2022	Amendments to IFRS 16 *Leases*	Requirements for the subsequent measurement of leases under a sale and leaseback for seller lessees	Periods beginning on or after 1 January 2024	No

Use of estimates

The preparation of financial statements in accordance with IFRSs requires management to make estimates and assumptions. These can affect the measurement of assets and liabilities, the nature and scope of contingencies, and the reported amounts of income and expenses during the reporting period. The assumptions and estimates primarily relate to the following matters:

» The determination of uniform useful lives is subject to estimates by management.
» The measurement parameters for impairment testing, in particular regarding goodwill (see note 12 Intangible assets).
» The actuarial parameters on which the calculation of the defined benefit obligations is based (see note 19 Provisions for pensions and similar obligations).
» The recoverability of the future tax relief.
» The timing of recognizing intangible assets in accordance with IAS 38 *Intangible Assets*.
» Assessment of the expected probability of default when assessing trade receivables and other financial assets.
» The measurement of lease liabilities in accordance with IFRS 16 *Leases*. In determining the lease term, all facts and circumstances that create an economic incentive to exercise options to extend the lease or not exercise termination options are taken into account;
» The share of revenue comprising contractual fees that are in part variable or contingent on future events.

In addition, estimates are required when assessing the recoverability of inventories as well as recognizing and measuring provisions. Actual results may differ from these estimates. The estimates and assumptions are regularly reviewed based on past experience. Changes are recognized through profit or loss as and when better information is available.

Current versus non-current classification
In the statement of financial position, assets and liabilities are classified as current or non-current depending on their maturity.

Revenue recognition and other income
Revenue was generated from products, system solutions, technical and other services for biomedical research, the medical technology, the semiconductor, automobile and mechanical engineering industries, planetariums and high-end consumer articles such as eyeglass lenses, camera and cine lenses and binoculars.

ZEISS recognizes revenue when control over the distinct goods and services is transferred to the customer, i.e. as soon as the customer has the ability to direct the use of, and obtain substantially all of the remaining benefits from the goods or services transferred. The recognition of revenue requires a contractual agreement that creates legally enforceable rights and obligations. The amount of revenue recognized is the expected consideration to which ZEISS is contractually entitled. Revenues for product deliveries and services are based partly on variable price agreements with external partners. The price variability is based, among other things, on the estimation of the expected business development of the external partners. The most likely amount is used for the determination of revenue, taking into account all information available at the time of preparation. Where required, revenue is adjusted for variable price components such as cash discounts, price reductions, customer bonuses and rebates. These are mainly volume-based bonuses measured on the basis of estimated future purchase volumes. Rebates are generally allocated to the individual performance obligations on the basis of the relative stand-alone selling prices.

Revenue from the sale of goods is recognized when control is transferred to the customer, which is normally when the goods are delivered. Revenue from services, for example under maintenance agreements, is recognized over time since the customer simultaneously receives and consumes the benefits evenly throughout the performance period. It is recognized on either a straight-line basis or, where the performance obligation is not satisfied on a straight line basis, in line with the provision of the services in proportion to the total services to be provided. Revenue from royalties that ZEISS collects as a usage fee (fee for an access right) over the period of use are recognized according to the economic substance of the underlying contract. In all cases described, revenue is recognized in accordance with the output method, since customers normally use both the services and the licenses evenly throughout the year.

When goods are sold, the customer pays on receiving the invoice after the goods are delivered. Advance payments may be requested from customers. The payment terms vary depending on the customary conditions in the respective countries and industries and usually allow short-term payment terms.

In addition to conventional product sales, ZEISS offers several performance obligations under multiple component arrangements. This can be, for example, the sale of a product combined with a service-type warranty, related services and/or an additional sale of consumables. If a single contract with a customer comprises several performance obligations and the timing of satisfaction of the performance obligations differs, the agreed transaction price is allocated to the separate performance obligations in accordance with the contractually stated prices or, more rarely, in accordance with the relative stand-alone selling prices. Since the agreed prices are normally the stand-alone selling prices within the meaning of IFRS 15 *Revenue from Contracts with Customers*, they do not need to be re-allocated to the product delivery and services.

Revenue from the sale of service-type warranties is recognized pro rata temporis over the contractually agreed warranty period.

No financing component is included in the determination of the amount and timing of revenue recognition when the period between transferring the goods or services and the customer paying for the goods or services is 1 year or less.

Incremental costs of obtaining contracts with customers (mainly sales commissions) which are amortized over 1 year or less are expensed immediately.

The contract liabilities largely relate to prepayments received on account of orders and deferred revenue due to the recognition of revenue over time (for example service revenue).

Interest income is recognized pro rata temporis using the effective interest method. Dividends are recognized when the legal right to receive the payment is established.

Expense recognition
Expenses are generally recognized when it is probable that there will be an outflow of economic benefits from the entity.

Research and development costs are expensed as incurred unless they can be capitalized as part of the cost of the asset. Subsidies for research and development costs are deducted from the expenses when they become receivable for services already performed and thus spent.

The company is liable to its customers for flawless functioning of the products sold during the contractual warranty period. The corresponding warranty provisions are recognized by debiting cost of sales when revenue is recognized.

Intangible assets
In accordance with IAS 38 *Intangible Assets*, internally generated intangible assets are recognized only if it is probable that future economic benefits will flow to the entity and the cost of the asset can be measured reliably.

Acquired and internally generated intangible assets are initially measured at cost. Intangible assets with finite useful lives are subsequently measured at cost less any accumulated amortization and any accumulated impairment losses. Amortization is charged over the useful life using the straight-line method. The major part of amortization is contained in cost of sales.

Intangible assets with indefinite useful lives as well as goodwill are not amortized and are therefore recognized at cost less any impairment losses.

Development costs are capitalized if all of the criteria set forth in IAS 38.57 are satisfied. These include, for example, demonstrating the technical feasibility of completing the intangible asset so that it will be available for use or sale. Other criteria relate to the intention to complete the intangible asset and the ability to use or sell it. In addition, it must generate future economic benefits for the company.

The entities of the ZEISS Group perform development work at the limit of the possible and set new technological standards. That is why only a small portion of development costs is capitalized in the ZEISS Group, as the criteria for recognition as part of the cost of an intangible asset are not all satisfied until a relatively late stage.

The costs directly attributable to development, including appropriate development-related overheads, are recognized as part of the cost of an asset. Amortization of capitalized development costs begins when the asset is available for use and is charged using the straight-line method over the expected product life cycle or based on unit numbers defined in business plans. Research costs and development costs that cannot be capitalized are expensed in the period in which they are incurred.

Depreciation is based on the following ranges of useful lives:

	Useful life
Patents, industrial rights, licenses, software	2 to 20 years
Development costs	2 to 15 years
Other intangible assets	2 to 10 years

Property, plant and equipment
Property, plant and equipment except for right-of-use assets are measured at cost less any accumulated depreciation and any accumulated impairment losses in accordance with IAS 16 *Property, Plant and Equipment*. The cost of self-constructed assets includes direct costs and a portion of materials and production overheads. The cost of creating qualifying assets, for example for assets that take a substantial period of time to produce, includes borrowing costs. Depreciation is charged on a straight-line basis over the asset's useful life.

The property that is held to earn rentals is immaterial and recognized at cost in accordance with IAS 40 *Investment Property.*

Depreciation is based on the following ranges of useful lives:

	Useful life
Buildings and structures	2 to 50 years
Technical equipment and machinery	2 to 21 years
Other equipment, furniture and fixtures	2 to 23 years

Impairment of intangible assets and property, plant and equipment
IAS 36 *Impairment of Assets* requires assessing at the end of each reporting period whether there is any indication that the assets reported in the statement of financial position may be impaired. In addition, annual impairment testing is required for intangible assets with indefinite useful lives and goodwill. The Group performs impairment testing if any indication of impairment exists or if this is required. This involves estimating the recoverable amount of the asset or cash-generating unit (CGU) in order to determine any need to record an impairment loss. The recoverable amount is the higher of the fair value less costs to sell and the value in use – determined for the individual asset or cash-generating unit in each case.

In assessing value in use, the estimated future cash flows are discounted to their present value using an after-tax risk-adjusted discount rate based on the discounted cash flow method. The discount rates are calculated using the parameters risk-free base interest rate, risk premium (market risk premium, country risk and beta factor), borrowing costs and tax effect, and reflect the capital structure of the cash-generating unit. The detailed planning period for future cash flows generally covers 3 fiscal years. For the following fiscal years, the cash flows of the third detailed planning year are rolled forward taking into account appropriate growth. An impairment exists when the carrying amount of the asset or cash-generating unit exceeds the recoverable amount. Such impairment loss is recognized in the income statement immediately.

With the exception of goodwill, impairment losses recognized in prior years are reversed if the reasons for recognizing the impairment no longer exist. The reversal is limited to ensure that the carrying amount is not exceeded that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. The reversal of impairment losses recognized on goodwill is not permissible.

Government grants
In accordance with IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*, government grants are only recorded if it is reasonably certain that the conditions attached to the grants will be fulfilled and the grants actually awarded. As a rule, public investment grants are deferred and amortized

through profit or loss over the useful lives of the related assets. Grants related to income are offset against the corresponding expenses in the period in which the expenses are incurred.

Leases
IFRS 16 *Leases* requires lessees to recognize all leases in the form of a right-of-use asset and corresponding lease liability. The lease liability is measured at the present value of the outstanding lease payments. They are presented in the income statement as financing activities so that the right-of-use asset is amortized on a straight-line basis and the lease liability is rolled forward using the effective interest method. Renewal, termination and purchase terms are taken into account during initial measurement of the lease liability if their exercise has become reasonably certain (especially property leases). The practical expedients for low-value leased assets and short-term leases are used.

Sale-and-leaseback agreements are presented using the same principles.

Lessors must assess as of the commencement date whether a lease is a finance lease or an operating lease. The lease is a finance lease if all significant risks and rewards are transferred. In this case, a receivable is recognized in the amount of the net investment in the lease. The corresponding interest income is presented in the financial result. Lease payments under operating leases are recognized in income on a straight-line basis over the lease term.

Financial instruments
A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets and financial liabilities are reported in the consolidated statement of financial position as of the date on which ZEISS becomes party to the contract. Regular way purchases and sales of financial assets are generally recognized on the settlement date. As of the date of initial recognition, financial assets and financial liabilities are measured at fair value and classified in accordance with the provisions of IFRS 9 *Financial Instruments*.

Fair value generally corresponds to the market or quoted value. If no active market exists, fair value is calculated using generally accepted valuation techniques (for example, using the present value method or option pricing models). Amortized cost corresponds to the cost of the financial liabilities adjusted for repayments, impairment and the amortization of any discounts or premiums.

IFRS 9 divides financial assets into the following measurement categories:

» At amortized cost (AC)
» At fair value through profit or loss (FVPL)
» At fair value through other comprehensive income (FVOCI)

The classification and measurement of financial assets is based on the business model and the structure of the cash flows. Classification depends on

» whether the underlying business model is aimed at holding financial assets to collect contractual cash flows ("hold" business model), whether the objective is to both collect contractual cash flows and sell financial assets ("hold and sell" business model) or solely sell the financial assets ("sell" business model) and
» whether the contractual cash flows are solely payments of principal and interest (SPPI).

The business model is determined based on the corporate management of the ZEISS Group. To this end, the financial instruments are combined into groups, each of which have a consistent underlying business model. The characteristics of the contractual cash flows are reviewed at the level of the individual financial instruments.

Financial assets whose contractual cash flows are solely payments of principal and interest on the principal amount and that are held under a "hold" business model are measured at amortized cost. These are trade receivables, cash and cash equivalents, cash at banks, loans, securities and sundry financial assets. The assets are subsequently measured using the effective interest method. Gains and losses from impairment or derecognition are recognized in the income statement.

If the objective is to both collect the contractual cash flows and sell the financial assets ("hold and sell" business model), the financial assets are measured at fair value through other comprehensive income (FVOCI). Unrealized gains and losses are recognized in other comprehensive income. If the assets are sold the cumulative gains and losses from the change in fair value are reclassified to the income statement. Interest income is recognized in profit or loss using the effective interest method. This mainly relates to securities.

Financial assets that do not meet the SPPI criteria or are held under a "sell" business model are measured at fair value through profit or loss (FVPL). Gains and losses from the change in fair value are recognized directly in the income statement. This mainly relates to securities and derivatives.

Financial instruments classified as equity instruments are allocated at "fair value through profit or loss" (FVTPL) measurement category. Entities may also opt to allocate equity instruments at "fair value through other comprehensive income" (FVOCI) measurement category. If the option is exercised, the gains or losses from this financial instrument are recognized in other comprehensive income and may not be subsequently reclassified to the income statement. This option was exercised for certain investments, since ZEISS intends to hold these investments long term.

Subsidiaries, associates and joint ventures that are not consolidated for reasons of materiality do not fall within the scope of IFRS 9 and IFRS 7.

Financial assets are subject to credit risk which is accounted for by recognizing a risk provision or, if losses have already occurred, an impairment loss. Specific allowances and portfolio-based allowances based on the expected credit loss model are recognized to cover the credit risk. The extent of expected losses is categorized according to a 3-stage model (general approach) depending on whether the credit risk of a financial instrument has increased significantly since initial recognition. Stage 1 comprises financial assets that have not deteriorated significantly in credit quality since initial recognition. In these cases, 12-month expected credit losses are recognized. If there is a significant increase in the risk of default by the debtor, the financial instrument is allocated to stage 2 and an allowance is recognized in the amount of the expected losses over the entire term or life of the asset. If there is further objective evidence of impairment, the financial assets are allocated to stage 3. Objective evidence includes delay of payment by more than 90 days, information about financial difficulties of the debtor or insolvency proceedings filed against the debtor. The general approach is used to determine the expected credit losses for all assets except trade and other receivables.

Offsetting of financial instruments
In the ZEISS Group, derivative financial transactions are concluded in accordance with the German master agreement for financial futures contracts. They do not meet the offsetting criteria in accordance with IAS 32 *Financial Instruments: Presentation* since offsetting is enforceable only in the event of insolvency.

In the ZEISS Group, credit notes received are offset against corresponding trade payables, and trade receivables offset against corresponding credit notes if these fulfill the offsetting criteria in accordance with IAS 32.

Inventories
Materials and supplies as well as merchandise are measured at costs of purchase, which are generally determined using the average cost method. Work in progress and finished goods are measured at costs of conversion. In addition to direct materials as well as direct labor, costs of conversion include an appropriate portion of materials

and production overheads as well as production-related depreciation and production- related administrative expenses.

Write-downs are recorded on inventories when the costs of purchase or conversion exceed the estimated net realizable value. All inventory, selling and income risks are thus given adequate consideration. If the reasons for a write-down no longer apply, it is reversed to the lower of cost or estimated net realizable value.

Trade and other receivables
Trade and other receivables are accounted for at nominal value or amortized cost. Trade receivables are recognized when an unconditional right to consideration from the customer exists. The simplified approach is applied to determine allowances for trade receivables and receivables under financial leases. According to this, expected credit losses are always calculated over the entire lifetime of financial instruments. As a practical expedient, the ZEISS Group applies a provision matrix for non-credit-impaired receivables which determines the expected losses as a percentage based on the number of days overdue. The calculation is based on historical loss experience and is supplemented by relevant forward-looking parameters. This takes current macroeconomic forecasts into account. The forecasts cover a full economic cycle at a minimum. If information about financial difficulties of the debtor is available, the receivables are assessed on a case-by-case basis and an allowance is recognized for credit- impaired receivables. An allowance account is used to post changes to allowances.

A financial instrument is derecognized if the rights to cash flows have expired, due to the conclusion of insolvency proceedings, a court ruling or depending on other circumstances in the local law. A financial asset is also derecognized if the significant risks and rewards are transferred.

Cash and cash equivalents
Cash and cash equivalents comprise cash on hand and cash at banks as well as all investments with an original term of less than 3months.

Provisions for pensions and other post-employment benefits
The entities of the ZEISS Group have various pension plans. In addition, some foreign subsidiaries have agreed to provide post-employment healthcare benefits on a certain scale.

Payments for defined contribution obligations including contributions to statutory pension funds are recognized as an expense for the period.

Defined benefit obligations are measured in accordance with IAS 19 *Employee Benefits* using the projected unit credit method allowing for expected future adjustments to salaries and pensions.

The provisions for pensions and similar obligations at German Group entities are determined based on actuarial principles and using the 2018 G mortality tables published by Prof. Dr. Klaus Heubeck. The provisions for pensions and similar obligations at entities outside Germany are determined using the relevant local basis for calculation and local parameters.

External funds invested to cover defined benefit obligations are measured at fair value and offset against the corresponding obligations.

Changes in the portfolio and variances in actual trends compared to the assumptions used for calculation purposes, as well as changes in the assumptions for the measurement of defined benefit obligations, result in actuarial gains and losses, which are recognized directly in other reserves within equity and thus directly affect the consolidated statement of financial position and the consolidated statement of comprehensive income.

The balance of the defined benefit obligation and plan assets (net defined benefit obligation or net plan assets) is discounted using the interest rate on which the measurement of the defined benefit obligation is based. The resulting net interest cost or income is recognized in the interest expenses or interest income in the consolidated income statement. Service cost is disclosed in the earnings before interest and taxes (EBIT).

Deferred compensation
ZEISS offers employees with unlimited employment contracts the option of using untaxed compensation to make provision for old age. Depending on the terms of their contract, the employees may convert up to 3monthly salaries a year. The amounts converted are paid into an employer's pension liability insurance policy and the associated benefits are pledged to the employees. The amount and timing of the receivables from the employer's pension liability insurance matches those of the benefits payable to employees. As the receivables are pledged, they generally satisfy the requirements for plan assets and are presented on a net basis. The pension plan is therefore classified as a defined contribution plan from a substance-over-form perspective. If the future benefits under the employer's pension liability insurance are higher than the benefit obligation to the employee, the employee receives the higher amount.

The amount is dependent on the age of the employees at the time of conversion of their compensation and the employees' decision on whether to have the deferred compensation paid out as a one-off payment or as a pension. In addition to the conversion of compensation, the deferred compensation system may include invalidity and surviving dependents' benefits, depending on the model chosen.

Other provisions
In accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, present obligations to third parties arising from past events are disclosed within other provisions if it is probable that an outflow of resources will be required and can be measured reliably. The provisions are recognized at full cost.

Where the effect of the time value of money is material and the remaining term of the obligation can be determined reliably, non-current provisions are recognized at the amount needed to settle the obligation, discounted to the reporting date. In such cases, the increase in the provision due to the passage of time is recognized as an interest expense.

The provisions for obligations under the German phased retirement scheme, long-service awards and death benefits are determined and measured on the basis of actuarial reports or similar parameters.

Restructuring provisions
Restructuring provisions are recognized when an entity has made the decision to restructure and has a detailed formal plan for the restructuring, stating the parts of a business or locations concerned, the approximate number of employees affected and when the plan will be implemented, and it has been announced to those affected or their representatives before the reporting date. The amount of the provision covers all direct expenditures arising from the restructuring which necessarily arise during the restructuring and are not associated with the ongoing or future activities of the entity.

Warranty provisions
Warranty obligations may be legal, contractual or non-contractual (assurance-type warranties). Provisions are recognized for expenses expected to be incurred under guarantee or warranty obligations unless there are separate performance obligations. Warranty claims are expected especially when the warranty period has not yet expired, when warranty expenses were incurred in the past or when there is specific indication of pending warranty cases. The warranty risk is derived either from individual estimates or past experience and is provided for accordingly.

Provisions for litigation risks
Provisions are recognized for risks arising from litigation in which entities of the ZEISS Group are the defendants and if it is more likely than not that the outcome will be negative. They are measured at the amount that the company expects to pay in the event of a negative outcome. This amount includes the amounts payable by the company, such as damages and compensation payments as well as anticipated legal costs.

Deferred taxes
Deferred taxes are recognized using the liability method in accordance with IAS 12 *Income Taxes*.

Deferred tax assets and liabilities are recognized on all temporary differences between the IFRS carrying amounts and the tax accounts of consolidated entities and on consolidation measures.

Further, deferred tax assets for future economic benefits from unused tax losses and unused tax credits are taken into account if it is probable that they will be used within a period of up to 7 years. As non-capital-market-oriented entity, the ZEISS Group is pursuing a long-term business strategy that has a direct impact on the tax strategy and the forecast period.

The carrying amount of deferred tax assets is reviewed at every reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the deferred tax asset to be utilized. A previously unrecognized deferred tax asset is reassessed and recognized to the extent that it has become probable that future economic benefits will be recovered.

Deferred tax liabilities are recognized for the expected income tax and withholding tax on expected dividend payments by subsidiaries. No deferred tax liabilities are recognized for the retained earnings of subsidiaries, unless corresponding dividend distributions are intended in the foreseeable future.

Deferred taxes relating to items recognized in other comprehensive income are likewise recognized in other comprehensive income and not through profit or loss.

Deferred tax assets and deferred tax liabilities are offset if a group entity has a legally enforceable right to offset current tax assets and current tax liabilities and these relate to income taxes levied by the same taxation authority on the same taxable entity. Consequently, deferred tax assets and liabilities are netted within consolidated tax groups.

Liabilities
Financial liabilities and the outstanding invoices reported in accruals are normally measured at amortized cost using the effective interest method. Financial liabilities comprise liabilities to banks, loans and other financial liabilities. Non-interest-bearing loans and loans bearing off-market interest rates are recognized at present value and increased due to the passage of time over their term to maturity.

The fair value option offered by IFRS 9 is not applied.

Contract liabilities are recorded when the customer pays consideration before the corresponding goods or services are transferred to the customer. Contract liabilities are recognized as revenue when the contractual obligations are fulfilled.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

7 Revenue

Revenue by region breaks down as follows:

	2021/22		2020/21	
	€ k	%	€ k	%
Germany	676,349	8	619,209	8
EMEA (without Germany)	3,817,552	44	3,337,259	45
Americas	1,762,491	20	1,528,525	20
APAC	2,498,018	28	2,043,935	27
	8,754,410	**100**	**7,528,928**	**100**

Of revenue, €7,810m (prior year: €6,738m) is attributable to the sale of goods, €906m (prior year: €758m) to the rendering of services and €39m (prior year: €33m) to the granting of licenses.

Revenue of €851m (prior year: €683m) was recognized under contractual liabilities at the beginning of the reporting period. Contracts with customers of €1,138m (prior year: €851m) currently still recorded under current contract liabilities are expected to result in revenue in the next fiscal year.

Due to changes in the transaction price, revenue from performance obligations that had been fulfilled in the prior year were reduced by €66m in the reporting period (prior year: €0m).

The transaction price allocated to the remaining performance obligations (fully or partially unsatisfied) from contracts for the provision of services with an original expected duration of more than 1 year is expected to result in revenue of €25m in fiscal year 2023/24 (prior year: €21m for fiscal year 2022/23) and €17m in the subsequent fiscal years (prior year: €14m). In addition, there are contractual performance obligations from the order backlog of €6,134m (prior year: €4,141m).

8 Other income

Other income contains income from cross-charging Microsoft expenses of €3.5m to SCHOTT AG, Mainz (Germany), from disposals of property, plant and equipment, from the reversal of other provisions and from the sale of scrap as well as other income not attributable to functional costs.

9 Other expenses

Other expenses contain the loss of €7.0m from the disposals of Carl Zeiss Fixture Systems GmbH, Tholey (Germany), from the basis of consolidation, losses from the disposal of non-current assets, expenses from allocations to other provisions, expenses for the support of humanitarian causes in Ukraine and other operating expenses not attributable to functional costs.

10 Financial result

Interest result

	2021/22	2020/21
	€ k	€ k
Interest income	**31,172**	**14,311**
» thereof from affiliates	284	253
Interest expenses	**38,666**	**32,443**
» thereof to affiliates	23	2
» thereof from leases	6,214	5,964
» thereof net interest cost for pensions	15,548	17,165
	-7,494	**-18,132**

Other financial result

	2021/22	2020/21
	€ k	€ k
Income from investments	2,219	2,137
Income from profit transfer	716	16,664
Expenses for loss absorption	3,068	1,291
Investment result	**-133**	**17,510**
Result from exchange differences	-13,788	918
Result from changes in market value	-84,748	-22,840
Sundry other financial result	80,002	-13,691
Other financial result	**-18,667**	**-18,103**

The result from exchange differences should be seen in the context of the hedging of currency risks. The result from changes in market value mainly include effects from the measurement of financial assets and financial liabilities at fair value through profit or loss.

The sundry other financial result mainly contains income from the remeasured financial liability in connection with the acquisition of Carl Zeiss Meditec Cataract Technology, Inc., Reno, (US) and the sale of the interests in Bridger Photonics Inc., Bozeman (US).

11 Income taxes

Income taxes comprise domestic and foreign income taxes as well as deferred tax and break down as follows:

	2021/22	2020/21
	€ k	€ k
Current tax expenses less tax refunds	466,058	410,673
Deferred tax income	-59,414	-15,375
» thereof from temporary differences	-64,125	1,294
» thereof from changes in tax rates	-1,295	1,020
» thereof from unused tax losses including any reductions	6,006	-17,689
	406,644	**395,298**

Deferred taxes are determined on the basis of the tax rates that apply or are expected to apply based on the tax laws that have been enacted or substantively enacted in the individual countries at the time of realization. In Germany, a corporate income tax rate of 15.0% currently applies. Taking into account the solidarity surcharge and the different trade tax levy rates, the rates for German entities ranged between 27.7% to 29.9% (prior year: 27.7% to 31.2%). The tax rates form the basis for the calculation of current taxes.

The nominal tax rates applicable outside Germany in the fiscal year ranged between 7.5% and 35.0% (prior year: 7.5% and 35.0%).

Significant estimates are required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of future taxable profits together with future tax planning strategies. The deferred tax assets are assumed to be recoverable on account of the planned business development in subsequent years.

The total amount of deferred tax assets and liabilities as of 30 September 2022 is allocated to the following items of the statement of financial position:

	30 Sep 2022		30 Sep 2021	
	Assets	Liabilities	Assets	Liabilities
	€ k	€ k	€ k	€ k
Non-current assets	**38,158**	**128,389**	**29,636**	**101,593**
Intangible assets	4,019	82,875	5,006	69,764
Property, plant and equipment	23,571	40,353	16,611	28,254
Other non-current assets	10,568	5,161	8,019	3,575
Current assets	**144,630**	**25,444**	**103,902**	**34,671**
Inventories	126,906	5,893	88,227	10,265
Receivables and other current assets	17,724	19,551	15,675	24,406
Non-current liabilities	**348,102**	**63,518**	**568,575**	**7,534**
Provisions for pensions and similar obligations	303,927	38,498	518,656	5,117
Other non-current liabilities and provisions	44,175	25,020	49,919	2,417
Current liabilities	**161,245**	**6,641**	**127,059**	**10,968**
Outside basis differences	**0**	**3,100**	**0**	**2,600**
Unused tax losses	**82,342**	**0**	**74,408**	**0**
Total deferred taxes	**774,477**	**227,092**	**903,580**	**157,366**
Impairment losses	3,820	0	5,748	0
Offsetting	143,636	143,636	90,319	90,319
Deferred taxes, net	**627,021**	**83,456**	**807,513**	**67,047**

The outside basis differences contain deferred tax liabilities on retained earnings from subsidiaries where a distribution is planned.

Unused tax losses include deferred tax assets from unused tax losses as well as from tax credits.

In the fiscal year, deferred taxes of minus €243,860k (prior year: minus €88,448k) were recognized in other comprehensive income.

Deferred tax assets are recognized for unused tax losses to the extent that it is probable on the basis of the tax planning that taxable profit will be available against which the losses can be utilized. The loss carryforwards relate to group entities in Germany, Australia, Brazil, China, Finland, France, Israel, Netherlands and the US (prior year: Germany, Australia, Brazil, China, Finland, France, Israel and the US).

The unused tax losses for which no deferred taxes were recognized amount to €463,430k (prior year: €432,158k). Thereof, an amount of €1,554k (prior year: €1,912k) is available for offsetting for more than 5 years while an amount of €461,876k (prior year: €430,246k) does not expire at all. As of the reporting date these unused tax losses were classified as not likely to be usable because based on the forecasts it is not likely that taxable profit will be available in the future. The loss carryforwards relate to group entities in the following countries:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Germany	403,127	361,814
Brazil	0	2,802
France	42,497	47,645
Japan	1,554	1,912
Singapore	850	1,070
South Africa	13,655	14,757
Hungary	1,732	2,077
Other	15	81
Unrecognized unused tax losses	**463,430**	**432,158**

Consolidation measures gave rise to deferred tax assets of €78,735k (prior year: €62,903k) and deferred tax liabilities of €61,032k (prior year: €53,740k).

In the reporting period, the tax rate of the parent company Carl Zeiss AG of 28.78% (prior year: 28.78%) was used as the tax rate applicable for the reconciliation of the expected income tax expense of €449,542k (prior year: €415,121k), based on earnings before taxes, to the current income tax expense of €406,644k (prior year: €395,298k).

The tax reconciliation statement is presented in the table below:

	2021/22	2020/21
	€ k	€ k
Earnings before taxes (EBT)	1,561,993	1,442,395
Expected income tax expense (= 28.78% x EBT; prior year: = 28.78% x EBT)	**449,542**	**415,121**
Differences from diverging tax rates	-31,742	-26,838
Effects of changes in tax rates	-1,295	1,020
Effects of non-deductible expenses	24,346	17,334
Effects of tax-free income	-16,576	-2,614
Effects relating to other periods	164	8,977
Permanent effects	-12,750	-11,722
Other	-5,045	-5,980
Current income tax expense	**406,644**	**395,298**

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

12 Intangible assets

	Patents, industrial rights, licenses, software	Goodwill	Development costs	Other intangible assets and advances	Total
	€ k	€ k	€ k	€ k	€ k
Cost					
1 October 2020	**535,656**	**1,369,774**	**361,973**	**264,138**	**2,531,541**
Change in the basis of consolidation	1,531	4,313	0	1,826	7,670
Additions	9,713	0	38,065	13,480	61,258
Disposals	2,590	0	0	1,632	4,222
Reclassifications	2,749	0	0	-2,749	0
Currency translation	1,477	3,843	1,875	789	7,984
30 September 2021	**548,536**	**1,377,930**	**401,913**	**275,852**	**2,604,231**
Amortization/impairment					
1 October 2020	**445,004**	**92,621**	**222,544**	**158,163**	**918,332**
Change in the basis of consolidation	8	0	0	0	8
Additions	29,928	0	24,596	17,513	72,037
Disposals	2,542	0	0	221	2,763
Reclassifications	0	0	0	0	0
Currency translation	1,301	427	1,141	552	3,421
30 September 2021	**473,699**	**93,048**	**248,281**	**176,007**	**991,035**
Carrying amounts as of 30 Sep 2021	**74,837**	**1,284,882**	**153,632**	**99,845**	**1,613,196**
Cost					
1 October 2021	**548,536**	**1,377,930**	**401,913**	**275,852**	**2,604,231**
Change in the basis of consolidation	-319	85,552	58,427	44,484	188,144
Additions	8,364	2,452	42,847	34,903	88,566
Disposals	2,902	0	0	854	3,756
Reclassifications	4,213	0	0	-18,144	-13,931
Currency translation	18,088	64,623	34,001	14,045	130,757
30 September 2022	**575,980**	**1,530,557**	**537,188**	**350,286**	**2,994,011**
Amortization/impairment					
1 October 2021	**473,699**	**93,048**	**248,281**	**176,007**	**991,035**
Change in the basis of consolidation	-2,037	0	0	0	-2,037
Additions	27,621	0	31,029	21,282	79,932
Disposals	2,884	0	0	854	3,738
Reclassifications	0	0	0	0	0
Currency translation	16,360	7,239	15,997	8,463	48,059
30 September 2022	**512,759**	**100,287**	**295,307**	**204,898**	**1,113,251**
Carrying amounts as of 30 Sep 2022	**63,221**	**1,430,270**	**241,881**	**145,388**	**1,880,760**

The goodwill amounting to €1,430,270k (prior year: €1,284,882k) is tested for impairment annually at the level of the cash-generating units.

The cash flows referred to in the impairment test are generally determined on the basis of detailed plans with a planning horizon of 3 years. The detailed planning phase was extended to 5 years for the Industrial Solutions strategic business unit, as the detailed planning phase of 3 years was not sufficient to derive the sustainable cash flow based on the development of business. For the following fiscal years, the cash flows of the last detailed planning year are rolled forward with a growth rate of 1.0% (prior year: 1.0%). The discount rates are based on an after-tax weighted average cost of capital (WACC) depending on the cash-generating unit. The cost of capital is a material parameter in impairment testing. A change in WACC has a direct impact on value in use.

In a sensitivity analysis, an increase in the discount rate by 1 percentage point and a decrease in the long-term growth rate by half a percentage point were simulated. Based on this, no sensitivity of parameters (individually or in combination) classified as probable would result in a need to recognize an impairment loss. Only in the event that the discount rates were increased by 1 percentage point and the long-term growth rate were simultaneously reduced to almost zero percent would an imputed impairment loss only be necessary for the Industrial Quality Solutions strategic business unit. A further simulation to take into account current uncertainties with expansion of the relevant parameters (increase of the borrowing rate by 2 percentage points and simultaneous decline of the long-term growth rate to 0%) would only result in an impairment loss of €107.6m for the Industrial Quality Solutions strategic business unit.

Goodwill is allocated to the cash-generating units on the basis of the internal organizational structure of the ZEISS Group. This allows goodwill to be allocated to the strategic business units or the overarching segments as follows:

	30 Sep 2022		30 Sep 2021	
	Carrying amounts	WACC (after tax)	Carrying amounts	WACC (after tax)
	€ k	%	€ k	%
» Semiconductor Mask Solutions	51,735	11.2	45,768	9.6
Semiconductor Manufacturing Technology	**51,735**		**45,768**	
» Industrial Quality Solutions	570,442	9.8	555,435	8.4
» Research Microscopy Solutions	54,365	10.1	48,026	8.7
Industrial Quality & Research	**624,807**		**603,461**	
» Ophthalmic Devices	375,448	7.0	298,752	6.7
» Microsurgery	27,611	7.0	3,951	6.7
Medical Technology	**403,059**		**302,703**	
» Vision Care	333,263	7.3	332,950	6.0
Consumer Markets	**333,263**		**332,950**	
Others	17,406	9.7	0	8.3
Total	**1,430,270**		**1,284,882**	

The changes in the cash-generating units result from the initial consolidation of Capture 3D, Inc., Santa Ana (US), Carl Zeiss Digital Innovation GmbH, Dresden (Germany), Preceyes B.V., Eindhoven (Netherlands), Katalyst Surgical LLC, Chesterfield (US), Kogent Surgical LLC, Chesterfield (US), as well as from the deconsolidation of Carl Zeiss Fixture Systems GmbH, Tholey (Germany), and from foreign currency translation in accordance with IAS 21.47.

Apart from goodwill, the ZEISS Group does not report any intangible assets with indefinite useful lives.

13 Property, plant and equipment

	Land and buildings including buildings on third-party land	Technical equipment and machinery	Other equipment, furniture and fixtures	Assets under construction and advances	Right-of-use assets	Total
	€ k	€ k	€ k	€ k	€ k	€ k
Cost						
1 October 2020	**932,429**	**1,062,614**	**1,169,905**	**293,867**	**309,368**	**3,768,183**
Change in the basis of consolidation	3,972	1,368	770	0	0	6,110
Additions	68,982	32,339	77,128	383,354	194,147	755,950
Disposals	151,452	65,400	44,345	8,625	55,768	325,590
Reclassifications	105,253	102,787	30,411	-238,451	0	0
Currency translation	5,221	11,569	7,403	3,708	6,749	34,650
30 September 2021	**964,405**	**1,145,277**	**1,241,272**	**433,853**	**454,496**	**4,239,303**
Amortization/impairment						
1 October 2020	**420,217**	**738,906**	**900,556**	**0**	**85,681**	**2,145,360**
Change in the basis of consolidation	7	0	570	0	0	577
Additions	35,983	74,363	86,036	0	66,449	262,831
Disposals	123,845	58,416	33,443	0	35,713	251,417
Reclassifications	-5	11	-6	0	0	0
Currency translation	1,391	5,767	4,233	0	1,733	13,124
30 September 2021	**333,748**	**760,631**	**957,946**	**0**	**118,150**	**2,170,475**
Carrying amounts as of 30 Sep 2021	**630,657**	**384,646**	**283,326**	**433,853**	**336,346**	**2,068,828**

Cost						
1 October 2021	**964,405**	**1,145,277**	**1,241,272**	**433,853**	**454,496**	**4,239,303**
Change in the basis of consolidation	-590	-2,516	3,378	14	958	1,244
Additions	50	19,438	77,585	675,338	69,582	841,993
Disposals	14,984	31,753	48,491	5,131	39,892	140,251
Reclassifications	-22,929	194,899	406,387	-564,426	0	13,931
Currency translation	21,453	46,170	36,168	11,194	34,543	149,528
30 September 2022	**947,405**	**1,371,515**	**1,716,299**	**550,842**	**519,687**	**5,105,748**
Amortization/impairment						
1 October 2021	**333,748**	**760,631**	**957,946**	**0**	**118,150**	**2,170,475**
Change in the basis of consolidation	-1,792	-1,841	1,611	0	-106	-2,128
Additions	40,232	90,944	107,153	0	72,941	311,270
Disposals	5,795	24,801	41,755	0	30,352	102,703
Reclassifications	-616	855	-239	0	0	0
Currency translation	6,740	26,009	22,339	0	7,539	62,627
30 September 2022	**372,517**	**851,797**	**1,047,055**	**0**	**168,172**	**2,439,541**
Carrying amounts as of 30 Sep 2022	**574,888**	**519,718**	**669,244**	**550,842**	**351,515**	**2,666,207**

Property, plant and equipment with a net carrying amount of €51,302k (prior year: €52,112k) are subject to restrictions on disposal or serve as collateral for liabilities. Accumulated contractual purchase commitments for property, plant and equipment and intangible assets total €682,787k as of the reporting date (prior year: €338,994k).

14 Other financial assets

	30 Sep 2022	30 Sep 2022 thereof due in more than 1 year	30 Sep 2021	30 Sep 2021 thereof due in more than 1 year
	€ k	€ k	€ k	€ k
Shares in affiliates	55,967	55,967	86,740	86,740
Investments	22,789	22,789	22,267	22,267
Loans	41,519	34,662	42,890	40,551
Securities	928,525	359,317	729,932	393,922
Derivatives	16,716	5,170	3,434	36
Sundry other financial assets	585,561	435,325	164,763	94,803
	1,651,077	**913,230**	**1,050,026**	**638,319**

The shares in affiliates relate to non-consolidated subsidiaries. The year-on-year decline is mainly attributable to the initial consolidation of Carl Zeiss Digital Innovation GmbH, Dresden (Germany).

Loans cover default risks according to the expected credit loss model of €0.8m (prior year: €0.8m). Current macroeconomic uncertainties were taken into account in the calculation.

The sundry other financial assets mainly consist of the assets of entities within and outside Germany from pension plan surpluses in the amount of €276.4m (prior year: €11.7m), assets in connection with financing or securing short-term obligations toward employees in the amount of €112.9m (prior year: €75.5m) as well as time deposits and cash pool receivables from non-consolidated subsidiaries.

15 Other non-financial assets

Other non-financial assets mainly comprise prepaid expenses as well as tax reimbursement claims from taxes other than income taxes.

16 Inventories

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Materials and supplies	760,387	553,153
Work in progress	916,252	712,461
Finished goods and merchandise	799,043	668,659
Advances	46,663	41,711
	2,522,345	**1,975,984**

The carrying amount of inventories recognized at net realizable value comes to €1,059,794k (prior year: €765,967k). The carrying amounts contain write-downs of €269,994k (prior year: €235,033k).

The write-downs recorded on inventories, which are recognized under cost of sales in the consolidated income statement, amounted to €84,987k in the reporting period (prior year: €61,724k). Write-downs of €16,324k (prior year: €12,086k) were reversed through profit or loss.

Cost of materials amounted to €2,825m in the fiscal year (prior year: €2,358m).

17 Cash and cash equivalents

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Cash funds	1,810,842	1,510,787
Securities due in less than 90 days of their acquisition date	438	55,083
	1,811,280	**1,565,870**

Cash is composed of checks, cash on hand and cash at banks. The effective interest rate for cash at banks due in less than 90 days is 0.0% (prior year: between minus 0.7% and 0.0%).

18 Equity

The *issued capital* of Carl Zeiss AG totaling €120,000k is unchanged compared to the prior year and is divided into 120,000,000 stocks at nominal value, all of which are held by the Carl Zeiss Foundation. A dividend of €78,200k was distributed in the reporting period (prior year: €30,000k).

The *capital reserves* are unchanged at €52,770k.

Retained earnings and sundry reserves primarily contain:
» the legal reserve of Carl Zeiss AG of €5,951k
» the consolidated profit of the reporting period as well as the past results generated by the entities included in the consolidated financial statements less the associated non-controlling interests
» difference between the measurement of ASML loans at fair value and nominal volume at initial recognition
» the acquisition or sale of shares in subsidiaries currently under control

Other reserves present the differences arising from the currency translation of foreign subsidiaries' separate financial statements without effect on income as well as remeasurement effects recognized in equity:
» defined benefit plans
» financial assets at fair value through other comprehensive income

Non-controlling interests contain the proportionate share of non-controlling interests in equity.

The development of consolidated equity is shown in the consolidated statement of changes in equity.

19 Provisions for pensions and similar obligations

The provisions for pensions include current and future pension obligations of Carl Zeiss AG and various subsidiaries. In addition, this item comprises the provisions of the US entities for medical care benefit obligations.

The ZEISS Group has both defined contribution plans and defined benefit plans.

In the case of defined contribution plans, the obligation of the entity concerned is limited to the payment of the agreed amounts. The expenses for defined contribution plans amounted to €134,123k in the reporting period (prior year: €114,820k).

With defined benefit plans, the entity's obligation consists of fulfilling the commitments made to current and former employees and their surviving dependents. Such obligations exist both at group entities in Germany and other countries. In the ZEISS Group, defined benefit plans are partly funded via provisions and partly via external funds.

The obligations from defined benefit plans primarily relate to pension obligations in Germany, the US and the UK.

The characteristics and the associated risks of the defined benefit plans vary depending on the legal, tax and economic framework in the respective country.

German pension plans

The currently applicable pension arrangement for employees in Germany is an employer-financed defined benefit plan, comprising old age, disability and surviving dependents' pensions. These pensions are generally granted after a certain period of service.

The defined benefit plan is a modular system in which one pension module is calculated and fixed for each fiscal year. The contribution amount is based on the employee's income and the profit of the company during the fiscal year, with a basic contribution being guaranteed. The contribution is translated into a pension module on the basis of age- and interest-related factors. The pension modules acquired are aggregated and paid out as a life-long annuity.

For employees who were employed before 1 January 2000, vested rights from previous final-salary-based defined benefit plans must be taken into account for service periods up to 2010.

To reduce the risks associated with defined benefit plans (in particular longevity, salary increases and inflation), benefits are partly financed via external plan assets. To this end, a contractual trust arrangement (CTA) was introduced in Germany in fiscal year 2005/06, under which assets are transferred to a trust association such that they can be used only to settle benefit obligations. These assets satisfy the criteria set forth in IAS 19 for plan assets and can therefore be offset against the benefit obligations in these consolidated financial statements. Where the assets exceed the underlying secured claims, the excess is reported under non-current financial assets.

In addition to the employer-financed pensions, all employees in Germany have the option of participating in the company pension scheme in the form of deferred compensation. This is a defined contribution plan financed by converting salary components, for which the company takes out employer's pension liability insurance.

Pension plans outside Germany
Major pension plans exist primarily in the US and the UK. These are employer-financed defined benefit plans, comprising old age and surviving dependents' benefits as well as medical benefits, depending on how they are structured. Some of these plans are based on final salary, while others are based on salary-related modules. The obligations from foreign defined benefit obligations are largely covered by assets in long-term external funds. The plans in the US and in the UK are closed to new employees and existing obligations are now capped.

Actuarial assumptions are essential for all defined benefit plans. Besides life expectancy, which in Germany is determined based on the 2018 G mortality tables published by Prof. Dr. Klaus Heubeck, and in other countries on comparable local measurement bases, the following assumptions were made for the purposes of the actuarial calculations:

		Germany		Other countries
	30 Sep 2022	30 Sep 2021	**30 Sep 2022**	30 Sep 2021
	%	%	%	%
Interest rate	3.75	1.35	0.68 to 9.25	0.37 to 8.00
Future salary increases	3.00	2.75	0.00 to 5.00	0.00 to 5.00
Future pension increases	2.25	1.75	0.00 to 3.70	0.00 to 5.73

The assumptions regarding interest rates, future salary and pension increases as well as mortality rates on which the calculation of the defined benefit obligation (DBO) was based vary depending on economic and other conditions in the country in which the plans exist. The interest rates were determined on an entity-specific basis as of the respective reporting date, depending on the weighted average duration of the pension obligations and in line with the respective maturities and currencies.

The amounts for defined benefit obligations recognized in the statement of financial position break down as follows:

				30 Sep 2022
	Defined benefit obligations (DBO)	Fair value of plan assets	Effects of the asset ceiling	Net carrying amount
	€ k	€ k	€ k	€ k
Germany	1,987,163	1,649,274	0	337,889
Other countries	255,245	207,537	0	47,708
Carrying amount	**2,242,408**	**1,856,811**	**0**	**385,597**
» thereof pension provisions				662,026
» thereof other non-current financial assets				276,429

				30 Sep 2021
	Defined benefit obligations (DBO)	Fair value of plan assets	Effects of the asset ceiling	Net carrying amount
	€ k	€ k	€ k	€ k
Germany	2,795,807	1,724,043	0	1,071,764
Other countries	326,128	267,598	0	58,530
Carrying amount	**3,121,935**	**1,991,641**	**0**	**1,130,294**
» thereof pension provisions				1,141,994
» thereof other non-current financial assets				11,700

The reconciliation from the funded status to the amounts recognized in the consolidated statement of financial position is as follows:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Present value of funded pension obligations	1,590,062	2,325,634
Plan assets	1,856,811	1,991,641
Funded status (net)	**-266,749**	**333,993**
Present value of unfunded pension obligations	**652,346**	**796,301**
Adjustment on account of asset ceiling	0	0
Carrying amount	**385,597**	**1,130,294**
» thereof pension provisions	662,026	1,141,994
» thereof other non-current financial assets	276,429	11,700

Pension provisions developed as follows:

	2021/22	2020/21
	€ k	€ k
1 October	**1,141,994**	**1,605,834**
Recognized through profit or loss		
Service cost	100,109	102,048
Net interest cost	15,548	17,165
Not recognized through profit and loss		
Benefits paid	-50,820	-76,931
Remeasurements	-776,389	-421,478
Employer contributions	-34,225	-93,874
Exchange differences on translation	4,972	405
Change in the basis of consolidation	-4,293	825
Other	265,130	8,000
30 September	**662,026**	**1,141,994**

Service cost is recorded in functional costs; net interest cost is recorded in the financial result.

The other changes in pension provisions mainly result from the overfunding of the pension plans.

The present value of the defined benefit obligations developed as follows during the reporting period:

	2021/22	2020/21
	€ k	€ k
1 October	**3,121,935**	**3,301,274**
Change in the basis of consolidation	-4,293	825
Service cost	100,109	102,048
Interest cost	44,615	36,892
Plan settlement	-2,961	0
Benefits paid	-95,452	-90,282
Remeasurements		
» Actuarial gains/losses as a result of changes in demographic assumptions	585	-1,272
» Actuarial gains/losses as a result of changes in financial assumptions	-995,114	-214,912
» Actuarial gains/losses as a result of experience adjustments	47,020	-20,810
Exchange differences on translation	25,928	8,141
Other	36	31
30 September	**2,242,408**	**3,121,935**

The present value of the defined benefit obligations is attributable to:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Active employees	941,373	1,582,965
Former employees with vested rights	185,615	279,459
Pensioners	1,115,420	1,259,511
	2,242,408	**3,121,935**

A detailed reconciliation of the change in the fair value of plan assets is presented in the table below:

	2021/22	2020/21
	€ k	€ k
1 October	**1,991,641**	**1,699,342**
Change in the basis of consolidation	0	0
Interest income	29,067	19,727
Remeasurements	-171,120	184,484
Employer contributions	34,225	93,874
Employee contributions	348	355
Withdrawals for benefit payments	-44,632	-13,351
Plan settlement	-3,094	0
Exchange differences on translation	20,956	7,736
Other	-580	-526
30 September	**1,856,811**	**1,991,641**

The actuarial gains/losses from the DBO and the remeasurement of the plan assets are recognized in other comprehensive income.

Employer contributions to plan assets for the following fiscal year are expected to amount to €3,232k.

These plan assets are used exclusively to settle the defined benefit obligations. The funding of these benefit obligations serves to cover future cash outflows as required by law in some countries and made on a voluntary basis in others.

Giving special consideration to the type of the underlying obligations, the assets transferred in Germany to Carl Zeiss Pensions-Treuhand e.V. are to be invested in the interest of the beneficiaries so as to maximize security and profitability while ensuring liquidity at all times. The objective of the investment is the long-term ability to fulfill the obligation.

The plan assets in the CTA are managed using an absolute return approach with the objective of achieving an attractive return over the investment horizon in order to earn the interest cost of the pension liabilities while controlling and limiting short-term risks. The target return is derived as a deterministic figure from the obligations.

Dynamic risk management aims to decrease the risks of potential losses in relation to strategic asset allocation (SAA) while generating a return comparable with the SAA over the course of a market cycle. The exposures of the asset classes are managed by means of derivatives on an annual basis using defined allocation ranges and taking into account a risk budget.

The portfolio of plan assets consists of the following components:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Equities and equity funds	565,481	685,964
Bonds and bond funds	586,286	757,356
Real estate and real estate funds	268,543	203,319
Alternative investments	262,637	195,453
Cash and cash equivalents	121,770	151,737
Other	52,094	-2,188
	1,856,811	**1,991,641**

Price quotations for the equity and equity funds as well as bonds and bond funds are almost exclusively in an active market; for the other investments, there are no market quotations.

Plan assets (real estate and real estate funds) contain owner-occupied property of €260,825k (prior year: €194,745k).

Changes in the relevant actuarial assumptions would have the following effects on the defined benefit obligation as of the reporting date:

	30 Sep 2022	
Change in the present value of the defined benefit obligations (DBO)	Increase by 0.5%	Decrease by 0.5%
	€ k	€ k
Interest rate	-163,105	185,468
Future salary increases	13,708	-12,411
Future pension increases	84,103	-77,584

A 1-year increase in life expectancy would lead to an increase of €98,230k in the present value of the defined benefit obligations.

The sensitivity analyses presented take into account ceteris paribus the change of a parameter, while retaining the calculation method.

To examine the sensitivity of the DBO with regard to a change in the assumed life expectancy, the mortality rates used were reduced in a comparative calculation so that the decrease results in an increase in life expectancy of roughly 1 year.

For the defined benefit obligations as of the reporting date, the following pension payments are forecast for the next 10 years, with the expected benefit payments being partly funded via plan assets:

	Estimated benefit payments
Fiscal year	€ k
2022/23	96,327
2023/24	100,139
2024/25	102,476
2025/26	105,305
2026/27	107,236
2027/28 to 2031/32	570,035

The average weighted duration of the pension plans as of the reporting date is approximately 17 years (prior year: approximately 21 years) in Germany, approximately 10 years (prior year: approximately 13 years) in the US and approximately 13 years (prior year: approximately 17 years) in the UK.

20 Other provisions

	30 Sep 2022		30 Sep 2021	
		thereof due within 1 year		thereof due within 1 year
	€ k	€ k	€ k	€ k
Provisions for personnel-related obligations	31,543	7,738	30,844	9,232
Provisions for sales-related obligations	139,663	102,362	143,320	113,011
Sundry other provisions	97,736	63,832	93,830	52,493
	268,942	**173,932**	**267,994**	**174,736**

Provisions for personnel-related obligations contain phased retirement obligations, long-service awards and early retirement arrangements, the timing and/or amount of which cannot yet be precisely determined. Provisions for sales-related obligations principally relate to warranty obligations. Sundry other provisions include provisions for environmental risks, risks of legal costs and restructuring.

	1 Oct 2021	Change in basis of consolidation	Utilization	Reversal	Additions	Unwinding of the discount and effects from changes in the discount factor	Exchange differences	30 Sep 2022
	€ k	€ k	€ k	€ k	€ k	€ k	€ k	€ k
Provisions for personnel	30,844	36	-12,850	-1,968	14,446	19	1,016	31,543
Provisions for sales	143,320	-180	-42,475	-11,467	45,686	-882	5,661	139,663
Sundry other provisions	93,830	622	-18,217	-7,347	26,712	-656	2,792	97,736
	267,994	**478**	**-73,542**	**-20,782**	**86,844**	**-1,519**	**9,469**	**268,942**

21 Accruals

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Accruals for personnel-related obligations	622,739	542,118
Accruals for sales-related obligations	371,935	249,234
Outstanding invoices	349,145	251,861
Other accruals	22,752	22,432
	1,366,571	**1,065,645**

Accruals for personnel-related obligations are primarily attributable to special payments, accrued vacation, accrued overtime as well as other personnel-related obligations. Accruals for sales-related obligations mainly relate to bonus and commission payments.

22 Financial liabilities

	30 Sep 2022			30 Sep 2021		
		thereof due within 1 year	thereof due in more than 5 years		thereof due within 1 year	thereof due in more than 5 years
	€ k	€ k	€ k	€ k	€ k	€ k
Liabilities to banks	256,360	5,605	0	51,840	21,012	0
Derivatives	61,218	61,218	0	24,348	24,348	0
Lease liabilities	380,041	73,136	131,408	362,284	64,265	132,921
Other financial liabilities	681,034	262,806	229,716	466,113	254,433	155,448
	1,378,653	**402,764**	**361,124**	**904,585**	**364,058**	**288,369**

Liabilities to banks
Promissory notes of €200m were placed in prior years. In June 2016, some of the promissory notes were renewed and some were refinanced at new conditions. The part of €33m that was not renewed was repaid to the investors. Following an unscheduled repayment of €55m in fiscal year 2019/20, a scheduled repayment of another €66.5m was made in fiscal year 2020/21.

The promissory notes still outstanding as of the reporting date of €27.5m bear interest at a fixed rate and have a contractual term of 10 years.

A loan of €220m was borrowed from the European Investment Bank on 30 September 2021. The dedicated loan, which serves to finance research and development activities, was drawn down on 15 July 2022.
The term of the loan is 5 years and will be repaid at maturity. The interest rate is variable on the basis of the 3-month Euribor plus the agreed margin.

Lease liabilities
Lease liabilities mainly stem from lease agreements for office space, various non-current asset items and office equipment, which ZEISS accounts for as the lessee in accordance with IFRS 16 *Leases*. They are measured at the present value of the outstanding lease payments.

Other financial liabilities

Dividends payable
Dividends of €178.7m are payable to ASML (prior year: €168.0m).

Purchase price liabilities
Purchase price liabilities come to €121.9m (prior year: €99.1m) and comprise liabilities from contingent purchase price components of the purchase price for the acquisition of the shares in Carl Zeiss Meditec Cataract Technology, Inc., Reno (US), in the amount of €32.3m (prior year: €78.5m), Kogent Surgical LLC, Chesterfield (US), in the amount of €26.7m, Preceyes B.V., Eindhoven (Netherlands), in the amount of €22.8m, Capture 3D, Inc., Santa Ana (US), in the amount of €21.9m, InfiniteVision Optics S.A.S., Strasbourg (France), in the amount of €6.1m (prior year: €9.9m) and Katalyst Surgical LLC, Chesterfield (US), in the amount of €3.3m. A further €8.8m (prior year: €8.2m) relates to purchase price liabilities from the anticipated acquisition of Photono Oy, Helsinki (Finland).

Loans payable
Under a framework loan agreement with Carl Zeiss SMT GmbH, Oberkochen (Germany), dated 22 September 2021, ASML agreed to finance Carl Zeiss SMT GmbH's investments in property, plant and equipment under certain circumstances and conditions if requested by Carl Zeiss SMT GmbH by drawing on a credit facility to be agreed annually.

On 29 September 2021, Carl Zeiss SMT GmbH drew on the credit facility under this framework loan agreement which has a nominal volume of €124.4m at a fair value of €122.8m, a term of 10 years until 29 September 2031 and is subject to a variable interest rate within a range and is repayable in equal annual installments after an initial 3-year repayment-free period. The agreement includes an option to repay the loan that can be exercised early at any time. As of the reporting date, the amortized cost of the loan amounted to €123.0m.

On 30 September 2022, Carl Zeiss SMT GmbH drew on the additional credit facility under this framework loan agreement which has a nominal volume of €240.0m at a fair value of €183.1m. The loan has a remaining term of 10 years until 30 September 2032 and is subject to a variable interest rate within a range and is repayable in equal annual installments after an initial 3-year repayment-free period. The agreement includes an option to repay the loan that can be exercised early at any time. As of the reporting date, the amortized cost of the loan amounted to €183.1m.

Profit participation capital
The Annual General Meeting of Carl Zeiss AG adopted a resolution on 13 March 2017 authorizing the Executive Board to issue profit participation certificates in the fiscal years from 2016/17 up to and including 2020/21 for a total amount of up to €25,000k. As of the reporting date, these comprise participation certificates of the 2017-D series with a term of 5 years and a nominal volume totaling €3,435k.

In accordance with the terms and conditions of the participation certificates, they are subject to graded interest rates (0% to 16%) depending on the ZEISS Group’s revenue performance.

The recipients are the employees of Carl Zeiss AG and its affiliates in Germany, respectively. In addition, the boards of foreign group entities are authorized to issue similar rights to employees not eligible for the Carl Zeiss AG profit participation offer.

The terms and conditions of the participation certificates provide for termination rights for either party only in very limited exceptions.

Miscellaneous financial liabilities
Miscellaneous financial liabilities include cash pool liabilities to non-consolidated subsidiaries and sundry financial liabilities.

For more information on the contractually agreed undiscounted cash outflows from the non-derivative financial liabilities and derivative financial instruments, please refer to note 24 Financial instruments and risk management.

23 Other non-financial liabilities

	30 Sep 2022		30 Sep 2021	
		thereof due within 1 year		thereof due within 1 year
	€ k	€ k	€ k	€ k
Contract liabilities				
» Advances received on account of orders	938,651	938,651	668,136	668,136
» Deferred income	230,033	188,071	189,636	154,692
» Other contract liabilities	11,662	11,662	28,504	28,504
Other liabilities	120,165	111,746	108,370	98,020
	1,300,511	**1,250,130**	**994,646**	**949,352**

Other liabilities essentially contain liabilities from taxes other than income taxes as well as withheld wage tax.

24 Financial instruments and risk management

As a global player, the ZEISS Group is exposed to credit risks, liquidity risks and market risks (currency, interest rate and other market risks) as part of its ordinary activities.

Credit risk
Credit risk stems from an adverse development in the economic conditions of the company’s counterparties or borrowers and lies primarily in trade receivables. There is the threat of non-performance on the part of a

contractual party. The maximum credit risk position of the ZEISS Group is equivalent to the carrying amounts of the financial instruments disclosed as financial assets. The risks are minimized by obtaining collateral, gathering credit ratings/references or analyzing track records of prior business relations, particularly payment behavior. The most frequent form is the retention of title. To reduce the credit risk with regard to trade receivables, invoices and corresponding credit notes are reported at the net amount in the statement of financial position provided netting is legally permissible and the receivable is intended to be settled on a net basis. Impairment losses are recognized for any credit risks associated with the financial assets.

The table below provides information on the remaining credit risk of trade and other receivables:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Trade and other receivables (gross)	**1,671,719**	**1,426,180**
Impairment losses	46,751	44,277
Allowance for exchange differences	2,166	174
Trade and other receivables (net)	**1,627,134**	**1,382,077**
» thereof due in more than 1 year	44,842	51,790

Trade and other receivables include finance lease receivables of €26,310k (prior year: €26,955k).

Identifiable credit risks are accounted for by specific allowances on trade and other receivables. Impairment losses of €30,050k (prior year: €30,293k) are recognized for credit risks.

Bad debt allowances on trade receivables (credit-impaired and non-credit-impaired) developed as follows:

	2021/22	2020/21
	€ k	€ k
1 October	**44,277**	**52,054**
Utilization	-3,407	-9,490
Reversal	-10,256	-17,348
Additions	13,469	18,402
Exchange rate effects	2,669	659
30 September	**46,751**	**44,277**

The table below presents the gross carrying amounts and average default rates for trade and other receivables according to the expected credit loss model:

	30 Sep 2022		30 Sep 2021	
	€ k	in %	€ k	in %
not past due	1,317,311	0.4	1,125,296	0.5
up to 30 days past due	167,005	1.7	174,140	1.3
31 to 60 days past due	40,749	4.2	38,134	4.2
61 to 90 days past due	37,001	5.0	17,347	6.0
more than 90 days past due	109,653	7.4	71,263	7.6

Various macroeconomic scenarios were taken into account when calculating expected losses in order to reflect the credit risk expected by the market compared to past years. Adjusting the forward-looking statements to the current environment had no effect on the average default rates.

The table below provides information on the offsetting of non-derivative financial instruments and the resulting limit to the credit risk:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Trade and other receivables (before offsetting)	1,703,440	1,476,515
Offsetting of credit notes issued	76,306	94,438
Remaining credit risk	**1,627,134**	**1,382,077**

The following offsetting of derivative financial instruments would be possible in the event of the insolvency at a counterparty:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Derivatives with a positive market value	16,716	3,434
Amount available for offsetting in the event of insolvency	16,252	3,380
Remaining credit risk	**464**	**54**

Credit risk in connection with securities is mitigated by selecting counterparties with good credit ratings and by limiting the amounts invested. The Group invests exclusively in securities of investment grade issuers.

Another credit risk is connected to the investment of cash if the banks are not able to meet their obligations. This risk is diversified by investing at different banks, defining limits per asset class and issuer, and applying high rating standards to business partners.

Liquidity risk

The liquidity risk of the ZEISS Group is the risk that it may not be able to meet its financial obligations (to repay financial liabilities or make interest payments).

The cash that serves this risk is generated primarily by operations. Where necessary or where it makes sense for strategic reasons, external sources of finance are drawn on in addition. Carl Zeiss Meditec AG also has the possibility of raising equity funds on the capital market.

For further details on financial liabilities, please refer to note 22 Financial liabilities.

To reduce the liquidity risk with regard to trade payables, invoices and corresponding credit notes issued are reported at the net amount in the statement of financial position provided netting is legally permissible and the liability is intended to be settled on a net basis.

The table below provides information on the offsetting of trade payables and the resulting limit to the liquidity risk:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Trade payables (before offsetting)	707,941	544,081
Offsetting of credits notes issued	15,110	13,310
Remaining liquidity risk	**692,831**	**530,771**

The following offsetting of derivative financial instruments with a negative market value would be possible in the event of insolvency of a counterparty:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Derivatives with a negative market value	61,218	24,348
Amount available for offsetting in the event of insolvency	16,252	3,380
Remaining liquidity risk	**44,966**	**20,968**

Liquidity is ensured by means of ongoing, group-wide liquidity monitoring and budgeting and a diversified investment policy that takes into account the terms to maturity and is implemented by Carl Zeiss Financial Services GmbH on a group-wide scale. The available liquidity as well as the revolving credit facility concluded with a banking syndicate with a total volume of €500m and a term until 2 August 2026 give the ZEISS Group adequate flexibility to cover the Group's refinancing needs. The ZEISS Group is not subject to any concentration risk thanks to the diverse nature of its financing sources and its cash and cash equivalents. The payment terms of the trade payables vary depending on the customary conditions in the respective countries and industries and usually include short-term payment terms.

The table below shows the contractually agreed undiscounted cash outflows for non-derivative financial liabilities:

	Undiscounted cash outflows			
	due within 1 year	due in 1 to 5 years	due in more than 5 years	**Total 30 Sep 2022**
	€ k	€ k	€ k	€ k
Trade payables	692,831	0	0	**692,831**
Financial liabilities				
» Liabilities to banks	6,466	254,562	0	**261,028**
» Lease liabilities	73,426	176,287	133,414	**383,127**
» Other financial liabilities	262,806	217,194	336,381	**816,381**
Guarantees	0	0	0	**0**

	Undiscounted cash outflows			
	due within 1 year	due in 1 to 5 years	due in more than 5 years	Total 30 Sep 2021
	€ k	€ k	€ k	€ k
Trade payables	530,771	0	0	**530,771**
Financial liabilities				
» Liabilities to banks	21,240	32,896	0	**54,136**
» Lease liabilities	65,171	167,011	135,414	**367,596**
» Other financial liabilities	254,740	56,233	155,448	**466,421**
Guarantees	1,120	0	0	**1,120**

The table below shows the contractually agreed undiscounted cash outflows for derivative financial instruments with a negative market value:

	Undiscounted cash outflows			
	due within 1 year	due in 1 to 5 years	due in more than 5 years	**Total 30 Sep 2022**
	€ k	€ k	€ k	€ k
Derivative financial liabilities settled on a gross basis				
» Cash outflows	1,112,319	0	0	**1,112,319**
» Cash inflows	1,043,739	0	0	**1,043,739**

	Undiscounted cash outflows			
	due within 1 year	due in 1 to 5 years	due in more than 5 years	Total 30 Sep 2021
	€ k	€ k	€ k	€ k
Derivative financial liabilities settled on a gross basis				
» Cash outflows	633,138	0	0	**633,138**
» Cash inflows	601,826	0	0	**601,826**

Market risk

The operations of the ZEISS Group are exposed to market price risks due to changes in exchange rates and interest rates. Business policy aims to minimize these risks by means of hedging. All hedging transactions are implemented at corporate level.

From an operating perspective, hedging rates are set for all relevant currencies. All business is transacted in compliance with the principle of strict separation of duties between front office (trading), middle office (financial risk management) and back office (settlement, documentation).

Exchange rate risk

On account of its global orientation, the ZEISS Group is primarily exposed to exchange rate risks in operations whenever revenue is generated or goods are purchased in a currency other than the currency in which the associated costs are incurred. This risk is mainly in relation to the Chinese renminbi, the pound sterling, the Japanese yen, the South Korean won and the US dollar.

The average rates of the forward exchange contracts for the main currencies break down as follows:

	1 € =	**2021/22**	2020/21
China	CNY	7.21	7.82
UK	GBP	0.85	0.88
Japan	JPY	133.53	122.35
South Korea	KRW	1,360.54	1,329.29
US	USD	1.12	1.14

In order to reduce the effect of exchange rate fluctuations on operations, foreign exchange risks are mostly hedged using standard currency options and forward exchange contracts concluded with banks with excellent credit ratings.

Derivatives are accounted for as stand-alone derivatives. The nominal amounts and market values of the derivative financial instruments can be found in the following table:

	30 Sep 2022		30 Sep 2021	
	Nominal amount	Market value	Nominal amount	Market value
	€ k	€ k	€ k	€ k
Derivatives not used for hedge accounting				
» Derivatives with a positive market value	458,305	16,716	272,147	3,434
» Derivatives with a negative market value	1,045,360	61,218	599,626	24,348

For risk management and monitoring purposes value-at-risk analyses, supplemented by scenario, sensitivity and stress test analyses, are used to quantify exchange rate risks. These risk analyses are reported monthly to the Group’s Executive Board.

These value-at-risk analyses are used to regularly assess the risk position from changes in exchange rates by calculating the maximum loss for a certain confidence level and retention period. Value at risk is determined on the basis of historical data and taking into account correlations between the transactions analyzed. The value at risk determined then shows the maximum loss that will not be exceeded over a period of 10 days with a probability of 95% (historical simulation).

In the past fiscal year, value at risk amounted to €4.1m (prior year: €3.0m).

Interest rate risk
Interest rate risk arises from fluctuations in market interest rates.

These changes can affect both earnings (cash flow risk) and any fluctuations in the value of financial instruments (fair value risk). The ZEISS Group has various interest-sensitive assets and liabilities and therefore has interest rate exposure from its asset and liability management.

The interest rate risk is analyzed and managed centrally by Carl Zeiss Financial Services GmbH. The ZEISS Group has the following cash flow and fair value risks based on its variable-rate and fixed-rate instruments in this context.

Cash flow risk: A change of +/- 50 base points for the variable rate financial instruments would have an effect of +/- €9.7m (prior year: +/- €7.9m) on profit or loss.

Fair value risk: Assuming a change of +/- 50 base points, the fixed-rate securities allocated to the “fair value through other comprehensive income” (FVOCI) measurement category would have an effect of -/+ €2.9m on equity (prior year: -/+ € +1.2m). Assuming a change of +/- 50 base points, the fixed-rate securities allocated to the “fair value through profit or loss” (FVPL) category would have an effect of -/+ €0.9m (prior year: -/+ €1.2m) on profit or loss.

The ZEISS Group is not exposed to material other price risks.

Carrying amounts and fair values by category

The table below presents the carrying amounts of the financial instruments accounted for by measurement category:

	Categories of IFRS 9	30 Sep 2022 Carrying amount € k	30 Sep 2021 Carrying amount € k
Trade and other receivables			
» Trade receivables	AC	1,600,824	1,355,122
» Other assets	n.a.*	26,310	26,955
Other financial assets			
» Shares in affiliates	n.a.*	55,967	86,740
» Investments	FVPL	6,005	5,138
	FVOCI	10,803	6,688
	n.a.*	5,981	10,441
» Loans	AC	41,519	42,890
» Securities	AC	132,634	215,996
	FVPL	630,081	369,894
	FVOCI	165,810	144,042
» Derivatives	FVPL	16,716	3,434
» Sundry other financial assets	AC	585,561	164,763
Cash and cash equivalents	AC	1,811,280	1,565,870
Financial assets		**5,089,491**	**3,997,973**
Trade payables	FLAC	692,831	530,771
Other financial liabilities			
» Liabilities to banks	FLAC	256,360	51,840
» Loans	FLAC	0	0
» Derivatives	FVPL	61,218	24,348
» Lease liabilities	n.a.*	380,041	362,284
» Other financial liabilities	FLAC	568,005	377,714
	FVPL	113,029	88,399
Financial liabilities		**2,071,484**	**1,435,356**
Aggregated by measurement category in accordance with IFRS 9			
Financial assets at amortized cost	AC	4,171,818	3,344,641
Financial assets at fair value through other comprehensive income	FVOCI	176,613	150,730
Financial assets at fair value through profit or loss	FVPL	652,802	378,466
Financial liabilities at amortized cost	FLAC	1,517,196	960,325
Financial liabilities at fair value through profit or loss	FVPL	174,247	112,747

* n.a.: Not attributable to any of the measurement categories in accordance with IFRS 9.

The carrying amounts presented for the financial instruments measured at (amortized) cost approximate their fair values. The following table shows the fair values and carrying amounts of the financial instruments that were measured at (amortized) cost but the carrying amounts do not approximate their fair values:

		30 Sep 2022		30 Sep 2021	
		Carrying amount	Fair value	Carrying amount	Fair value
	Categories of IFRS 9	€ k	€ k	€ k	€ k
Securities	AC	132,634	128,339	215,996	215,996
Liabilities to banks	FLAC	256,360	241,852	51,840	55,129
Other financial liabilities	FLAC	568,005	543,877	377,714	377,714

Fair value measurement

Financial instruments are measured at fair value based on a 3-level fair value hierarchy:

Level 1: Fair value is calculated based on the quoted, unadjusted market prices on active markets.

Level 2: Fair value is calculated based on market data such as stock prices, exchange rates or interest curves in accordance with market-based valuation techniques (for example present value method or option pricing models).

Level 3: Fair value is calculated based on models with non-observable market data.

The decision on classification is made on the reporting date.

The table below shows the fair values of financial instruments as well as their respective classification:

Fair value				**30 Sep 2022**
	Level 1	Level 2	Level 3	Total
	€ k	€ k	€ k	€ k
Investments	0	0	16,808	16,808
Securities	918,338	6,241	0	924,579
Derivatives	0	16,716	0	16,716
Financial assets	**918,338**	**22,957**	**16,808**	**958,103**
Liabilities to banks	0	241,852	0	241,852
Derivatives	0	61,218	0	61,218
Other financial liabilities	0	543,877	113,029	656,906
Financial liabilities	**0**	**846,947**	**113,029**	**959,976**

Fair value				**30 Sep 2021**
	Level 1	Level 2	Level 3	Total
	€ k	€ k	€ k	€ k
Investments	0	0	11,826	11,826
Securities	714,757	15,175	0	729,932
Derivatives	0	3,434	0	3,434
Financial assets	**714,757**	**18,609**	**11,826**	**745,192**
Liabilities to banks	0	55,129	0	55,129
Derivatives	0	24,348	0	24,348
Other financial liabilities	0	377,714	88,399	466,113
Financial liabilities	**0**	**457,191**	**88,399**	**545,590**

The development of financial instruments allocated to Level 3 of the fair value hierarchy is presented in the table below:

			2021/22
	Investments	Contingent purchase price obligations	Total
	€ k	€ k	€ k
1 October 2021	**11,826**	**88,399**	**100,225**
Additions	9,338	67,887	77,225
Changes in fair value recognized through profit or loss	-2,730	-58,213	-60,943
Changes in fair value recognized in other comprehensive income	-2,252	-	-2,252
Payment of contingent purchase price obligations	-	-	-
Exchange rate effects	626	14,956	15,582
30 September 2022	**16,808**	**113,029**	**129,837**

			2020/21
	Investments	Contingent purchase price obligations	Total
	€ k	€ k	€ k
1 October 2020	**8,246**	**87,827**	**96,073**
Additions	3,771	-	3,771
Changes in fair value recognized through profit or loss	39	8,079	8,118
Changes in fair value recognized in other comprehensive income	-328	-	-328
Payment of contingent purchase price obligations	-	-8,509	-8,509
Exchange rate effects	98	1,002	1,100
30 September 2021	**11,826**	**88,399**	**100,225**

The financial assets allocated to Level 3 are investments belonging to both the measurement category “at fair value through profit or loss” (FVPL) and the measurement category “at fair value through other comprehensive income” (FVOCI).

Level 3 investments allocated to the measurement category air value through other comprehensive income (FVOCI) mainly comprise Precise Bio, Inc., Winston-Salem (US), with €5,715k (prior year: €0k), OcuTerra Therapeutics, Inc., Boston (US), with €2,565k (prior year: €2,158k), PolymerExpert S.A., Pessac (France), with €1,904k (prior year: €122k), Audioptics Medical, Inc., Halifax (Canada), with €619k (prior year: €741k) and MicroOptx, Inc., Maple Grove (US), with €0k (prior year: €3,667k).

In the current fiscal year, PolymerExpert S.A. paid a dividend of €87k.

An increase or decrease in the interest rate by one percentage point on Level 3 would result in a decrease or increase in the carrying amount of the investment by a low single-digit million figure.

The financial liabilities allocated to Level 3 that already existed at the start of the fiscal year are contingent purchase price obligations from the acquisition of Carl Zeiss Meditec Cataract Technology, Inc., Reno (US), and from the purchase of InfiniteVision Optics S.A.S., Strasbourg (France), in an asset deal. At the same time, the additions include new financial liabilities since this fiscal year in connection with the contingent purchase price obligations from the acquisitions of Capture 3D, Inc., Santa Ana (US), Preceyes B.V., Eindhoven (Netherlands), Kogent Surgical LLC, Chesterfield (US) and Katalyst Surgical LLC, Chesterfield (US). The change in fair value recognized through profit or loss includes the annual unwinding of the discount on liabilities and also the adjustment of cost of capital to measure the liabilities. The income from the remeasurement of the contingent purchase price obligation in connection with that of Carl Zeiss Meditec Cataract Technology, Inc. and InfiniteVision Optics S.A.S. is likewise part of the change in fair value recognized in profit or loss presented here. The fair value of the contingent consideration is determined based on the criteria agreed in the purchase agreement and the expected probable target achievement and is discounted at market interest rate. An increase or decrease in the interest rate by half a percentage point would result in a decrease or increase in the contingent consideration by a low single-digit million figure. A delay in the target achievement linked to milestones and simultaneous decrease in the forecast revenue targets by 15% would result in a decrease in the obligations in the low double-digit millions.

Net gain or loss

The effects of financial instruments recognized in the income statement are presented on a net basis in the table below by category as defined in IFRS 9 *Financial Instruments*:

	2021/22			
		thereof from interest	thereof from subsequent measurement	thereof from disposals
	€ k	€ k	€ k	€ k
Financial assets at amortized cost	51,336	9,351	41,986	-1
Financial assets at fair value through other comprehensive income	3,066	4,281	-383	-832
Financial assets and liabilities at fair value through profit or loss	-43,394	5,425	-31,292	-17,527
Financial liabilities measured at amortized cost	-24,441	-9,149	-15,292	0

	2020/21			
		thereof from interest	thereof from subsequent measurement	thereof from disposals
	€ k	€ k	€ k	€ k
Financial assets at amortized cost	8,290	6,826	1,478	-14
Financial assets at fair value through other comprehensive income	1,972	2,453	-334	-147
Financial assets and liabilities at fair value through profit or loss	-34,814	-6,744	-23,512	-4,558
Financial liabilities measured at amortized cost	-4,345	-1,191	-3,154	0

The “Financial assets at amortized cost” category contains the interest and currency result from the measurement of receivables and loans together with securities allocated to this category. The “Financial assets at fair value through other comprehensive income” category mainly results from the measurement of securities and from the reversal of provisions from financial assets in equity. The “Financial assets and liabilities at fair value through profit or loss” category contains the gains or losses from the measurement of derivatives and financial liabilities. The interest and currency result from the measurement of liabilities is recognized in the “Financial liabilities at amortized cost” category.

OTHER NOTES

25 Notes to the statement of cash flows

The consolidated statement of cash flows shows how the cash and cash equivalents reported in the statement of financial position of the ZEISS Group changed in the course of the fiscal year as a result of cash received and paid. In accordance with IAS 7 *Statement of Cash Flows*, a distinction is made between cash flows from operating activities, investing activities and financing activities.

The cash flows from investing activities and financing activities are determined on the basis of payments made or received. As for government grants for research and development, third-party subsidies are offset against investments in property, plant and equipment. The changes in financial assets are presented on a net basis as defined by IAS 7.22. The cash flows from operating activities, on the other hand, are derived indirectly from the consolidated profit or loss for the year. When performing the indirect calculation, changes in items of the statement of financial position considered in connection with operating activities are adjusted for effects from currency translation and changes in the basis of consolidation. Non-cash effects are likewise eliminated. Changes in the items of the statement of financial position concerned can therefore not be reconciled with the figures based on the published consolidated statement of financial position. Of the non-cash changes from additions to lease liabilities, €0k (prior year: €32,206k) relates to sale and leaseback transactions.

Changes to liabilities from financing activities are shown in the table below:

	1 Oct 2021	Cash changes	Non-cash changes			**30 Sep 2022**
			Currency translation	Changes in the basis of consolidation	Other changes	
	€ k	€ k	€ k	€ k	€ k	€ k
Liabilities to banks	51,840	202,288	1,797	435	0	256,360
Lease liabilities	362,284	-72,162	28,816	1,060	60,043	380,041
ASML loans	124,400	240,000	0	0	-58,307	306,093
	538,524	**370,126**	**30,613**	**1,495**	**1,736**	**942,494**

	1 Oct 2020	Cash changes	Non-cash changes			30 Sep 2021
			Currency translation	Changes in the basis of consolidation	Other changes	
	€ k	€ k	€ k	€ k	€ k	€ k
Liabilities to banks	123,302	-72,308	846	0	0	51,840
Lease liabilities	229,837	-56,200	5,282	0	183,365	362,284
ASML loans	0	124,400	0	0	0	124,400
	353,139	**-4,108**	**6,128**	**0**	**183,365**	**538,524**

Cash changes include both proceeds from loans as well as repayment of liabilities from financing activities.

In addition to the cash and cash equivalents of €1,811,280k reported in the statement of financial position and statement of cash flows (prior year: €1,565,870k), the Group can fall back on a revolving credit facility with a total volume of €500m entered into between Carl Zeiss AG and a syndicate of banks. It matures on 2 August 2026. As in the prior year, the revolving credit facility serves as a strategic liquidity reserve for the ZEISS Group and was not utilized in the reporting period.

26 Contingent liabilities and assets

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Liabilities from guarantees	0	1,120
Other contingent liabilities	1,283	1,982

The liabilities were not recognized as provisions because the probability of an outflow of resources is considered to be remote.

27 Average headcount for the year and personnel expenses

	2021/22	2020/21
	Number	Number
Germany	15,757	13,858
EMEA (without Germany)	4,880	4,624
Americas	7,830	7,878
APAC	8,306	7,381
	36,773	**33,741**
Trainees	453	464
Total	**37,226**	**34,205**

The average number for the year is calculated on the basis of full-time equivalents.

Personnel expenses break down as follows:

	2021/22	2020/21
	€ k	€ k
Wages and salaries	2,470,736	2,136,338
Social security	389,125	340,324
Pension costs	108,476	108,770
Total	**2,968,337**	**2,585,432**

28 Leases

ZEISS as lessee

The Group has entered into lease agreements for real estate, technical equipment and machinery and furniture and fixtures. The contracts have terms of between 1 and more than 5 years and some contain renewal and purchase options as well as price adjustment clauses.

The carrying amounts of the right-of-use assets are included in property, plant and equipment as follows:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Land and buildings	313,425	301,208
Technical equipment and machinery	1,038	1,555
Other equipment, furniture and fixtures	37,052	33,583
Carrying amounts for right-of-use assets	**351,515**	**336,346**

Depreciation of right-of-use assets breaks down as follows:

	2021/22	2020/21
	€ k	€ k
Land and buildings	53,728	47,108
Technical equipment and machinery	790	1,313
Other equipment, furniture and fixtures	18,423	18,028
Depreciation of right-of-use assets	**72,941**	**66,449**

Lease liabilities of €72,162k (prior year: €56,200k) were repaid in fiscal year 2021/22. Interest expenses from the unwinding of the discount on lease liabilities are presented in the financial result and amount to €6,214k (prior year: €5,964k).

The lease expenses include expenses for short-term leases of €12,004k (prior year: €12,173k) and expenses for leases of low-value assets of €13,180k (prior year: €10,352k).

In fiscal year 2021/22, cash outflows for leases totaled €103,560k (prior year: €84,689k).

Future cash outflows of €73,454k (prior year: €80,668k) were not included in the lease liability because it is not reasonably certain that the leases will be renewed or not terminated.

There are no future cash outflows for leases that have not yet begun as of the reporting date (prior year: €26k).

Income of €417k (prior year: €508k) from the sublease of right-of-use assets was also recognized.

In fiscal year 2021/22, no rental concessions granted due to the COVID-19 pandemic were recognized through profit or loss (prior year: €5k).

ZEISS as lessor

Operating leases

The Group has entered into lease agreements mainly for buildings and technical equipment. In connection with its product sales, the ZEISS Group offers financing models in the form of leases that are classified as operating leases based on their features.

The carrying amounts for property, plant and equipment contain the following amounts from operating leases under which the ZEISS Group is the lessor:

	30 Sep 2022	30 Sep 2021
	€ k	€ k
Land and buildings	24,051	29,601
Technical equipment and machinery	7,935	7,795
Other equipment, furniture and fixtures	81	1,737
Carrying amounts for operating leases	**32,067**	**39,133**

Risks from leases stem in particular from lessees failing to adhere to agreed conditions or purchase agreed quantities. In these cases, compensation for minimum purchase volumes in the event of failure to purchase or the return of the leased asset to the lessor including appropriate compensation payments for early contract termination are agreed in the contracts as protection against such risks. Further risk mitigation measures that are carried out prior to entering into a contract include customer credit checks, a feasibility appraisal of the lease and a comprehensive analysis of the customer's realistic requirements.

Lease income came to €7,445k (prior year: €5,810k) in fiscal year 2021/22. There was no lease income relating to variable lease payments not linked to an index or interest.

Accumulated future minimum lease payments under non-cancellable operating leases amount to:

	30 Sep 2022	30 Sep 2021
Term to maturity	€ k	€ k
Due within year 1	6,651	6,548
Due within year 2	5,060	4,103
Due within year 3	3,447	3,890
Due within year 4	2,322	2,288
Due within year 5	2,176	1,380
Due in more than 5 years	6,030	2,802
Total minimum lease payments	**25,686**	**21,011**

Finance leases

In connection with product sales, the ZEISS Group offers financing models in the form of leases that are classified as finance leases based on their features. There are also finance leases for buildings.

See the statements under operating leases for information on the risks from finance leases.

Outstanding minimum lease payments under finance leases are as follows:

	30 Sep 2022	30 Sep 2021
Term to maturity	€ k	€ k
Due within year 1	8,146	7,869
Due within year 2	5,590	5,107
Due within year 3	4,631	4,716
Due within year 4	3,597	3,341
Due within year 5	2,142	2,356
Due in more than 5 years	2,863	4,244
Future undiscounted cash inflows	**26,969**	**27,633**
Unearned finance income	659	678
Finance lease receivables	**26,310**	**26,955**

29 Government grants

The government grants received in the reporting period were as follows:

	2021/22	2020/21
	€ k	€ k
Research and development grants	8,232	8,497
Grants related to assets	5,771	1,673
Other grants related to expenses	14,167	8,631
	28,170	**18,801**

Other grants related to expenses include various grants in other countries as a result of the COVID-19 pandemic, which were deducted as income from cost of sales and functional costs.

30 Related party disclosures

Related parties as defined by IAS 24 *Related Party Disclosures* include the Carl Zeiss Foundation, Heidenheim an der Brenz and Jena (Germany), the entity SCHOTT AG, Mainz (Germany), owned by the Carl Zeiss Foundation, non-consolidated subsidiaries, the associates and joint ventures as well as the members of the Executive Board and the Supervisory Board of Carl Zeiss AG.

Related party transactions are carried out at arm's length.

In fiscal year 2021/22, the ZEISS Group procured goods and services from SCHOTT AG, Mainz, of € 7,938 k (prior year: € 10,126 k). The ZEISS Group provided a negligible volume of goods and services to SCHOTT AG, Mainz. In addition, Microsoft expenses of €3,495k were cross-charged to SCHOTT AG, Mainz. As of the reporting date, a prepayment of €4,760k (prior year: €4,760k) had been made to SCHOTT AG, Mainz. There were no other significant outstanding balances as of the reporting date.

The table below shows the goods and services supplied to and received from non-consolidated subsidiaries as well as associates and joint ventures:

	Goods and services supplied		Goods and services received	
	2021/22	2020/21	2021/22	2020/21
	€ k	€ k	€ k	€ k
Non-consolidated subsidiaries	21,545	21,360	46,646	70,889
Associates and joint ventures	3,611	2,501	6,746	5,154
	25,156	**23,861**	**53,392**	**76,043**

The table below shows the receivables from non-consolidated subsidiaries as well as associates and joint ventures:

	Trade and other receivables		Financial receivables	
	30 Sep 2022	30 Sep 2021	**30 Sep 2022**	30 Sep 2021
	€ k	€ k	€ k	€ k
Non-consolidated subsidiaries	8,983	10,768	45,308	46,709
Associates and joint ventures	954	353	100	0
	9,937	**11,121**	**45,408**	**46,709**

The table below shows the liabilities to non-consolidated subsidiaries as well as associates and joint ventures:

	Trade payables and other liabilities		Financial liabilities	
	30 Sep 2022	30 Sep 2021	**30 Sep 2022**	30 Sep 2021
	€ k	€ k	€ k	€ k
Non-consolidated subsidiaries	5,430	13,536	4,789	11,337
Associates and joint ventures	432	201	43	19
	5,862	**13,737**	**4,832**	**11,356**

Financial receivables and financial liabilities primarily contain receivables and liabilities from cash management.

In the reporting period, there were no transactions between the ZEISS Group and members of the Executive Board and the Supervisory Board and their family members above and beyond the existing employment, service or appointment relationships and the related contractually agreed remuneration.

Information on the remuneration of board members is contained in Note 34 Remuneration of the Executive Board and the Supervisory Board.

31 German Corporate Governance Code

The Management Board and the Supervisory Board of the listed company Carl Zeiss Meditec AG, Jena (Germany), included in the consolidated financial statements have issued a declaration in accordance with Sec. 161 German Stock Corporation Act (AktG) on the recommendations issued by the government commission on the German Corporate Governance Code and made it available to stockholders on the company's website (https://www.zeiss.com/meditec-ag/investor-relations.html).

32 Audit fees

The Supervisory Board of Carl Zeiss AG engaged Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart (Germany), to audit the consolidated financial statements. The audit fees relate to the group auditor Ernst & Young GmbH, Germany.

	2021/22	2020/21
	€ k	€ k
Audit services	2,230	2,127
Other attestation services	281	183
Other services	1,348	820

33 Subsequent events

There were no significant events after the end of the fiscal year.

34 Remuneration of the Executive Board and the Supervisory Board

Total remuneration of the members of the Executive Board for performance of their duties at Carl Zeiss AG and its subsidiaries came to €20,993k for fiscal year 2021/22 (prior year: €10,402k). Of the total remuneration, €6,128k (prior year: €1,781k) is attributable to service cost for pension obligations. Current fixed and variable remuneration comes to €14,865k (prior year: €8,621k). The members of the Executive Board did not receive any additional remuneration because they either waived the remuneration for their activities on the Supervisory Board of subsidiaries or offset this against their Executive Board remuneration. There are pension obligations of €13,956k (prior year: €23,511k) and further obligations from outstanding remuneration of €10,492k (prior year: €14,275k) toward members of the Executive Board.

The total benefits paid to former members of the Executive Board and their surviving dependents amounted to €3,078k for fiscal year 2021/22 (prior year: €3,017k). Provisions totaling €58,195k (prior year: €64,393k) were recognized for the benefit obligations to former members of the Executive Board or their surviving dependents.

The total remuneration of the members of the Supervisory Board of Carl Zeiss AG for their work came to €1,258k in fiscal year 2021/22 (prior year: €1,293k).

Oberkochen, 12 December 2022

The Executive Board of Carl Zeiss AG

Dr. Karl Lamprecht

Susan-Stefanie Breitkopf

Sven Hermann

Dr. Christian Müller

Andreas Pecher

Dr. Jochen Peter

Dr. Markus Weber

List of Shareholdings of the Group

in accordance with Sec. 315e (1) in conjunction with Sec. 313 (2) German Commercial Code HGB 30 September 2022

Country	City	Name of entity		Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial Share in capital
				%	%
1. Fully consolidated subsidiaries					
Germany	Neuenstein	Carl Zeiss Automated Inspection GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss Beteiligungs-GmbH	1	100.0	100.0
Germany	Düsseldorf	Carl Zeiss CIS Vertriebs GmbH	1	100.0	100.0
Germany	Göttingen	Carl Zeiss CMP GmbH	1	100.0	100.0
Germany	Dresden	Carl Zeiss Digital Innovation GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss Energie GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss Financial Services GmbH	1	100.0	100.0
Germany	Braunschweig	Carl Zeiss GOM Metrology GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss Grundstücks GmbH & Co. KG	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss Industrielle Messtechnik GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss IQR GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss IQS Deutschland GmbH	1	100.0	100.0
Germany	Jena	Carl Zeiss Jena GmbH	1	100.0	100.0
Germany	Jena	Carl Zeiss Jena Grundstücks GmbH & Co. KG	1	100.0	100.0
Germany	Jena	Carl Zeiss Meditec AG		59.1	59.1
Germany	Jena	Carl Zeiss Meditec Asset Management Verwaltungsgesellschaft mbH	1	100.0	59.1
Germany	Oberkochen	Carl Zeiss Meditec Vertriebsgesellschaft mbH	1	100.0	59.1
Germany	Oberkochen	Carl Zeiss Microscopy Deutschland GmbH	1	100.0	100.0
Germany	Jena	Carl Zeiss Microscopy GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss MultiSEM GmbH	1	100.0	100.0
Germany	Neubeuern	Carl Zeiss Optotechnik GmbH	1	100.0	100.0
Germany	Peine	Carl Zeiss QEC GmbH	1	100.0	100.0
Germany	Schönkirchen	Carl Zeiss Schönkirchen GmbH	1	100.0	100.0
Germany	Oberkochen	Carl Zeiss SMT GmbH	1	100.0	75.1
Germany	Oberkochen	Carl Zeiss SMT Holding GmbH & Co. KG	1	75.1	75.1
Germany	Oberkochen	Carl Zeiss SMT Holding Management GmbH	1	100.0	100.0
Germany	Jena	Carl Zeiss Spectroscopy GmbH	1	100.0	100.0
Germany	Wetzlar	Carl Zeiss Sports Optics GmbH	1	100.0	100.0
Germany	Aalen	Carl Zeiss Vision GmbH		100.0	100.0
Germany	Aalen	Carl Zeiss Vision Grundstücks GmbH & Co. KG	1	100.0	100.0
Germany	Aalen	Carl Zeiss Vision Holding GmbH		100.0	100.0
Germany	Aalen	Carl Zeiss Vision International China Holding GmbH		100.0	100.0
Germany	Aalen	Carl Zeiss Vision International GmbH		100.0	100.0
Germany	Aalen	Carl Zeiss Vision Investment GmbH		100.0	100.0
Germany	Wetzlar	Carl Zeiss Wetzlar Grundstücks GmbH & Co. KG	1	100.0	100.0
Germany	Frankfurt	Helaba Invest - CZFS Spezialfonds		100.0	100.0
Germany	Stuttgart	LBBW AM-CZFS Spezialfonds		100.0	100.0
Germany	Aalen	Marwitz & Hauser GmbH	1	100.0	100.0
Germany	Kiel	Opton Feintechnik Kiel GmbH	1	100.0	100.0
Argentina	Buenos Aires	Carl Zeiss Vision Argentina S.A.		100.0	100.0
Australia	North Ryde	Carl Zeiss No. 2 Pty Ltd		100.0	100.0

Country	City	Name of entity	Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial Share in capital
			%	%
1. Fully consolidated subsidiaries				
Australia	North Ryde	Carl Zeiss Pty. Limited	100.0	100.0
Australia	Tonsley	Carl Zeiss Vision Australia Group Pty. Ltd.	100.0	100.0
Australia	Tonsley	Carl Zeiss Vision Australia Holdings Ltd.	100.0	100.0
Australia	Tonsley	Carl Zeiss Vision Australia Pty. Ltd.	100.0	100.0
Australia	Tonsley	Sola Optical Partners (Limited Partnership)	100.0	100.0
Belgium	Zaventem	Carl Zeiss N.V.-S.A.	100.0	100.0
Belgium	Zaventem	Carl Zeiss Vision Belgium NV	100.0	100.0
Brazil	São Paulo	Carl Zeiss do Brasil Ltda.	100.0	100.0
Brazil	Petrópolis	Carl Zeiss Vision Brasil Industria Optica Ltda.	100.0	100.0
British Virgin Islands	Road Town, Tortola	Carl Zeiss Vision China (BVI) Ltd.	100.0	100.0
China	Shanghai	Carl Zeiss (Shanghai) Co., Ltd.	100.0	100.0
China	Hong Kong	Carl Zeiss Far East Co., Ltd.	100.0	100.0
China	Shanghai	Carl Zeiss Holding Co., Ltd., China	100.0	100.0
China	Shanghai	Carl Zeiss IMT (Shanghai) Co., Ltd.	100.0	100.0
China	Guangzhou	Carl Zeiss Meditec (Guangzhou) Ltd.	100.0	59.1
China	Shanghai	Carl Zeiss Meditec Holding (Shanghai) Co., Ltd.	100.0	59.1
China	Suzhou-City	Carl Zeiss Suzhou Co., Ltd.	100.0	100.0
China	Guangzhou	Carl Zeiss Vision (China) Ltd.	100.0	100.0
China	Guangzhou	Carl Zeiss Vision (Guangzhou) Ltd.	100.0	100.0
China	Hong Kong	Carl Zeiss Vision Sunlens Asia Pacific Ltd.	100.0	100.0
China	Guangzhou	Carl Zeiss Vision Sunlens China Ltd.	100.0	100.0
China	Guangzhou	Carl Zeiss Vision Technical Services (Guangzhou) Ltd.	100.0	100.0
China	Guangzhou	Carl Zeiss Vision Technologies (Guangzhou) Ltd.	100.0	100.0
Denmark	Birkerød	Carl Zeiss A/S	100.0	100.0
Denmark	Birkerød	Carl Zeiss Vision Danmark A/S	100.0	100.0
Finland	Vantaa	Carl Zeiss Oy	100.0	100.0
Finland	Helsinki	Photono Oy	49.0	59.1[3]
France	La Rochelle, Perigny	Atlantic SAS	100.0	59.1
France	Rueil Malmaison	Carl Zeiss Meditec France S.A.S.	100.0	59.1
France	La Rochelle, Perigny	Carl Zeiss Meditec SAS	100.0	59.1
France	Rueil Malmaison	Carl Zeiss SAS	100.0	100.0
France	Sablé-sur-Sarthe	Carl Zeiss Services S.a.r.l.	100.0	100.0
France	Fougères	Carl Zeiss Vision France Holding S.A.S.	100.0	100.0
France	Fougères	Carl Zeiss Vision France S.A.S.	100.0	100.0
France	Paris	France Chirurgie Instrumentation SAS	100.0	59.1
UK	Cambourne	Carl Zeiss Ltd	100.0	100.0
UK	Cambourne	Carl Zeiss Microscopy Limited	100.0	100.0
UK	Birmingham	Carl Zeiss Vision UK Limited	100.0	100.0
UK	Livingston	HYALTECH Ltd.	100.0	59.1
UK	Birmingham	SILS Limited	100.0	100.0
India	Bangalore	Carl Zeiss India (Bangalore) Private Limited	100.0	100.0
Indonesia	South Jakarta, DKI Jakarta	PT Carl Zeiss Indonesia	100.0	100.0

Country	City	Name of entity	Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial Share in capital
			%	%
1. Fully consolidated subsidiaries				
Ireland	Wexford	Carl Zeiss Vision Ireland Ltd.	100.0	100.0
Israel	Misgav	Carl Zeiss SMS Ltd.	100.0	75.1
Italy	Milan	Carl Zeiss S.p.A.	100.0	100.0
Italy	Varese	Carl Zeiss Vision Italia S.p.A.	100.0	100.0
Italy	Cassano Magnago, Varese	Carl Zeiss X-ray Technologies S.r.l.	100.0	100.0
Japan	Tokyo	Carl Zeiss Co., Ltd.	100.0	100.0
Japan	Tokyo	Carl Zeiss Meditec Co., Ltd.	100.0	79.2
Japan	Tokyo	Carl Zeiss Vision Japan Co., Ltd.	100.0	100.0
Canada	Toronto	Carl Zeiss Canada Ltd.	100.0	100.0
Canada	Toronto	Carl Zeiss Vision Canada Inc.	100.0	100.0
Kazakhstan	Almaty District	Carl Zeiss LLC	100.0	100.0
Colombia	Bogotá D.C.	Carl Zeiss Vision Colombia S.A.S.	100.0	100.0
Korea, South	Seoul	Carl Zeiss Co., Ltd.	100.0	100.0
Korea, South	Seoul	Carl Zeiss Vision Korea Co., Ltd.	100.0	100.0
Croatia	Zagreb	Carl Zeiss d.o.o.	100.0	100.0
Malaysia	Petaling Jaya	Carl Zeiss Sdn. Bhd.	100.0	100.0
Malaysia	Petaling Jaya	Carl Zeiss Vision (Malaysia) Sdn. Bhd.	100.0	100.0
Mauritius	Quatre Bornes	FCI SUD Ltd.	100.0	59.1
Mexico	México D.F.	Carl Zeiss de México S.A. de C.V.	100.0	100.0
Mexico	Tijuana	Carl Zeiss Vision Manufactura de Mexico S. de R.L. de C.V.	100.0	100.0
Mexico	Naucalpan	Carl Zeiss Vision Mexico S. de R.L. de C.V.	100.0	100.0
New Zealand	Auckland	Carl Zeiss (N.Z.) Ltd.	100.0	100.0
Netherlands	Breda	Carl Zeiss B.V.	100.0	100.0
Netherlands	Breda	Carl Zeiss Vision Nederland B.V.	100.0	100.0
Netherlands	Eindhoven	Preceyes B.V.	100.0	59.1
Norway	Oslo	Carl Zeiss AS	100.0	100.0
Austria	Vienna	Carl Zeiss GmbH	100.0	100.0
Austria	Graz	Carl Zeiss Industrielle Messtechnik Austria GmbH	100.0	100.0
Philippines	Taguig	Carl Zeiss Philippines Pte. Ltd.	100.0	100.0
Poland	Poznan	Carl Zeiss Shared Services Sp. z o.o.	100.0	100.0
Poland	Poznan	Carl Zeiss Sp. z o.o.	100.0	100.0
Portugal	Lisbon	Carl Zeiss Meditec Portugal Unipessoal Lda.	100.0	59.1
Portugal	Setúbal	Carl Zeiss Vision Portugal S.A.	100.0	100.0
Romania	Bucharest	Carl Zeiss Instruments S.R.L.	100.0	100.0
Russia	Moscow	Carl Zeiss LLC	100.0	100.0
Sweden	Stockholm	Carl Zeiss AB	100.0	100.0
Sweden	Malmö	Carl Zeiss Vision AB	100.0	100.0
Switzerland	Feldbach	Carl Zeiss AG	100.0	100.0
Switzerland	Feldbach	Carl Zeiss Vision Swiss AG	100.0	100.0
Singapore	Singapore	Carl Zeiss Pte. Ltd.	100.0	100.0
Singapore	Singapore	Carl Zeiss Vision Singapore Pte. Ltd.	100.0	100.0
Slovakia	Bratislava	Carl Zeiss Slovakia, s.r.o.	100.0	100.0

Country	City	Name of entity	Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial Share in capital
			%	%
1. Fully consolidated subsidiaries				
Slovenia	Ljubljana	Carl Zeiss d.o.o.	100.0	100.0
Spain	Tres Cantos - Madrid	Carl Zeiss Iberia, S.L.	100.0	100.0
Spain	Tres Cantos - Madrid	Carl Zeiss Meditec Iberia SA	100.0	59.1
Spain	Tres Cantos - Madrid	Carl Zeiss Vision España, S.L.	100.0	100.0
South Africa	Randburg	Carl Zeiss (Pty.) Ltd.	100.0	100.0
South Africa	Randburg	Carl Zeiss Vision South Africa (Pty) Ltd.	100.0	100.0
Taiwan	Hsinchu	Carl Zeiss Co., Ltd.	100.0	100.0
Thailand	Bangkok	Carl Zeiss Co., Ltd.	49.0[2]	49.0[2]
Czech Republic	Prague	Carl Zeiss spol. s r.o.	100.0	100.0
Türkiye	Ankara	Carl Zeiss Meditec Medikal Cözümler Tic. ve San. A.S.	100.0	59.1
Ukraine	Kiev	Carl Zeiss LLC	100.0	100.0
Hungary	Mátészalka	Carl Zeiss Sport Optikai Hungaria Kft.	100.0	100.0
Hungary	Budapest	Carl Zeiss Technika Kft.	100.0	100.0
Hungary	Mátészalka	Carl Zeiss Vision Hungary Optikai Kft.	100.0	100.0
USA	Santa Ana	Capture 3D, Inc.	100.0	100.0
USA	White Plains	Carl Zeiss Inc.	100.0	100.0
USA	Minneapolis	Carl Zeiss Industrial Metrology, LLC	100.0	100.0
USA	Minneapolis	Carl Zeiss Industrial Quality Solutions, LLC	100.0	100.0
USA	Reno	Carl Zeiss Meditec Cataract Technology, Inc.	100.0	59.1
USA	Temple	Carl Zeiss Meditec Digital Innovations, LLC	100.0	59.1
USA	Dublin	Carl Zeiss Meditec, Inc.	100.0	59.1
USA	Ontario	Carl Zeiss Meditec Production, LLC	100.0	59.1
USA	Dublin	Carl Zeiss Meditec USA, Inc.	100.0	59.1
USA	White Plains	Carl Zeiss Microscopy, LLC	100.0	100.0
USA	White Plains	Carl Zeiss SBE, LLC	100.0	100.0
USA	Danvers	Carl Zeiss SMT, Inc.	100.0	75.1
USA	Hebron	Carl Zeiss Vision Holdings Ltd.	100.0	100.0
USA	Hebron	Carl Zeiss Vision Inc.	100.0	100.0
USA	Dublin	Carl Zeiss X-ray Microscopy, Inc.	100.0	100.0
USA	Pembroke	FCI Ophthalmics Inc.	100.0	59.1
USA	Chesterfield	Katalyst Surgical LLC	100.0	59.1
USA	Chesterfield	Kogent Surgical LLC	100.0	59.1
USA	Lafayette	Ophthalmic Laser Engines, LLC	52.0	30.8
United Arab Emirates	Dubai	Carl Zeiss Vision MENA FZE	100.0	100.0
Vietnam	Ho Chi Minh City	Carl Zeiss Vietnam Company Limited	100.0	100.0

Country	City	Name of entity	Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial Share in capital
			%	%
2. Non-consolidated subsidiaries				
Germany	Rostock	arivis AG	87.0	87.0
Germany	Oberkochen	Carl Zeiss EyeTec GmbH	100.0	59.1
Germany	Oberkochen	Carl Zeiss Grundstücks-Verwaltungs GmbH	100.0	100.0
Germany	Ulm	Carl Zeiss MES Solutions GmbH	100.0	100.0
Germany	Wangen	Carl Zeiss Optical Components GmbH	100.0	100.0
Germany	Cologne	Carl Zeiss Retrofit und Service GmbH	100.0	100.0
Germany	Oberkochen	Carl Zeiss Sechste Vorratsgesellschaft mbH	100.0	100.0
Germany	Oberkochen	Carl Zeiss Siebte Vorratsgesellschaft mbH	100.0	100.0
Germany	Oberkochen	Carl Zeiss Venture Beteiligungsgesellschaft mbH	100.0	100.0
Germany	Oberkochen	Carl Zeiss Zehnte Vorratsgesellschaft mbH	100.0	100.0
Germany	Oberkochen	Gusto Gourmet GmbH	100.0	100.0
Germany	Oberkochen	MuLight Technology GmbH	100.0	100.0
Germany	Ulm	Scantinel Photonics GmbH	52.3	52.3
Germany	Cologne	VenTrade GmbH	100.0	100.0
Germany	Hohenbrunn	XETOS AG	51.0	51.0
Belarus	Minsk	Carl Zeiss LLC	100.0	100.0
Belarus	Minsk	JV ZEISS-BelOMO OOO	60.0	60.0
Brazil	Rio de Janeiro	Lentrix Indústria e Comércio de Produtos Ópticos Ltda.	100.0	100.0
Bulgaria	Sofia	Carl Zeiss Bulgaria EOOD	100.0	100.0
China	Shanghai	GOM Optical Measuring Techniques (Shanghai) Co., Ltd.	100.0	100.0
France	Guibeville	GOM FRANCE SAS	65.9	65.9
France	Strasbourg	InfiniteVision Optics SAS	100.0	59.1
UK	Coventry	GOM UK LIMITED	100.0	100.0
Italy	Buccinasco	GOM ITALIA S.R.L.	100.0	100.0
Poland	Slupsk	Carl Zeiss IQS Software R&D Center Sp. z o.o.	100.0	100.0
Poland	Slupsk	OptiMedi Sp. z o.o.	91.1	91.1
Romania	Timisoara	Carl Zeiss MES Solutions S.R.L.	99.9	99.9
Switzerland	Widen	GOM International AG in Liquidation	60.0	60.0
Zimbabwe	Harare	Carl Zeiss (Pvt.) Ltd. (Zimbabwe)	100.0	100.0
Türkiye	Istanbul	Carl Zeiss Teknoloji Cözümleri Ticaret Limited Sirketi	100.0	100.0
Hungary	Miskolc	Carl Zeiss Digital Innovation Hungary Kft.	100.0	100.0
USA	Hebron	American Optical IP Corporation	100.0	100.0
USA	Boston	arivis Imaging Inc.	100.0	87.0
USA	Princeton	EMMETROPIA, INC	100.0	59.1
USA	Charlotte	GOM Americas Inc.	100.0	100.0
USA	New York	Preceyes Inc.	100.0	59.1
Venezuela	San Diego	Carl Zeiss Vision Venezuela Industria Optica C.A.	100.0	100.0

Country	City	Name of entity		Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial Share in capital
				%	%
3. Associates and joint ventures carried at cost					
Germany	Braunschweig	A3DS GmbH		30.0	30.0
Germany	Jena	JENAER BILDUNGSZENTRUM gGmbH SCHOTT CARL ZEISS JENOPTIK		33.3	33.3
Germany	Berlin	MakerVerse GmbH		31.0	31.0
Germany	Mainz	SCHOTT-ZEISS ASSEKURANZKONTOR GmbH		50.0	50.0
Germany	Holm-Seppensen	X-Ray Solutions GmbH		49.0	49.0
Italy	Samarate, Varese	S.E.A.I. S.r.l.		25.0	25.0
Norway	Drammen	Visitech AS		25.0	25.0
Switzerland	Zug	KXO AG		38.3	19.6
USA	White Plains	tooz technologies Inc.		50.0	50.0
United Arab Emirates	Jebel Ali, Dubai	Carl Zeiss Vision MENA Spectacles Trading LLC		49.0	49.0

[1] In accordance with Sec. 264 (3) HGB or Sec. 264b HGB, these entities are exempted from the duty to publish their financial statements
[2] Majority of the voting rights
[3] Due to a purchase option that can be exercised at any time

Independent Auditor's Report

"Independent Auditor's Report

To Carl Zeiss AG

Opinions

We have audited the consolidated financial statements of Carl Zeiss AG, Oberkochen (Germany), and its subsidiaries (the Group), which comprise the consolidated income statement, and the consolidated statement of comprehensive income for the fiscal year from 1 October 2021 to 30 September 2022, the consolidated statement of financial position as of 30 September 2022, the consolidated statement of changes in equity and the consolidated statement of cash flows for the fiscal year from 1 October 2021 to 30 September 2022, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Carl Zeiss AG for the fiscal year from 1 October 2021 to 30 September 2022.

In our opinion, on the basis of the knowledge obtained in the audit,

» the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) German Commercial Code (HGB) and, in compliance with these requirements, give a true and fair view of the net assets and financial position of the Group as of 30 September 2022, and of its results of operations for the fiscal year from 1 October 2021 to 30 September 2022, and

» the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Other information

The Supervisory Board is responsible for the Report by the Supervisory Board. In all other respects, the executive directors are responsible for the other information. The other information comprises the following components designated for the annual report, of which we obtained a version before issuing our auditor's report: Key Figures, Executive Board of Carl Zeiss AG, Foreword by the Executive Board, Solutions to Shape the Future, At Home Across the Globe, Thinking and Acting Sustainably, Impressions from the Fiscal Year, Carl Zeiss Foundation, Corporate Governance, Report of the Supervisory Board and Supervisory Board of Carl Zeiss AG.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

» is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or

» otherwise appears to be materially misstated.

Responsibilities of the executive directors and the Supervisory Board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

» Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

» Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

» Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

» Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

» Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.

» Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

» Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

» Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit."

Stuttgart, 12 December 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Dr. Jungblut	Störzinger
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

Legal Information/Disclaimer

Legal information
Carl Zeiss AG
73446 Oberkochen
Phone: +49 73 64 20-0
Fax: +49 73 64 20-68 08
Email: info@zeiss.com
www.zeiss.com

Editors: Corporate Brand and Communications and Services Consolidation and Accounting

Design: Carl Zeiss AG

Disclaimer
This report contains certain forward-looking statements concerning the development of the ZEISS Group. At the present time, ZEISS assumes that these forward-looking statements are realistic. However, such forward-looking statements are based both on assumptions and estimates that are subject to risks and uncertainties, which may lead to the actual results differing significantly from the expected results. ZEISS therefore assumes no liability for such a deviation. There are no plans to update the forward-looking statements for events that occur after the end of the reporting period.

Apparent additional discrepancies may arise throughout this annual report due to mathematical rounding.

This is a translation of the original German-language Annual Report of the ZEISS Group. The ZEISS Group shall not assume any liability for the correctness of this translation. If the texts differ, the German report shall take precedence.

Carl Zeiss AG
73446 Oberkochen
Phone: +49 73 64 20-0
Fax: +49 73 64 20-68 08
www.zeiss.com