Seeing beyond

Enabling Digitalization

Annual Report 2022/23
ZEISS Group

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Key Figures
(IFRS)

	2022/23		2021/22		2020/21	
	€ m	%	€ m	%	€ m	%
Revenue	**10,108**	**100**	8,754	100	7,529	100
» Germany	740	7	676	8	619	8
» Other countries	9,368	93	8,078	92	6,910	92
Research and development costs	**1,545**	**15**	1,151	13	943	13
EBIT	**1,686**	**17**	1,588	18	1,479	20
Consolidated profit/loss	**1,257**	**12**	1,155	13	1,047	14
Cash flows from operating activities	**1,377**		1,421		1,457	
Cash flows from investing activities	**-1,593**		-1,300		-525	
Cash flows from financing activities	**148**		90		-149	

	30 Sep 2023		30 Sep 2022		30 Sep 2021	
	€ m	%	€ m	%	€ m	%
Total assets	**15,059**	**100**	13,056	100	10,656	100
Property, plant and equipment	**3,573**	**24**	2,666	20	2,069	19
» Capital expenditures	1,360		842		756	
» Depreciation	358		311		263	
Inventories	**3,138**	**21**	2,522	19	1,976	19
Equity	**7,846**	**52**	7,173	55	5,494	52
Net liquidity	**1,619**		2,228		2,120	

	30 Sep 2023		30 Sep 2022		30 Sep 2021	
	Number	%	Number	%	Number	%
Employees	**42,992**	**100**	38,770	100	35,375	100
» Germany	20,067	47	17,058	44	14,848	42
» Other countries	22,925	53	21,712	56	20,527	58

More information:
www.zeiss.com/annualreport

From the ZEISS Group

Executive Board
of Carl Zeiss AG

Andreas Pecher
Head of the Semiconductor Manufacturing Technology segment

Dr. Markus Weber
Head of the Medical Technology segment

Dr. Karl Lamprecht
President and CEO and Chief Financial Officer* (interim)

*Dr. Christian Müller resigned from the Executive Board of Carl Zeiss AG as Chief Financial Officer on 30 September 2023

Susan-Stefanie Breitkopf
Chief Transformation Officer

Sven Hermann
Head of the Consumer Markets segment

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

Foreword by the Executive Board

Ladies and Gentlemen, dear Readers,

In fiscal year 2022/23, the ZEISS Group reached a special milestone: for the first time in our history our annual revenue totaled 10.1 billion euros – exceeding the 10-billion-euro threshold. ZEISS could therefore continue its exceptionally dynamic growth. What is particularly encouraging is that all four segments contributed to this growth.

It is with great satisfaction that we look back with on an economically very successful fiscal year 2022/23. On behalf of the entire ZEISS Executive Board team, I would therefore like to express my sincere thanks to both our business partners and our customers for the successful collaboration. It is you we want to make successful. It is you who make us successful.

Dr. Karl Lamprecht

We would especially like to thank our employees whose number has now grown to around 43,000 worldwide for this successful fiscal year. This success would not have been possible without their considerable achievements, their extraordinary personal commitment and their high degree of flexibility.

The market conditions were again extremely challenging in the past fiscal year. We were nevertheless able to further expand our business and provide excellent support to our customers – particularly because ZEISS stands for reliability, strength and stability in turbulent times.

ZEISS segments on course for success

All four ZEISS segments grew over the past fiscal year. With its EUV (extreme ultraviolet) technology, the ZEISS Semiconductor Manufacturing Technology segment has already made a leap in innovation for the production of microchips. The segment continues to enable the semiconductor sector with its High-NA-EUV lithography, the newest EUV product generation, to create the next microchip generations. In addition, the ZEISS segments Industrial Quality & Research and Medical Technology grew considerably in the past fiscal year. The Consumer Markets segment achieved stable growth despite the difficult market environment.

Enabling digitalization

ZEISS is synonymous with one thing above everything else – and that is innovation. This characteristic has made ZEISS a world-leading technology company over the past 177 years. ZEISS is not only advancing the world of optics with our solutions. All four ZEISS segments are at the forefront of digitalization with their innovations. ZEISS develops solutions for semiconductor manufacturing technology which allows chip manufacturers all over the world to produce ever smaller, more powerful and energy-efficient storage microchips. From vision care and photography through to microscopy, metrology, and medical technology, ZEISS is developing solutions for the digital world.

Driving growth and investing in the future

We have a very successful financial year under our belt – measured in terms of revenue, innovative strength and growth. Success in the future means seizing every opportunity which opens success up to us and setting ourselves up for the future. As a foundation company, we benefit from sustainable development and long-term prospects. We build on our distinctive innovative strength. To ensure this continues, we have invested more in research and development, personnel development and infrastructure than ever before.

At 15 percent of revenue, ZEISS spent a record 1.5 billion euros on research and development in the past fiscal year. In the ZEISS Group's research and development departments, more than 6,200 employees work every day to further expand our innovative strength. This is reflected in our many patents which totaled around 11,300 worldwide as of the reporting date.

With around 43,000 employees, ZEISS is bigger than ever. Almost 18,000 new employees joined the global Team ZEISS in the past seven years alone. And we continue to work on attracting talent to our teams around the world. We are creating a working environment for them in which they can contribute their strengths, develop themselves and advance society. This also includes creating modern workplaces. ZEISS is making targeted investments in the expansion of infrastructure. Over the next five years, ZEISS plans to invest around 3.5 billion euros in infrastructure worldwide. A large proportion of this will flow into infrastructure projects in Germany alone, such as the further expansion of the Oberkochen site and new sites in Aalen-Ebnat (Baden-Württemberg) and at the site of the company's founding in Jena (Thuringia).

Growth needs development
ZEISS has been successful for many years with innovative and market-defining products that have secured us world market leadership in many areas. As an innovation-driven company, this success provides us with sustainable and profitable growth in our markets. We want to continue on our successful course in the future. We have set the right priorities for this with our group-wide strategy – #agenda25 – and aligned it with important global megatrends such as digitalization. This way, we can secure and promote growth and market success.

However, growth always brings new challenges. And, because we want to continue to grow sustainably and profitably in the future, we initiated a comprehensive company transformation process. Part of this transformation is about allowing us to become even more efficient and robust in our processes and to make decisions in an increasingly data- and process-driven way. This will allow us to realize our full potential and achieve significantly more with the same effort and expense and secure our growth trajectory through higher customer satisfaction and greater market success.

We are creating a company that adds value for its customers, that offers its employees an inspiring working environment and that provides its business units with room for productive work processes. In this way, we as a company will be better equipped to deal with the unknowns of a dynamic and varying market environment.

Facing the future with confidence
Our high level of innovation and extensive investments in our future, our strategic focus defined in #agenda25, the transformation we have initiated to become a data- and process-driven company and our approximately 43,000 employees worldwide altogether form the foundation for the continued sustainable and profitable growth of ZEISS. At the same time, all of this helps us to remain resilient in rapidly changing times. After all, the last few years have shown us how difficult it is to assess the geopolitical situation, how quickly it can change and the complex challenges that can arise from it.

ZEISS is successful today. Success in the future depends on us continuing to keep an eye on geopolitical risks while, at the same time, realizing our potential and maximizing every opportunity. We believe that our strategic agenda and interconnected transformation activities will enable us not only to evolve, but also to continue to grow. We are 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

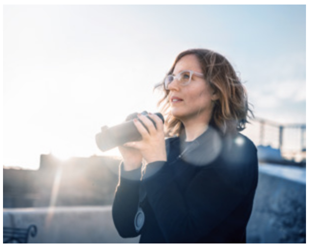
The ZEISS Group is one of the world's leading technology companies. It has a balanced portfolio that is geared toward attractive future-oriented markets in optics, precision mechanics and optoelectronics. For more than 175 years, the company has been shaping technological progress, advancing the world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

- Ophthalmology
- 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, multisensory systems and X-ray systems, microscope systems of high resolution and smart software for industrial quality assurance, as well as 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 doctors 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, technologies for smartphone photography as well as sports and nature observation optics 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. Around 43,000 employees work at more than 60 sales and service locations, 35 research and development facilities, and 35 production facilities worldwide. The company is headquartered in Oberkochen (Baden-Württemberg, Germany).

More than
100
sites
worldwide

15
percent of revenue is spent on research and development

Over
6,200
employees in research and development

Around
11,300
patents
worldwide

Enabler of Technological Progress

How ZEISS is driving digitalization

ZEISS is synonymous with innovation. That's because in a constantly changing world, society's needs also change. A central goal is therefore to develop solutions that offer added value, bring benefits – and go beyond the ordinary.

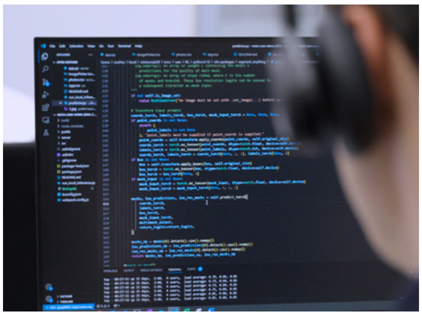
Innovation is part of ZEISS' DNA. With its innovative solutions, ZEISS is not only advancing the world of optics, the company is also doing pioneering work within digitalization: ZEISS is an enabler of this change and is driving it forward.

Smartphones and high-performance computers, 5G and autonomous driving, artificial intelligence (AI), Industry 4.0 and augmented reality (AR) – all of this would hardly be possible without ZEISS. That's because modern microchips form the backbone of these technologies and all digital transformation. And the majority of all microchips worldwide are manufactured with optics and semiconductor technologies from ZEISS. In the field of semiconductor technology, ZEISS develops solutions that enable chip manufacturers all over the world to produce even more powerful and energy-efficient microchips. ZEISS has thus become the heartbeat of digitalization and continues to drive it forward. In its position as a global technology leader, ZEISS is also enabling digitalization to progress in other areas. From vision care and photography through to microscopy, metrology, and medical technology: ZEISS is increasingly expanding its range of digital solutions and thus makes a significant contribution to the success of its customers.

More information:
www.zeiss.com/digitalization-insights

Digital innovations that have become established in everyday life

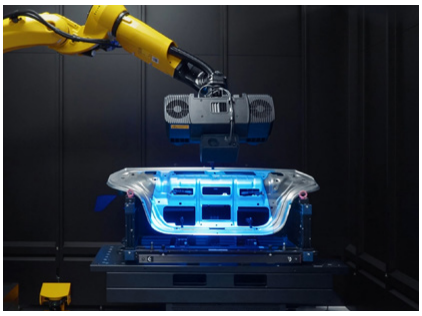
Artificial Intelligence
One of the most important achievements of digitalization is artificial intelligence. It helps evaluate extremely large data sets – from analysis in microscopy to quality assurance in additive manufacturing. Current devices and software solutions from ZEISS already contain AI components or have been manufactured with them. There is also a major focus on topics such as intelligent data use or advanced machine learning methods.



From fiction to reality: we encounter AI everywhere – in smartphones, smart homes and smart factories. ZEISS utilizes AI as a major achievement of digitalization and key technology in numerous fields. Dr. Tanja Teuber, Head of Algorithms Corporate Research and Technology at ZEISS, and her team are driving the development and expansion of AI expertise at ZEISS. She and other colleagues ensure that ZEISS realizes the potential of AI throughout the company.

Find the whole story at
www.zeiss.com/artificial-intelligence

Industry 4.0
Connected machines in the context of Industry 4.0 enable more efficient processes in which components constantly communicate, adapt and coordinate digitally. ZEISS uses these processes and is continuously developing new solutions for its customers so they retain their competitive edge.



The transformation to Industry 4.0 is perhaps the most significant industrial revolution. That's because for the first time, it's not just about physical work. Thanks to AI, systems are able to adapt and interact automatically. Dr. Alexander Freytag, Expert in Machine Learning in Corporate Research and Technology at ZEISS, deals with what this means for production and the role ZEISS plays in Industry 4.0 every day.

Find the whole story at
www.zeiss.com/ai-industry-4-0

Augmented Reality
Augmented reality has become a key component of the digital world. It connects people, supports services and eliminates the need for travel. AR solutions are also an important element of the digitalization strategy at ZEISS.

Augmented reality is becoming part of everyday life with the help of smart glass. Smart glass combines digital and optical technologies in one piece of hardware to display digital content on a smart surface. Yi Zhong-Schipp, Team Lead Optics Design in Microoptics at ZEISS, expects smart glass to change many things.

Find the whole story at
zeiss.com/smart-glass

Future technologies and applications

Behind every challenge is a path – and a solution. ZEISS empowers people to make the seemingly impossible possible through innovative and digital developments in fields of research such as artificial intelligence, advanced materials, automation or optics and photonics.

Powerful microchips for a digital future

Artificial intelligence is making the world increasingly more digital – and requires more and more processing power. The semiconductor manufacturing optics of ZEISS Semiconductor Manufacturing Technology enable the production of smaller, more powerful and more efficient microchips that can deliver this processing power.

The key technology used in the production of microchips is optical lithography. The vast majority of all microchips are manufactured using deep ultraviolet technology (DUV). In order to achieve the processing power required by digitalization or artificial intelligence and, at the same time, reduce energy consumption and manufacturing costs per chip during production an even more advanced process was required. The solution: extreme ultraviolet light and EUV lithography. Together with its strategic partner ASML, a network of partners and thousands of researchers, ZEISS has brought a groundbreaking technology for the production of semiconductors to the point of series maturity. EUV lithography has made it possible to image smaller structures on a wafer and increase the transistor density on microchips. Powerful and energy-efficient EUV chips enable life-saving medical technology, support autonomous driving and form the backbone of high-performance computers, smart cities and AI. With the further development of the EUV lithography process to High-NA-EUV lithography, ZEISS Semiconductor Manufacturing Technology will soon also enable the semiconductor industry to realize the next generation of microchips: High-NA-EUV lithography enables light from a larger angular range to be used for imaging, allowing up to three times more structures to be imaged on a microchip.

Today, more than 80 percent of microchips worldwide are manufactured using DUV or EUV technology based on ZEISS optics. From 2025, High-NA-EUV lithography will also be used. This means that the heart of digitalization will continue to beat at ZEISS.

A digital ecosystem for medical technology

For more than 110 years, ZEISS has been shaping ophthalmology and micro-surgery in a sustainable way. By developing cutting-edge technological products, ZEISS promotes progress in medicine and supports the digital transformation of the healthcare sector with innovative connected solutions. The ZEISS Medical Ecosystem is a key element in ZEISS’ medical technology strategy.

Digital technologies offer new possibilities for diagnosis and treatment. They open up new ways of communicating with patients and support medical professionals in their collaboration. Digital systems and connected devices enable ZEISS’ workflow solutions, forming the ZEISS Medical Ecosystem – a fully integrated environment where connectivity, automation, AI and the secure and efficient management of data are realized. This enables healthcare centers and clinics to meet the challenges faced on a daily basis.

The ZEISS Medical Ecosystem is enabled by the ZEISS Health Data Platform, which supports connectivity and the integration of data and digital applications in clinical workflows. In a fully integrated ZEISS workflow, data collected from devices is digitally transferred to the ZEISS Health Data Platform, where it is accessible to a variety of digital applications for every step in the clinical work-flow. In this way, healthcare centers and clinics can standardize processes and can provide efficient, high-quality care.

Artificial intelligence in quality assurance and research

The ZEISS Industrial Quality & Research segment develops connected solutions and intelligent software based on AI for quality assurance in various areas of research and industry. ZEISS microscopes visualize tiny structures in nano dimensions, and highly efficient metrology systems in industry guarantee higher productivity and improved quality. From analysis in the field of microscopy to quality assurance in additive manufacturing, ZEISS is increasingly relying on AI-based software solutions for its microscope and metrology systems.

In smart factories, automation and AI are playing an increasingly important role in production processes, particularly in quality assurance. The ZEISS Industrial Quality Solutions segment has, for example, developed the ZEISS Automated Defect Detection (ZADD) machine learning software for computer tomography (CT), in which machine-based models support defect diagnosis in production. The software uses AI to automatically detect even small and fuzzy defects in components. ZADD uses AI to provide semi-automated defect analysis, which increases efficiency and process reliability while saving time and costs in production.

ZEISS uses AI in research in order to overcome imaging challenges in new and innovative ways. For this purpose, ZEISS has developed the Advanced Reconstruction Toolbox (ART) for modern image reconstruction technologies in X-ray microscopy. Using AI can improve data capture and analysis and significantly facilitate decision-making. One of the components of ART is the ZEISS DeepRecon reconstruction software with deep learning which enables a tenfold increase in throughput and a significant improvement in imaging quality. The toolbox is primarily used in geosciences, pharmaceuticals, electronics, battery and materials research, and in semiconductor defect analysis.

Optometry of the future – connected and digital

The digital age is also opening up new opportunities for opthalmic opticians. This is why ZEISS Vision Care is developing digital innovations for greater precision, speed and service in optometry. One of these is the precise refraction system ZEISS VISUCORE 500.

The measurement of the eye using wavefront technology and the subjective eye test form the basis for optimal vision correction with individual lenses. The two steps are often carried out separately on different devices and in different rooms. ZEISS VISUCORE 500 combines both refractions in one space-saving device and delivers precise measurement results in a short time, regardless of the user's level of experience. Innovative software automatically guides opthalmic opticians through the entire refraction process, which can be controlled via a tablet and adapted to the respective level of experience. ZEISS VISUCORE 500 thus complements the requirements for a digital experience during a visit to the optician's.

This digital experience is bundled in the ZEISS VISUCONSULT 500 solution, which connects various ZEISS devices in a digital system. All the customer data required to order the correct lenses, captured on different devices, is combined, managed and evaluated centrally. This enables more personalized interaction with customers and augmented reality demonstrations can be used to explain ZEISS lenses even more clearly.

The ZEISS VISUFIT 1000 platform goes one step further. With the help of an innovative system, facial and centering data is recorded and a realistic three-dimensional image of the head is created. Virtual frame fittings are available on site and will later be available from home and on the move. ZEISS Vision Care will continue to work more closely with its partner opticians on innovations to continue the digital customer journey.

Impressions from the Fiscal Year
Shaping the future

Thanks to its long-term investment strategy, balanced portfolio, international setup and globally oriented value chains, ZEISS can look forward to a bright future. Some impressions from fiscal year 2022/23 show the way in which we have already succeeded in shaping the future through innovation and commitment in the past fiscal year.

More information:
www.zeiss.com/newsroom

ZEISS Research Award 2023
On the evening of 26 June 2023, ZEISS ceremoniously presented two research awards to a total of four scientists. Prof. Dr. Immanuel Bloch was the recipient of the ZEISS Research Award, while Dr. Simon Baier, Dr. Arindam Ghosh and Dr. Dasha Nelidova all received the Carl Zeiss Award for Young Researchers. By presenting such awards, the company recognizes outstanding research in optics and photonics.

Special exhibition marking the Centennial of the Planetarium in the Deutsches Museum
To mark the centennial of the planetarium, the Deutsches Museum in Munich is showcasing the history of planetariums in a special exhibition of the same name. The exhibition includes several historical projectors, including Model I, which ZEISS presented to the Deutsches Museum on 21 October 1923. The special exhibition, for which ZEISS is providing technical and logistical support, opened with a celebration on 4 May 2023.

Voluntary work recognized
Germany's Federal President Frank-Walter Steinmeier recognized the voluntary work of ZEISS at the Citizens' Festival held in the grounds of Bellevue Palace in Berlin. Projects, organizations and companies presenting their voluntary work were the focus of the event. ZEISS was also on site with a stand. At the open day event at Bellevue Palace, visitors were able to find out more about "A Heart for Science", ZEISS' international initiative to promote STEM subjects for young people between the ages of 12 and 18.

New PENTERO Platform for the digital age

At this year's Congress of Neurological Surgeons (CNS) in Washington D.C., US, ZEISS Medical Technology presented the new concept of the PENTERO platform. The new ZEISS PENTERO 800 S offers enhanced optical functions, newly designed interactions and leading digital solutions for spine surgery, neurosurgery as well as plastic and reconstructive surgery. The ZEISS PENTERO platform is one of the most widely used surgical microscopes in the world.

ZEISS thermal imaging cameras for a new bird watching experience

At the Global BirdFair in Rutland, UK, ZEISS recently unveiled its complete range of thermal imaging devices for nature observation and bird watching. With the ZEISS DTI 1, DTI 3 GEN 2, DTI 4, and DTI 6, ZEISS offers a comprehensive line of thermal imaging cameras for use during the day and at night, as well as for research and nature conservation. The ergonomics and user-friendliness, the extraordinary visual experience with detail recognition and the sophisticated power management make up the ZEISS DTI family.

Initial delivery of High-NA-EUV lithography

In 2023, ZEISS Semiconductor Manufacturing Technology delivered the latest EUV product generation to its customer ASML for the first time, marking another important technological leap. With High-NA-EUV lithography, ZEISS Semiconductor Manufacturing Technology is enabling the semiconductor industry to realize the next generation of microchips. Currently, various chip manufacturers are planning to use the High-NA machines in volume production from 2025. High-NA-EUV lithography can increase the structure density on microchips by a factor of three, enabling even smaller, more powerful and more energy-efficient microchips to be manufactured.

ZEISS Quality Suite for Software and Digital Services

The new ZEISS Quality Suite offers customers direct access to the software world of ZEISS Industrial Quality Solutions. Users can launch the various software products via the ZEISS Quality Suite and gain access to the latest news, events, training courses, online help, updates and add-ons. In the long term, all software products from the field of quality assurance and metrology will be integrated into the Quality Suite and continuously developed in line with the measurement-related issues and requirements of customers.

Sustainability at ZEISS
Ideas and projects for the future

As a foundation-owned company, sustainability and business success are inextricably linked at ZEISS. ZEISS anchors sustainable value creation as an integral part of its business activities, which focus on innovative solutions that contribute to positive development in society and enable long-term, profitable growth.

ZEISS is driving forward the three focus topics of value for society, climate action and circular economy, thus actively contributing to the United Nations' global Sustainable Development Goals (SDGs). In doing so, ZEISS can concentrate on the areas in which the company has particular opportunities to exert influence and can achieve the greatest impact for people and the environment.

More information:
www.zeiss.com/sustainability

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 intends to provide added value for society and contribute to providing as many people as possible with access to education, high-quality healthcare and rewarding job opportunities.

As an internationally active company with global supply and value chains, ZEISS takes its responsibility to people and the environment seriously. For this reason, ZEISS has adopted a Policy Statement on Respecting and Promoting Human Rights and Environmental Protection. Moreover, ZEISS has appointed a Human Rights Officer as a dedicated contact person for these issues.

Climate action
Human greenhouse gas emissions 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 are the main cause of global warming, ocean warming and rising sea levels. They pose a threat to human life.

ZEISS aims to achieve carbon neutrality in its own activities (Scope 1 and 2 emissions) by 2025. ZEISS takes a three-pronged approach to reducing emissions: prevention, reduction and, if there are no other options, compensation. An important lever in this regard is the switch to green power and increasing energy efficiency. Furthermore, ZEISS will be looking at the emissions in its upstream value chains.

Circular economy
The overexploitation of natural resources needed to achieve economic growth and development has had a negative impact on the environment and people. A circular economy is an economic system of closed loops in which raw materials, components and products generate added value for as long as possible, renewable energy sources are used and systems thinking is at the core.

ZEISS strives for a circular use of resources to reduce the impact on the environment. To achieve this, more renewable energy resources and recycled materials will be deployed, while loops are being closed. By 2025, ZEISS aims 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.

A Heart for Science

Enthusiasm for nature and technology has always been an integral part of 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. The vision behind the project is to kindle interest in STEM and therefore contribute to developing innovative and sustainable solutions for the future.

By introducing this initiative, ZEISS intends to grow an international network of internal and external project partners. More than 360 ZEISS employees from 20 countries volunteered in fiscal year 2022/23. Their diverse projects range from a science escape room in Germany, to STEM support programs in remote schools in Australia and India, to STEM-related learning activities in Korea and China.

More information:
www.zeiss.com/aheartforscience

Science as you've never seen it before – using this slogan, ZEISS organized a "A Heart for Science" workshop for children in Varese (Italy) together with TEDx. At various stations, schoolchildren were able to explore light or take a look into the future. Using ZEISS microscopes, they explored plants and insects and discovered tiny organisms.

Inspiring the explorers of tomorrow – during a visit to the Deutsches Museum in Munich, ZEISS CEO Dr. Karl Lamprecht encouraged schoolchildren to learn more about physics and optics. Together they visited the optics exhibition, discovered various visual phenomena and immersed themselves in the world of microscopy.

A Heart for Science and nature – getting young people excited about science and technology and directing their attention toward environmental and climate protection – this is the aim of the EPOCH! project group in Japan. At several events, children had the opportunity to experience the role ZEISS microscopes play in researching biodiversity, why protecting the oceans and biodiversity is important as well as the dangers microplastics pose to whales and dolphins.

The Carl Zeiss Foundation

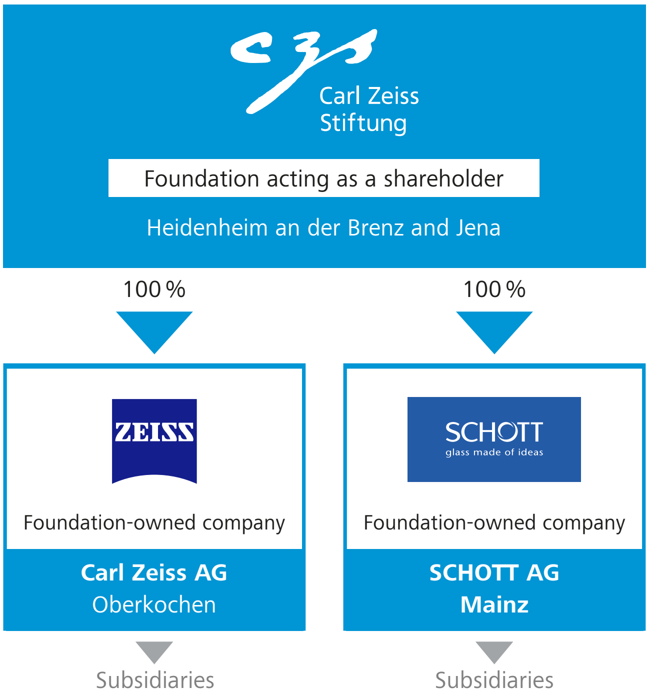
Promoting science

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 prospects. 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 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 local communities
» 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 531 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.



More 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, dear Readers,

In fiscal year 2023/23, the ZEISS Group broke through a revenue barrier: for the first time in its history annual revenue totaled 10 billion euros, accompanied by an outstanding EBIT of 1.7 billion euros.

The company coped exceptionally well with the challenging market and geopolitical conditions, which were even more challenging than they had been in the previous fiscal year.

Dr. Michael Bolle

Both the ZEISS Semiconductor Manufacturing Technology segment and the direct-to-market segments succeeded in further increasing their revenue. Continuing progress in digitalization, particularly at the ZEISS Semiconductor Manufacturing Technology segment, resulted in a significant increase in revenue of 29% compared to the already strong previous year. ZEISS has thus once again proved that sustained, substantial investment in digitalization and in research and development is the foundation for further growth.

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 worked closely together to ensure ZEISS continues to develop successfully.

Supervisory Board meeting topics

The Supervisory Board held a total of four meetings during fiscal year 2022/23.

In September 2022, it approved the annual budget for fiscal year 2022/23. In December 2022, it discussed and approved the annual financial statements.

The Supervisory Board focused at the meeting in May 2023 on discussing the impact of the geopolitical situation on ZEISS' business and the war in Ukraine on ZEISS' current delivery situation.

During the July 2023 strategy meeting, the Supervisory Board received a comprehensive presentation of the company's strategic portfolio. The respective heads of the strategic business units were involved and particular attention was paid to the challenges facing ZEISS as a result 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 considered the changes that might occur in the company's respective markets, taking into account the predictability of expected changes.

The budget plan for 2023/24 derived from the strategy was approved at the final meeting of fiscal year 2022/23 on 26 September 2023.

Changes to the Executive Board

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

The Chief Financial Officer (CFO), Dr. Christian Müller, decided not to extend his Executive Board contract which was due to end on 30 September 2023. The Supervisory Board then appointed Stefan Müller, who will take up his position on 1 January 2024. The Supervisory Board would like to welcome the new CFO and wishes him every success in his new role.

The Supervisory Board would like to thank Dr. Müller for his excellent work as Executive Board member of Carl Zeiss AG and wishes him well for the future.

The Supervisory Board subsequently appointed Stefan Müller (as the new CFO) and he will assume his role on 1 January 2024. The Supervisory Board would like to welcome the new CFO and wish him every success in his new role.

Work of the Supervisory Board committees
The Audit Committee met three times as scheduled during the period under review. It evaluated the effectiveness of risk management and discussed the topics compliance, internal audit, the internal control system, accounting and the focus of the annual audit, as well as the annual and consolidated financial statements.

The Chairman's Committee also convened three times. The achievement of targets and Executive Board remuneration were subject to regular review. The further development of the Supervisory Board with regard to required competencies and the upcoming changes in the composition of the Supervisory Board for the 2024 Annual General Meeting were also discussed.

The Digital Committee, which was newly established at its constituent meeting on 20 October 2022, convened a total of five times. It dealt with the CTO's transformation agenda and served primarily as a sounding board.

At the Supervisory Board meetings the Chairmen of the Audit, Chairman's and Digital Committees reported regularly about the work of the committees.

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

Changes to the Supervisory Board
The previous shareholder representatives on the Supervisory Board, Dr. Eberhard Veit and Prof. Dr. Jürgen Mlynek, both stepped down from the Supervisory Board with effect from the end of the Annual General Meeting on 13 March 2023. At the same time, the Annual General Meeting elected new Supervisory Board members Prof. Dr. Tanja Weil and Dr. Rutger Wijburg with effect from 13 March 2023.

The previous employee representative on the Supervisory Board and member of the Audit Committee and Digital Committee, Hariolf Abele, stepped down from the Supervisory with effect from 30 September 2023. Ernst Stumpp replaced him on the Supervisory Board with effect from 1 October 2023.

Following Mr. Abele's exit from the Audit and Digital Committees, the Supervisory Board elected Angelika Franzke to the Audit Committee and Tamara Hübner to the Digital Committee.

As there are now more than 20,000 permanently employed members of staff at Carl Zeiss AG sites and subsidiaries in Germany, the Supervisory Board will consist of a total of 20 Supervisory Board members from March 2024 following the initiation of status proceedings by the Executive Board.

Audit of the annual and consolidated financial statements
PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, audited the consolidated financial statements of Carl Zeiss AG, including the Management Report, for fiscal year 2022/23 which were 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. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, 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. The Supervisory Board examined the documents and discussed the annual and consolidated financial statements at the meeting of the Audit Committee on 14 December 2023 and at the Supervisory Board meeting held on 15 December 2023. The independent auditor attended both meetings, presented the main 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 as of 30 September 2023 were thereby adopted.

Pursuant to Sec. 312 German Stock Corporations Act (AktG), the Executive Board prepared the above-mentioned dependent company report for the period from 1 October 2022 to 30 September 2023. The independent auditors issued the following opinion on the findings of their audit of the dependent company report: "Based on our audit and assessment, which was carried out in accordance with professional standards, we confirm that

1. The actual disclosures contained in the report are correct

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

3. There are no circumstances that indicate a materially different assessment of the measures listed in the report than that made by the Executive Board."

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.

Once again this year, the Supervisory Board will recommend that a dividend be paid out 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, which are the basis of our success.

I personally would like to thank all members of the Supervisory Board and members of the Executive Board for the constructive and successful cooperation.

Oberkochen, December 2023

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. Michael Bolle, Chairman | Leonberg
Chairman of the Shareholder Council of the Carl Zeiss Foundation, Heidenheim an der Brenz and Jena

Angelika Franzke, Deputy Chair[1] | Oberkochen
Chairwoman of the Group Employee Representative Council of Carl Zeiss AG, Oberkochen

Hariolf Abele[1, 2] | Aalen
Deputy Chairman of the Employee Representative Council of Carl Zeiss Industrielle Messtechnik GmbH, Oberkochen

Prof. Dr. Martin Allespach[1] | Kelkheim
Director and Head of the European Academy of Labour at the University of Frankfurt am Main

Kai Bliesener[1, 3] | Weinstadt
First Authorized Representative of the IG Metall union, Aalen Administration Office

Gerhard Bösner[1] | 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 Development, Robert Bosch GmbH, Stuttgart

Tamara Hübner[1, 4] | Aalen
First Authorized Representative of the IG Metall union, Aalen Administration Office

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

Andreas Kopf[1] | Bad Wurzach
Head of Services Accounting and Tax of Carl Zeiss AG, Oberkochen

Michael Kramer[1] | Jena
Production supervisor at Carl Zeiss Jena GmbH, Jena

Dr. Joachim Kreuzburg | Göttingen
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. Dr. Jürgen Mlynek[3, 5] | Berlin
Chairman of the Board of the Falling Walls Foundation gGmbH, Berlin

Silke Müller[1] | Jena
Patent Counsel at the Jena site of Carl Zeiss AG, Oberkochen

Ernst Stumpp[1, 6] | Königsbronn
Development engineer at Carl Zeiss Industrielle Messtechnik GmbH, Oberkochen

Dr. Eberhard Veit[5] | Göppingen
Managing Partner of 4.0-Veit GbR, Göppingen

Dr. Rutger Wijburg[7] | Egling
Member of the Executive Board and Chief Operations Officer of Infineon Technologies AG, Neubiberg

Prof. Dr. Tanja Weil[7] | Bad Kreuznach
Managing Director of the Max Planck Institute for Polymer Research, Mainz

Committees of the Supervisory Board

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

Audit Committee
Gert-Hartwig Lescow (Chairman)
Hariolf Abele[1, 2]
Dr. Michael Bolle
Angelika Franzke[1, 6]
Silke Müller[1]

Digital Committee
Jan Brecht (Chairman)[8]
Hariolf Abele[1, 2]
Dr. Michael Bolle
Dr. Klaus Dieterich
Tamara Hübner[1, 6]

Mediation Committee
Dr. Michael Bolle (Chairman)
Dr.-Ing. Mathias Kammüller
Andreas Kopf[1]
Angelika Franzke[1]

[1] Employee Representatives
[2] Until 30 September 2023
[3] Until 20 November 2022
[4] From 1 December 2022
[5] Until 13 March 2023
[6] From 1 October 2023
[7] From 13 March 2023
[8] Chairman from 20 October 2022

Last updated: December 2023

Group Management Report

Group Management Report

THE ZEISS GROUP

Company profile

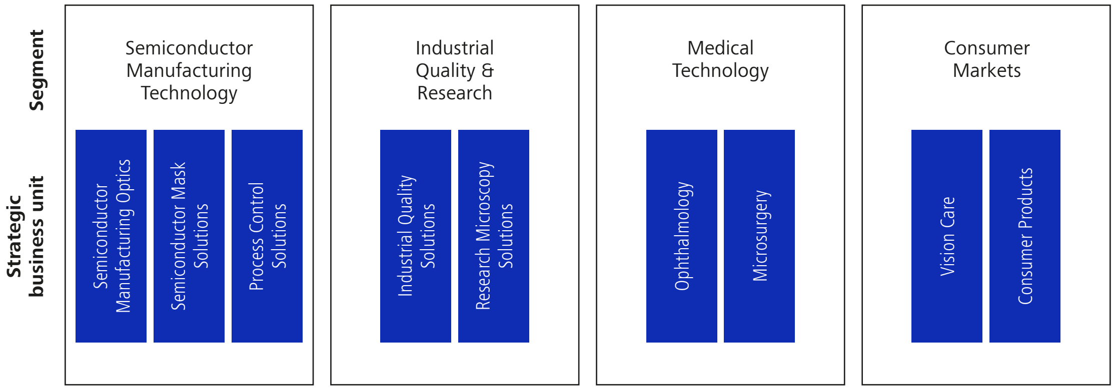
ZEISS is an internationally leading technology enterprise operating in the optics and optoelectronics industries. The ZEISS Group emerged from a workshop for precision mechanics and optics established by company founder Carl Zeiss in Jena (Thuringia) in 1846. Today, ZEISS is headquartered in Oberkochen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

The ZEISS Group is represented in around 50 countries and has more than 60 sales and service locations, 35 research and development centers as well as 35 manufacturing sites 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 four segments: Semiconductor Manufacturing Technology, Industrial Quality & Research, Medical Technology and Consumer Markets. The ZEISS Group has a business portfolio that is divided into nine 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, metrology, 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. The majority of all microchips worldwide are manufactured using lithography technologies from the strategic partner and customer ASML, headquartered in the Netherlands. The lithography optics from ZEISS Semiconductor Manufacturing Technology are at the heart of wafer scanners. Electronic applications fitted with such microchips 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 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 many industries and are important tools for the energy transition. The main fields of application are electric drivetrains, power generation, but also aerospace, medical technology, electronics and mechanical engineering. In the fields of science and research, the segment also covers the entire spectrum of microscopy with light, 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 and microsurgery. 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 use new technologies to shape the healthcare system in such a way as to promote medical progress and support digital transformation. Accordingly, cutting-edge technology in medical applications is to be made accessible to doctors and patients. In order to meet today’s requirements for safe and efficient treatments, the Medical Technology segment offers integrated solutions that improve clinical performance and the patient experience throughout the continuum of care. A deep understanding of the challenges faced by customers and a range of services tailored to them are therefore key to the Group’s long-term success.

Consumer Markets

The Consumer Markets segment operates in the areas of vision care, photography, cinematography, mobile imaging, 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, thermal imaging cameras, 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." 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 focus areas, 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. Revenue growth and EBIT margin are the most important financial indicators for ZEISS. Other internal 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 2022/23 was significantly less impacted by the COVID-19 pandemic than the previous year and supply chains have largely stabilized. According to the forecast of the International Monetary Fund (IMF) from the World Economic Outlook Update of October 2023, global economic growth will slow from 3.5% in calendar year 2022 to approximately 3% in calendar year 2023, below the average growth of 3.8% of the first two decades of this century. In addition, the IMF projects that growth in the industrialized countries will decline significantly from 2.6% in calendar year 2022 to around 1.5% in calendar year 2023, while developing countries will grow at around 4% over this period. The Chinese economy grew by 3% in calendar year 2022 due to the COVID-19 pandemic. After the measures to contain the COVID-19 pandemic in China had been discontinued, the Chinese economy grew significantly in the early months of calendar year 2023. The economic recovery weakened somewhat over the course of the year, with the IMF forecasting growth of around 5% for calendar year 2023.

Global inflation stood at 8.7% in calendar year 2022. A moderate reduction to approximately 6.9% is forecast for calendar year 2023. To curb inflation, the US Federal Reserve and the European Central Bank raised key interest rates several times over the course of the fiscal year. High inflation and the rise in interest expenses for loans in the wake of the increase in key interest rates have reduced the purchasing power of households and affect borrowing and investment. The war in Ukraine resulted in massive price hikes for energy and in particular natural gas in Europe, dropping again as calendar year 2023 progressed.

Segment-specific environment

Semiconductor Manufacturing Technology
Following the unexpected increase in demand due to the surge in digitalization in the wake of the pandemic and the associated global shortage of semiconductors, an expected correction occurred in the semiconductor market in fiscal year 2022/23. The uncertain macroeconomic situation had a negative impact on industrial customers and end customers. The semiconductor industry reacted quickly to the drop in demand and slowed production. Manufacturers have adjusted their investments in semiconductor manufacturing equipment in the short and medium term. In the reporting year, these investments were nevertheless significantly above the level before the pandemic, mainly driven by high demand from China. Strong growth drivers for the global semiconductor industry include digital transformation and trends such as artificial intelligence and autonomous driving.

Industrial Quality & Research
Growth in the industry environment of ZEISS' Industrial Quality & Research segment continued. Decarbonization requires new, more efficient products and production. The global investments required for this are supporting demand for quality assurance technologies in an overall cooling market. This is clearly illustrated by the investments in alternative drive technologies in the automobile sector and the strong demand for wind power, as well as initial investments in the hydrogen economy. In microscopy solutions, global megatrends such as the increasing aging of society and ongoing digital transformation support solid long-term growth. This applies to public spending for research as well as to the pharmaceutical and biotech industries as well as the semiconductor industry. However, there are challenges in the short and medium term. A difficult economic environment is putting pressure on public budgets in core markets and leading to a decline in public subsidies for research. There are also signs of weakening demand in the semiconductor 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. In order to optimize treatments in this respect, various workflows have been designed based on the clinical processes in hospitals and surgical centers. These workflow solutions offer an approach that goes beyond single device use by creating a link between devices, consumables and patient data. By contrast, 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. The main growth drivers are increased purchasing power in emerging economies, the global rise in demand for vision care from an aging population, innovations with value added for health in branded eyeglass lenses and optic technologies as well as an in some cases pandemic-like increase in short-sightedness (myopia). However, rising inflation rates and a worsening consumer sentiment are affecting all markets worldwide. The global market for eyeglass lenses is characterized by fierce price and competitive pressure, a volatile consumer sentiment and global trends towards omnichannel solutions for opticians and chain stores alike. The market for cine lenses is affected by the disruption of film production in the US and Europe due to strikes, but will benefit in the future from new, digital technologies for production and post-production. The markets for sports optics and nature observation will continue to grow, despite rising inflation having caused some consumers to hold back on purchases this year.

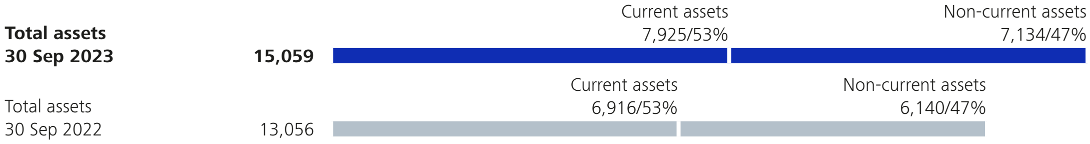
Overall statement on the economic situation of the Group as of fiscal year end

The ZEISS Group closed fiscal year 2022/23 with record revenue of €10,108m (prior year: €8,754m) with an EBIT margin of 17% (prior year: 18%). The prior-year forecast of revenue growth in the mid single-digit percentage range and an EBIT margin of around 15% was exceeded.

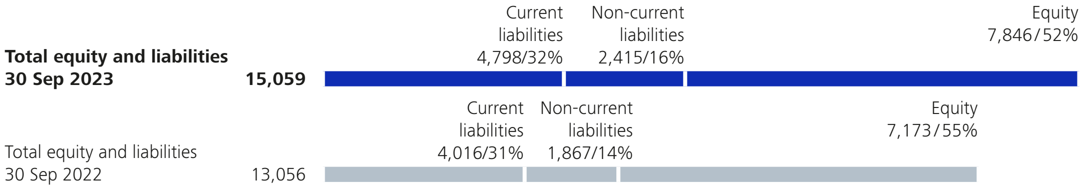
Net assets

Total assets increased by €2,003m in the reporting period to €15,059m (prior year: €13,056m).

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

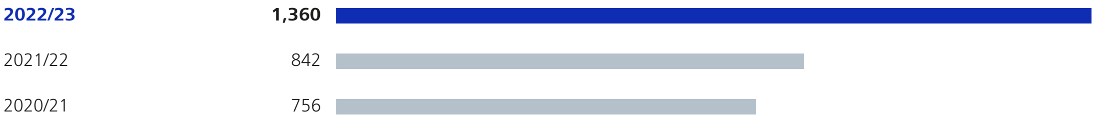


Goodwill
Goodwill amounted to €1,423m (prior year: €1,430m). The impairment tests performed in the reporting period did not give rise to the need to recognize any impairment losses on goodwill.

Other intangible assets
Other intangible assets amounted to €546m (prior year: €450m) and increased mainly as a result of acquisitions made in the fiscal year.

Property, plant and equipment
In fiscal year 2022/23, ZEISS invested a total of €1,360m in property, plant and equipment (prior year: €842m), mainly in expansion and modernization measures relating to infrastructure, production plants and in furniture and fixtures. Investments in the Semiconductor Manufacturing Technology segment to meet expected demand in the semiconductor equipment market, including the production of the next generation of EUV lithography, as well as the investments in the ZEISS high-tech location in Jena are particularly noteworthy in this regard. Depreciation in the reporting period amounted to €358m (prior year: €311m).

Capital expenditures on property, plant and equipment in € m



Other non-current assets
The sundry non-current assets amounted to €917m (prior year: €921m) and mainly consist of securities, shares in non-consolidated subsidiaries, investments, 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 and preemptively increased supply chain inventories. Inventories came to €3,138m as of the reporting date (prior year: €2,522m). Current trade receivables increased by 18% to €1,874m. Trade payables came to €838m as of the reporting date (prior year: €693m).

Other current assets amounted to €1,192m (prior year: €975m) and include securities with a short-term investment horizon and time deposits.

Current provisions came to €167m (prior year: €174m) and essentially comprise provisions for warranty obligations.

Accruals of €1,607m (prior year: €1,367m) mainly include personnel-related and sales-related obligations as well as outstanding invoices.

Other current non-financial liabilities of €1,595m (prior year: €1,250m) mainly contain prepayments received on account of orders and deferred income.

Increase in equity
Equity amounted to €7,846m as of the reporting date (prior year: €7,173m). The consolidated profit of €1,257m generated in the reporting period increased equity. Equity was reduced, on the other hand, by the differences arising from the currency translation recognized in other reserves through other comprehensive income of €183m, and the dividends paid out of €361m. The equity ratio stood at 52% (prior year: 55%), mainly due to the increase in total assets.

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 €1,660m on the reporting date (prior year: €1,649m). For reasons relating to the cut-off date, the pensions obligations had a funded status of 117% (prior year: 118%).

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 €637m (prior year: €662m) are reported in the consolidated statement of financial position. This equates to 4% of total assets (prior year: 5%).

Financial liabilities
The financial liabilities of €1,980m (prior year: €1,379m) primarily contain loans, lease liabilities and liabilities from dividends and purchase price obligations in conjunction with acquisitions. The increase stems mainly from investment loans from ASML.

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.

Cash flows from operating activities were primarily determined by the consolidated profit for the year and amounted to €1,377m in the reporting period (prior year: €1,421m).

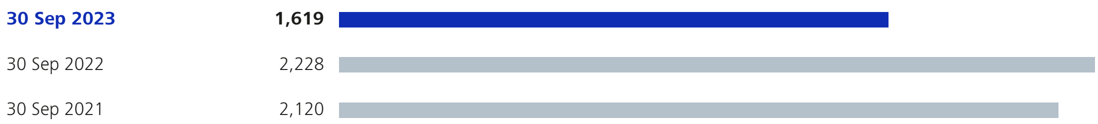
Cash flows from investing activities came to minus €1,593m in the reporting period (prior year: minus €1,300m). Payments for capital expenditures on property, plant and equipment and intangible assets of €1,381m (prior year: €858m) are partly counterbalanced by proceeds from the disposal of intangible assets and property, plant and equipment of €18m (prior year: €25m). The payments in connection with the acquisition of shares in entities amounted to €59m (prior year: €99m). The net cash flow changes of financial assets amounted to minus €171m (prior year: minus €369m).

Cash flows from financing activities came to €148m in the reporting period (prior year: €90m) and contain cash received from investment loans of €548m (prior year: €460m). Cash received is counterbalanced by cash paid to repay lease liabilities as well as dividend payments. Dividends of €322m (prior year: €280m) were paid out in the reporting period.

Liquidity

Cash and cash equivalents[1] came to €2,784m as of the reporting date (prior year: €2,846m) and loans payable[2] amounted to €1,165m (prior year: €618m). Net liquidity[3] thus stood at €1,619m (prior year: €2,228m).

Net liquidity in € m



In addition, the ZEISS Group has access to a revolving credit facility with a total volume of €1.0b that was concluded between Carl Zeiss AG and a syndicate of banks to finance its business operations. On 6 October 2023, Carl Zeiss AG refinanced the existing revolving credit facility of €500m with an original term until 2 August 2026 ahead of schedule and increased it to €1.0b. At the same time, the refinanced credit facility was given a five-year term and the option to extend it thereafter twice by a year each time. The revolving credit facility serves as a strategic liquidity reserve for the ZEISS Group and was not utilized in the reporting period.

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. the geopolitical situation), the ZEISS Group currently has sufficient cash and cash equivalents and lines of credit to finance its operational and strategic objectives.

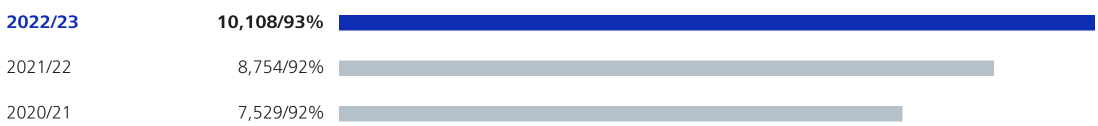
Results of operations

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 17% (prior year: 18%). Currency effects had a slightly negative impact on the results of operations of the ZEISS Group in the reporting period.

At €10,108m, the ZEISS Group's revenue in the reporting period was 15% higher than the prior-year figure (€8,754m). At 93%, 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 mid single-digit percentage range was exceeded.

Revenue in € m/international share as a %



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

The ZEISS Group's incoming orders increased by 2% (adjusted for currency effects: 3%) in the reporting period to €10,834m (prior year: €10,664m). Incoming orders in the instrument segments changed by a total of 2% (adjusted for currency effects: 4%). The Semiconductor Manufacturing Technology segment recorded an increase in incoming orders of 2% (adjusted for currency effects: 1%) compared to the prior year.

Consolidated revenue by segment

Revenue by segment	2022/23	2021/22	Change compared to prior year as a %	
	€ m	€ m		Adjusted for currency effects
Semiconductor Manufacturing Technology	3,555	2,757	29	29
Industrial Quality & Research	2,295	2,066	11	13
Medical Technology	2,504	2,251	11	14
Consumer Markets	1,624	1,569	4	5
Other	130	111	17	18
ZEISS Group	**10,108**	**8,754**	**15**	**17**

Semiconductor Manufacturing Technology

The Semiconductor Manufacturing Technology segment generated revenue of €3,555m. That is equivalent to an increase of 29% (adjusted for currency effects: 29%) compared to the prior year (€2,757m).

The Semiconductor Manufacturing Technology segment thus remains on course for growth despite the slowdown in the semiconductor market. The strategic business units for Semiconductor Manufacturing Optics and Semiconductor Mask Solutions in particular contributed to this renewed revenue record, with both units generating increases in deliveries compared to the prior year.

In the Semiconductor Manufacturing Optics business unit, high customer demand for lithography equipment for semiconductor manufacturing, particularly in the Deep Ultra Violet (DUV) segment, continued in fiscal year 2022/23. DUV lithography systems are still a key revenue driver in the business unit and thus in the segment, in part due to the high demand from the expansion of the semiconductor industry in China. The business unit is expanding its capacities to meet high customer demand. Extreme Ultra Violet (EUV) lithography is the key technology in the semiconductor industry enabling further miniaturization of microchips. In the reporting year, ZEISS Semiconductor Manufacturing Technology delivered High-NA-EUV lithography, the latest EUV product generation, to its customer ASML for the first time. With the further development of the EUV lithography process, light from a larger aperture angle can be used for imaging, allowing up to three times more structures to be imaged on a microchip. ZEISS is thus enabling the semiconductor industry to realize the next generation of microchips. In the business unit's other business with optical components and modules for lithography lasers, demand remained stable at a high level in fiscal year 2022/23. Products for optical wafer inspection are in particularly high demand due to their increased importance in the chip manufacturing process.

The Semiconductor Mask Solutions strategic business unit contributed to the segment's growth by setting a new revenue record in a challenging market environment with sales of solutions for the metrology, inspection and repair of photomasks despite the sanctions imposed by the US on service and spare parts for the Chinese market.

The Process Control Solutions strategic business unit made further progress in the business with products for process control in semiconductor manufacturing and technologies for the analysis of three-dimensional structures of microchips in close exchange with leading semiconductor manufacturers.

As of 30 September 2023, the segment had 7,591 employees (based on full-time equivalents) worldwide (prior year: 6,215).

Industrial Quality & Research

The Industrial Quality & Research segment generated revenue of €2,295m. That is equivalent to an increase of 11% (adjusted for currency effects: 13%) compared to the prior year (€2,066m).

Demand for products from the Industrial Quality & Research segment continued to increase in fiscal year 2022/23. 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 metrology, new solutions such as fast multi-sensor machines and computer tomography for non-destructive testing were in particularly high demand. Software products and the service business make an important and stable contribution to the business. Demand for optical metrology, 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.

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. Further expansion of remote service offerings is one of the factors that has enabled the installed base, which has grown steadily in recent years, to be leveraged for profitable growth in the service business.

As of 30 September 2023, the segment had 8,213 employees (based on full-time equivalents) worldwide (prior year: 7,534).

Medical Technology

The Medical Technology segment generated revenue of €2,504m. That is equivalent to an increase of 11% (adjusted for currency effects: 14%) compared to the prior year (€2,251m).

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, benefited in particular from the stabilization of the supply chains in the second half of the fiscal year. This resulted in an acceleration in deliveries in the reporting year. The positive development of the intraocular lenses business additionally contributed to the increase in revenue.

The Microsurgery strategic business unit, which offers visualization solutions for minimally invasive surgical treatments, also succeeded in delivering more equipment due to the improved supply chain situation, particularly in the second half of the fiscal year.

The EMEA region showed positive revenue development with good contributions to growth from the core markets of France, Spain and Italy. High growth rates in the US and Latin American markets were the main drivers of sales growth in the Americas region. Revenue in the APAC region developed positively. The markets in India and Southeast Asia developed dynamically, while growth in China slowed and Korea showed a slight decline.

As of 30 September 2023, the segment had 7,736 employees (based on full-time equivalents) worldwide (prior year: 6,829).

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

Consumer Markets

The Consumer Markets segment generated revenue of €1,624m in fiscal year 2022/23. That is equivalent to an increase of 4% (adjusted for currency effects: 5%) compared to the prior year (€1,569m).

The Vision Care strategic business unit generated growth globally, in particular with ZEISS branded ophthalmic lenses and innovations for an aging population, for a digital lifestyle and for pressing challenges of global healthcare markets such as progressive myopia, as well as with omnichannel offerings. In some countries, measures implemented to contain the pandemic still led in part to restrictions, but these remained limited in time and scope. The customer-oriented strategic positioning as a reliable partner to customers aided the exploitation of potential in growth markets and the acquisition of new customers in all regions. The US continued to be a challenge, mainly as a result of market entry barriers. In China, innovative ZEISS solutions for managing progressive myopia and the growing middle class in particular are driving growth.

Business in the Consumer Products strategic business unit was impacted worldwide by inflation and a deteriorating consumer climate. Innovations and the expansion of the portfolio to include thermal imaging and wildlife cameras, for example, have opened up new product categories for sports optics and nature observation. The prolonged strikes by screenwriters and actors in Hollywood had a noticeable impact on the cine lens business. The market for camera lenses has shrunk worldwide in recent years due to the shift to smartphone photography. Through strategic partnerships for smartphone photography, ZEISS is taking advantage of new possibilities and market opportunities in the field of photography and expanding its position here as an innovative brand for end consumers.

As of 30 September 2023, the segment had 13,075 employees (based on full-time equivalents) worldwide (prior year: 13,008).

Consolidated revenue by region and cooperations

Revenue by region and cooperations	**2022/23**	2021/22	Change compared to prior year as a %	
	€ m	€ m		Adjusted for currency effects
EMEA	2,283	2,090	9	10
» thereof Germany	723	661	9	9
Americas	1,802	1,679	7	5
APAC	2,742	2,467	11	17
Cooperations	3,281	2,518	30	30
ZEISS Group	**10,108**	**8,754**	**15**	**17**

In the region Europe/Middle East/Africa (EMEA), ZEISS reported a rise in revenue in the reporting period of 9% (adjusted for currency effects: 10%) to €2,283m (prior year: €2,090m), with revenue in Germany increasing by 9% to €723m (prior year: €661m).

Revenue in the Americas region came to €1,802m, an increase of 7% (adjusted for currency effects: 5%) compared to the prior year (€1,679m).

Revenue in the Asia-Pacific region (APAC) increased by 11% compared to the prior year (adjusted for currency effects: 17%) to €2,742m (prior year: €2,467m).

Direct business with supra-regional cooperation partners increased by 30% to €3,281m in fiscal year 2022/23 (prior year: €2,518m). 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 €495m in comparison to the prior year and came to €4,407m (prior year: €3,912m). Gross profit rose by €859m from €4,842m to €5,701m in the reporting period. The gross margin was 56% (prior year: 55%).

Sales and marketing expenses in fiscal year 2022/23 amounted to €1,831m (prior year: €1,588m) and, at 18% of revenue, were at the prior-year level. General administrative expenses stood at €638m (prior year: €514m), accounting for 6% of revenue as in the prior year.

Research and development expenses recognized in the consolidated income statement came to €1,545m in the reporting period (prior year: €1,151m).

	2022/23	2021/22
	€ m	€ m
Research and development expenses before subsidies and IAS 38	1,675	1,321
Government and third-party grants	75	127
Capitalized development costs (IAS 38)	55	43
Research and development expenses according to consolidated income statement	**1,545**	**1,151**

Research and development expenses before subsidies and capitalized development costs (IAS 38) totaled €1,675m (prior year: €1,321m). Representing 17% of revenue and above the prior-year level (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 €2,116m in the reporting period (prior year: €1,979m).

Earnings before interest and taxes (EBIT) of €1,686m (prior year: €1,588m) with an EBIT margin of 17% (prior year: 18%) were generated in the reporting period. The EBIT margin is down on the prior year due to higher research and development expenses. However, the EBIT margin of around 15% projected in the prior year was exceeded thanks in particular to revenue growth.

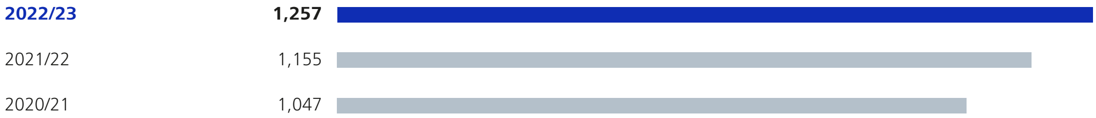
	2022/23	2021/22	2020/21
	€ m	€ m	€ m
EBITDA	2,116	1,979	1,814
» EBITDA margin as a %	21	23	24
EBIT	1,686	1,588	1,479
» EBIT margin as a %	17	18	20

The financial result deteriorated by €74m compared to the prior year to €48m (prior year: minus €26m). The interest result increased by €14m to €7m (prior year: minus €7m). The other financial result increased by €61m to €42m (prior year: minus €19m). 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 2022/23 totaled €477m (prior year: €407m), which resulted in a group tax rate of 27% (prior year: 26%).

ZEISS thus achieved a consolidated profit of €1,257m (prior year: €1,155m).

Consolidated profit/loss in € m



Other financial indicators

Other financial indicators are Economic Value Added (EVA®)[4] and Free Cash Flow (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 2022/23, EVA® amounted to €793m (prior year: €862m). ZEISS therefore once again achieved considerable value added, which exceeded 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 €332m in the reporting period (prior year: €1,045m). The level of the prior-year forecast was also 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. In its research activities, ZEISS focuses on innovative key optical technologies, continuously investing in these and shaping the market. This is the foundation for the continued growth of the company and is firmly embedded in its corporate identity as part of its strategy and culture.

In fiscal year 2022/23, expenses for research and development made up 15% of revenue (prior year: 13%). As forecast, they are thus above the high level of prior years. The ZEISS Group's research and development departments have 6,252 employees (prior year: 5,254 employees), or 15% of the workforce, working on new solutions and technologies for the optics and optoelectronics industries and digital business models.

[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 prepayments 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.

As of the reporting date, ZEISS held about 11,300 patents worldwide (prior year: 10,500) and applied for new patents for approx. 670 inventions (prior year: approx. 630).

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. 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.

ZEISS Ventures manages a portfolio of start-up companies and makes investments. In this way, ZEISS intends to enter attractive target markets with long-term growth prospects aligned with megatrends and open up significant opportunities for future growth. 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 closer networking between business and science allows for even more intensive synergy effects for ZEISS as an active promoter of science. This includes, for example, cooperation with colleges and universities. Here, ZEISS maintains long-standing ties 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.

The business-supporting function, ZEISS Digital Partners, supports the ZEISS segments and external customers along the entire value chain of digital solutions. The establishment of the ZEISS Group's Digital Competence Center, which now employs more than 1,100 digital experts, and the integration of digital and data-based solutions at ZEISS Group level enables the scaling of these solutions and will accelerate digital transformation.

Employees

Highly qualified, dedicated and motivated employees are the foundation for the long-term success of the ZEISS Group. As of 30 September 2023, the total headcount of the ZEISS Group stood at 42,992, a global increase of 4,222 (prior year: 38,770). The increase in headcount is therefore in line with the prior-year forecast. ZEISS has 20,067 (prior year: 17,058) employees at locations in Germany and 22,925 (prior year: 21,712) employees at locations outside Germany.

The ZEISS Group views diversity as a prerequisite for innovation, which is why it is actively supported and strengthened by ZEISS. Around 53% (prior year: 56%) of the ZEISS workforce work at international locations 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. ZEISS believes that 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 690 trainees and students of universities offering dual degree programs (prior year: 528).

The professional training of employees and leadership development are areas of focus of human resources for ZEISS. Employees can choose 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. ZEISS and the statutory health insurance provider BARMER have been cooperating as healthcare partners since 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.

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 in the development, production, packaging, shipping and disposal of its products. 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. ZEISS wants to make its contribution as a sustainable foundation company with concrete measures for the reduction of carbon emissions and climate protection: By 2025, ZEISS aims to become carbon neutral worldwide in its own operating activities (in terms of 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
For ZEISS product responsibility means 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. 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. ZEISS aspires to rigorously implement all product safety laws relating to product use and disposal. The product safety warranty is subject to a range of statutory requirements for the development, manufacture, approval and sale of products.

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 ZEISS supplier standards and implement ongoing measures to meet these requirements. The ZEISS supplier standards are composed of the Code of Conduct of the Responsible Business Alliance (RBA) and additional requirements from the German Supply Chain Sourcing Obligations Act (LkSG). 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
ZEISS wants to take responsibility and to play an active role in society. The ZEISS Group supports educational measures and scientific projects and institutions, nature conservation activities as well as selected social and cultural initiatives and facilities at its sites. With the ZEISS Promotion Fund, ZEISS bundles and structures its sponsorship activities in Germany. 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. ZEISS has worked with non-profit organizations and made 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.

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 2023/24.

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 generally 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. This also includes the evaluation of the impact of possible substance bans. 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 invests 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, the US and China 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. The current high inflation in several of ZEISS' core countries is affecting the wage structure. 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 and expanding its recruitment capacity worldwide in order to be able to act quickly on the applicant market and to cover the different requirements of the countries. 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 on-site initiatives and social benefits are offered, including health promotion programs, hybrid ways of working, flexible work models and ways of reconciling work and family life.

Opportunities arise from the new ways of working mainly related to diversity and attractiveness for current and future employees. ZEISS counters 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 situation on the procurement markets has largely normalized. Bottlenecks in the area of chemicals and electronics are becoming apparent in some areas. These are actively managed as part of procurement risk management. In the short to medium term, there are isolated risks relating to the stability of individual supply relationships. High inventories, now normalized demand and short replenishment times reduce the supply risk on the procurement markets, for example for electronic components. However, this creates the opportunity to correct inflation-related price increases. Overall, the supply chain risk is therefore classified as low and the probability of occurrence is also considered to be low.

Supply chain inventories increased as a preventative measure are maintained for critical materials and potential supply chain disruptions are being addressed by ZEISS in task force mode. The company can largely avoid these supply chain disruptions by employing predictive models, systems-based risk management, escalations, requalifications or purchases via brokers. As a result, the effects on business activities are currently low. ZEISS expects the normalized procurement market situation to continue. 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 low risk is expected due to production downtimes and unavailability of materials. The probability of occurrence is classified as low.

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 compensation by way of 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 chains. 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 moderate risk for production at German sites.

The regulatory requirements for supply chains in accordance with LkSG and the 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 suppliers are actively encouraged to reduce their carbon emissions, implement circular economy strategies, respect human rights, and be socially responsible. In this context, ZEISS identifies suppliers with an increased risk and urges them to take suitable preventive or remedial measures. ZEISS also conducts systematic audits for selected 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.

Sustainability risks and opportunities

The Group's Executive Board has appointed a Human Rights Officer to monitor risk management with regard to human rights and environmental risks. The Human Rights Officer is integrated into the compliance and reporting processes of ZEISS and maintains a close exchange with the business units. The management of the respective ZEISS business unit is responsible for identifying, managing and reporting human rights and environmental risks.

As a manufacturing technology company with international sites and a large number of supplier companies, ZEISS has identified risks to occupational health and safety and environmental protection as priorities both in its own business operations and in its supply chains, and is placing an increased focus on these. ZEISS takes appropriate preventive and remedial measures to avoid, eliminate or minimize risks in its own operations or those of its suppliers. ZEISS builds on long-established processes and structures from the risk management in its own business and supplier management in procurement. Therefore, there is considered to be a moderate risk and low probability of occurrence.

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, reliance on a stable IT infrastructure with high availability is constantly increasing. ZEISS is also focused on mobile working. 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 cyber attacks, 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, in addition to economic risks, reducing environmental, social and governance (ESG) 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 Audioptics Medical Inc., ZEISS is further expanding its portfolio in the new field of diagnostics and treatment of ear diseases. Audioptics Medical Inc. is developing a diagnostic device to better characterize middle ear pathology.

With the complete acquisition of the previous joint venture tooz technologies, ZEISS is able to expand its position in the field of augmented reality (AR) and virtual reality (VR) glasses and take advantage of growing market potential. tooz specializes in the integration of correction solutions in AR glasses, which are stylish and can be mass produced. The optics, which are extensively patented by tooz and are known as waveguides, project a virtual image in the wearer's field of view.

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 €1,423m 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 geopolitical developments. Credit risks are limited by only entering into transactions with counterparties that have an investment grade credit rating. 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 has implemented 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 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.

Market risks and opportunities
ZEISS' 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 and possible disruptions to global supply chains. It is possible that more restrictive trade policy measures may be imposed due to geopolitical tensions, particularly in the technology sector and for rare raw materials. The economic risk resulting from restrictions on free trade exchange is classified as moderate with a moderate probability of occurrence. 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.

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. As demand for the segment's products is greater than current production capacities, ZEISS is working with its partners to significantly expand capacity at all locations of the Semiconductor Manufacturing Technology segment. This includes infrastructure, technology and personnel development. Risks may arise from an impairment of the industry's security of supply of raw materials and energy, as well as from geopolitical uncertainties such as the situation with regard to China and Taiwan and uncertainties in value chains. It also cannot be ruled out that negative trends on the demand side and the slowdown in the market for equipment manufacturers could also impact the Semiconductor Manufacturing Technology segment. 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.

Risks for the Industrial Quality & Research segment arise from geopolitical developments leading to a global tightening of trade barriers. This could also have a negative impact on already fragile supply chains and customer segments. 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 channels and services. Opportunities arise from deglobalization and significant global investment in the construction of new factories, for example in the semiconductor industry or batteries.

The continued growth in demand for carbon neutral technologies represents a major opportunity. Innovations and the expansion of the product portfolio are aimed at tapping new market and customer potential. In addition, opportunities arise for the Industrial Quality & Research segment 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 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. 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.

Risks for the Consumer Markets segment arise from fundamental changes in the market, persistent inflation risks and their impact on consumer sentiment, changes in consumer behavior driven in particular by digitalization, and the horizontal and vertical integration of large competitors. Other risks include uninterrupted pressure on prices, the 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. Global supply chains continue to be subject to friction, disruptions, and long-term geopolitical changes. This could create challenges in terms of manufacturing locations and capacity planning, as well as delivery reliability. The licensing business with photo and smartphone lenses is dependent on the attractiveness of the ZEISS brand and the reputation for innovative photo and film technologies from ZEISS. ZEISS counters this risk by means of a consistent brand and innovation 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, the integration of digital technologies and services for film productions, hunting and nature observation, 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 primarily due to geopolitical developments, increasing regulation, strained supply chains, and a tense situation on the energy and labor markets. 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

According to the forecast of the International Monetary Fund (IMF) in the World Economic Outlook Update of October 2023, the global economy is expected to grow only moderately by around 2.9% in the coming calendar year 2024. At the same time, the IMF forecasts somewhat lower growth of around 1.4% in the industrialized countries compared with the 2023 calendar year, and steady economic growth of around 4% in the developing countries. According to the forecast, the Chinese economy's growth momentum will slow slightly to around 4.2% in calendar year 2024. Global inflation will continue to decline in calendar year 2024 and is expected to be around 5.8%. According to the forecast of the Economist Intelligence Unit (EIU) in the Global October Outlook dated September 2023, the key interest rates of the US Federal Reserve and the European Central Bank are not expected to rise again in calendar year 2024 and may be gradually reduced again in the second half of the year. According to the EIU's forecast, a return to a low-interest phase in the short and medium term is not expected within the next five years.

The IMF believes that the rise in interest rates compared to prior years, combined with inflation, could lead to increased defaults and restrained consumption and investment. Overall, this could have a negative impact on economic growth.

Due to geopolitical tensions, the free movement of goods may be impeded, especially for goods in the technology sector and rare raw materials.

Expected development of the markets and industries relevant for ZEISS

Semiconductor Manufacturing Technology

Despite an uncertain global economic situation, ZEISS continues to see long-term growth impetus for the Semiconductor Manufacturing Technology segment, in particular from accelerated global digitalization, the multi-year investment programs of chip manufacturers and national incentive programs to expand its own chip production and reduce dependence on Asia for chip manufacturing. The growth drivers for the semiconductor industry remain intact despite the current correction in the market. These include technologies such as artificial intelligence, more powerful data centers, a higher proportion of semiconductors in vehicles, and the industrial sector. Leading chip manufacturers therefore want to continue investing in new manufacturing technologies and capacities. A good order backlog in the segment provides a healthy foundation for fiscal year 2023/24. The prior-year order backlog also entails a great responsibility towards the semiconductor industry to meet the demand for ZEISS' unique technologies. It is still uncertain at present when the trend reversal in the current semiconductor cycle will begin and how the market will develop in the coming fiscal year. ZEISS is therefore acting prudently.

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. In the APAC region, especially in China, the Industrial Quality & Research segment expects to grow at a slower pace. In other regions, ZEISS predicts a moderately positive or flat development for fiscal year 2023/24. Overall, however, the segment anticipates growth through forward-looking projects, for example in energy technology 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 the 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 healthcare centers 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. In general, the Medical Technology segment expects further growth for fiscal year 2023/24.

Consumer Markets

For business in the Consumer Markets segment, ZEISS expects that global growth for vision care, film, hunting and nature observation as well as smartphone photography will, despite the volatile consumer climate, remain stable and that consumer behavior will be changed further 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 a modern lifestyle. ZEISS expects the advancing digitalization across the entire value chain of vision care – in 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 tougher competition. Increased competitive pressure is expected in the market for cine lenses due to the entry of new competitors from Asia in the lower price range. With the integration of digital technologies and services, partly through acquisitions, ZEISS is expanding its position for high-quality film and series productions. ZEISS expects the market for hunting and nature observation to be stable or grow slightly in the long term and is therefore expanding its product portfolio in this area. ZEISS expects the strategic partnerships for mobile imaging to continue to develop positively.

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 2023/24, ZEISS aims to further intensify its research and development activities to tap future potential, resulting in a slightly higher research and development ratio compared to already 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 further future investments possible.

Overall statement on anticipated development

Based on the strategic focus and positioning of the segments in their respective markets, which the company established and expanded in the past, mainly through its innovative strength, ZEISS plans revenue growth in the low single-digit percentage range with an EBIT margin of around 13% for fiscal year 2023/24. Furthermore, ZEISS forecasts a Free Cash Flow (FCF) in the mid triple-digit million range due to the consistently high investments, 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 2022 to 30 September 2023

	Note	2022/23	2021/22
		€ k	€ k
Revenue	5	**10,108,471**	**8,754,410**
Cost of sales		-4,407,154	-3,911,926
Gross profit		**5,701,317**	**4,842,484**
» Sales and marketing expenses		-1,830,511	-1,588,177
» General administrative expenses		-638,481	-514,388
» Research and development expenses		-1,544,526	-1,151,255
» Other income	6	16,110	12,468
» Other expenses	7	-17,716	-12,978
Earnings before interest and taxes (EBIT)		**1,686,193**	**1,588,154**
» Profit/loss from investments accounted for using the equity method	8	-893	0
» Interest income	8	48,624	31,172
» Interest expenses	8	-28,259	-23,118
» Net interest balance on defined benefit plans	8	-13,460	-15,548
» Other financial result	8	41,737	-18,667
Financial result		**47,749**	**-26,161**
Earnings before taxes (EBT)		**1,733,942**	**1,561,993**
» Income taxes	9	-476,540	-406,644
Consolidated profit/loss		**1,257,402**	**1,155,349**
» thereof profit/loss attributable to the stockholder of the parent company		905,750	863,993
» thereof profit/loss attributable to non-controlling interests		351,652	291,356

Consolidated Statement of Comprehensive Income
for the period from 1 October 2022 to 30 September 2023

	Note	2022/23	2021/22
		€ k	€ k
Consolidated profit/loss		**1,257,402**	**1,155,349**
Other comprehensive income that may be reclassified to consolidated profit/loss in subsequent periods:			
» Currency translation differences		-182,983	253,694
» Remeasurement of debt instruments		5,557	-11,351
» Deferred income tax on the remeasurement of debt instruments		2	15
Other comprehensive income that will not be reclassified to consolidated profit/loss in subsequent periods:			
» Remeasurement of defined benefit plans		7,267	776,389
» Deferred income tax on the remeasurement of defined benefit plans		-9,577	-244,829
» Remeasurement of equity instruments		4,249	-2,253
» Deferred income tax on the remeasurement of equity instruments		-387	954
Other comprehensive income (after taxes)		**-175,872**	**772,619**
Total comprehensive income		**1,081,530**	**1,927,968**
» thereof profit/loss attributable to the stockholder of the parent company		742,438	1,552,792
» thereof profit/loss attributable to non-controlling interests		339,092	375,176

Consolidated Statement of Financial Position
as of 30 September 2023

Assets	Note	**30 Sep 2023**	30 Sep 2022
		€ k	€ k
Non-current assets			
» Goodwill	10	1,422,667	1,430,270
» Other intangible assets	10	546,455	450,490
» Property, plant and equipment	11	3,572,934	2,666,207
» Investments accounted for using the equity method	12	12,870	0
» Trade and other receivables	24	45,513	44,842
» Other financial assets	13	894,795	913,230
» Other non-financial assets	14	9,447	7,904
» Deferred tax assets	15	629,561	627,021
		7,134,242	**6,139,964**
Current assets			
» Inventories	16	3,138,136	2,522,345
» Trade and other receivables	24	1,874,477	1,582,292
» Other financial assets	13	902,048	737,847
» Income tax refund claims		20,623	25,310
» Other non-financial assets	14	290,149	237,250
» Cash and cash equivalents	17	1,699,143	1,811,280
		7,924,576	**6,916,324**
		15,058,818	**13,056,288**

Equity and liabilities	Note	**30 Sep 2023**	30 Sep 2022
		€ k	€ k
Equity	18		
» Issued capital		120,000	120,000
» Capital reserves		52,770	52,770
» Retained earnings		6,781,323	6,008,647
» Other reserves		-187,032	-23,186
» Non-controlling interests		1,079,141	1,015,098
		7,846,202	**7,173,329**
Non-current liabilities			
» Provisions for pensions and similar obligations	19	637,351	662,026
» Other provisions	20	85,113	95,010
» Financial liabilities	22	1,544,560	975,889
» Other non-financial liabilities	23	46,514	50,381
» Deferred tax liabilities	15	100,917	83,456
		2,414,455	**1,866,762**
Current liabilities			
» Other provisions	20	166,542	173,932
» Accruals	21	1,607,011	1,366,571
» Financial liabilities	22	435,402	402,764
» Trade payables	24	838,478	692,831
» Income tax payables		155,855	129,969
» Other non-financial liabilities	23	1,594,873	1,250,130
		4,798,161	**4,016,197**
		15,058,818	**13,056,288**

Consolidated Statement of Changes in Equity
for the period from 1 October 2022 to 30 September 2023[1]

	Issued capital	Capital reserves	Retained earnings	Other reserves			Equity attributable to the stockholder of the parent company	Non-controlling interests	Equity
				from currency translation	from the remeasurement of defined benefit plans	from the remeasurement of equity and debt instruments			
	€ k	€ k	€ k	€ k	€ k	€ k	€ k	€ k	€ k
1 Oct 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 Sep 2022	**120,000**	**52,770**	**6,008,647**	**248,789**	**-259,914**	**-12,061**	**6,158,231**	**1,015,098**	**7,173,329**
» Consolidated profit/loss	0	0	905,750	0	0	0	905,750	351,652	1,257,402
» Other comprehensive income	0	0	0	-166,956	-4,199	7,843	-163,312	-12,560	-175,872
Total comprehensive income	**0**	**0**	**905,750**	**-166,956**	**-4,199**	**7,843**	**742,438**	**339,092**	**1,081,530**
Dividends	0	0	-101,500	0	0	0	-101,500	-259,660	-361,160
Changes in basis of consolidation	0	0	0	-534	0	0	-534	-4,920	-5,454
Other changes	0	0	-31,574	0	0	0	-31,574	-10,469	-42,043
30 Sep 2023	**120,000**	**52,770**	**6,781,323**	**81,299**	**-264,113**	**-4,218**	**6,767,061**	**1,079,141**	**7,846,202**

[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 2022 to 30 September 2023[1]

	2022/23	2021/22
	€ k	€ k
Consolidated profit/loss	1,257,402	1,155,349
Income taxes	476,540	406,644
Income tax paid	-451,425	-539,213
Amortization, depreciation and impairment of intangible assets and property, plant and equipment	429,741	391,202
Profit/loss from investments accounted for using the equity method	893	0
Other non-cash income and expenses	-5,121	41,086
Change in pension provisions and assets from overfunded pension plans	7,313	30,148
Changes in other provisions	-8,177	-9,000
Gain/loss from the disposal of intangible assets and property, plant and equipment	6,090	-455
Gain/loss from the disposal of current securities	-22	833
Changes in inventories	-703,973	-456,284
Changes in trade and other receivables	-348,011	-164,537
Changes in other assets	-112,635	-34,268
Changes in trade payables	158,694	136,771
Changes in current accruals	285,725	253,440
Changes in prepayments received	335,859	247,807
Changes in other liabilities	48,574	-38,247
Cash flows from operating activities	**1,377,467**	**1,421,276**
Purchases of intangible assets and property, plant and equipment	-1,381,440	-857,819
Proceeds from the disposal of intangible assets and property, plant and equipment	18,021	25,323
Changes in financial assets	-170,926	-368,701
Acquisition of subsidiaries, net of cash and cash equivalents received	-58,943	-99,248
Cash flows from investing activities	**-1,593,288**	**-1,300,445**
Dividend paid to the Carl Zeiss Foundation (Carl-Zeiss-Stiftung)	-101,500	-78,200
Dividends paid to non-controlling interests	-220,365	-201,478
Proceeds from loans	548,000	460,000
Repayment of loans	-1,112	-17,427
Changes in other bank liabilities	-886	-285
Repayment of lease liabilities	-75,800	-72,162
Cash flows from financing activities	**148,337**	**90,448**
Changes in cash and cash equivalents from exchange rate movements and changes in the basis of consolidation	-44,653	34,131
Changes in cash and cash equivalents	**-112,137**	**245,410**
Cash and cash equivalents as of 1 Oct	1,811,280	1,565,870
Cash and cash equivalents as of 30 Sep	**1,699,143**	**1,811,280**

Additional information on the statement of cash flows	2022/23	2021/22
Included in cash flows from operating activities:	€ k	€ k
Payments of interest	21,576	16,761
Proceeds from interest	41,135	15,904
Proceeds from dividends	1,621	1,233

[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 2022/23

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, metrology, microscopes, medical technology, eyeglass lenses as well as camera and cine lenses, binoculars and planetarium technology. ZEISS comprises four 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 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 pursuant to 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. It is therefore possible that individual figures do not add up exactly to the total stated and the percentages presented may not precisely reflect the absolute figures they correspond to.

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. In order to improve transparency, goodwill and other intangible assets have been reported separately in the consolidated statement of financial position and interest expenses and the net interest balance on defined benefit plans in the consolidated income statement since this reporting year.

The consolidated financial statements and group management report prepared as of 30 September 2023 were authorized for issue to the Supervisory Board by the Executive Board on 7 December 2023.

2 Significant accounting policies

The consolidated financial statements are prepared on the basis of the financial statements of the subsidiaries included in the consolidated financial statements, which were prepared in accordance with the uniform 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
14 May 2020	Improvements to IFRS (2018 - 2020)	Amendments to IAS 41, IFRS 1, IFRS 9 and the illustrative examples for IFRS 16
14 May 2020	Amendments to IFRS 3 *Business Combinations*	Update of a reference to the Conceptual Framework
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
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

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
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
12 Feb 2021	Amendments to IAS 1 *Presentation of Financial Statements*	Guidance on the deciding which accounting policies to disclose in the financial statements	Periods beginning on or after 1 January 2023	Yes
12 Feb 2021	Amendments to IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*	Clarification of the distinction between changes in accounting policies and changes in accounting estimates	Periods beginning on or after 1 January 2023	Yes
7 May 2021	Amendments to IAS 12 *Income Taxes*	Narrowing of the scope of an exemption (initial recognition exemption) from recognizing deferred taxes in specific cases	Periods beginning on or after 1 January 2023	Yes
9 Dec 2021	Amendments to IFRS 17 *Insurance Contracts* and IFRS 9 *Financial Instruments*	Transitional solution for the initial application of IFRS 17 by presenting comparative information	Periods beginning on or after 1 January 2023	Yes
23 May 2023	Amendments to IAS 12 *Income Taxes*	Temporary exception for the recognition of deferred taxes as part of the implementation of global minimum top-up tax (OECD Pillar Two Rules)	Periods beginning on or after 1 January 2023	Yes
23 Jan 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 2024	No
22 Sep 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
31 Oct 2022	Amendments to IAS 1 *Presentation of Financial Statements*	Clarification that only additional conditions which an entity must fulfill on or before the reporting date affect the classification of liabilities as current or non-current	Periods beginning on or after 1 January 2024	No
25 May 2023	Amendments to IAS 7 *Statement of Cash Flows* and IFRS 7 *Financial Instruments: Disclosures*	Additional disclosure requirements, especially for reverse factoring arrangements	Periods beginning on or after 1 January 2024	No
15 Aug 2023	Amendment to IAS 21 *The Effects of Changes in Foreign Exchange Rates*	The amendments require an entity to apply a single approach when assessing whether a currency is exchangeable	Periods beginning on or after 1 January 2025	No

Consolidation principles

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 Carl Zeiss AG 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.

Acquisition accounting was performed using the purchase method pursuant to 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. 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/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, indirectly or directly, to significantly influence financial and operating policy decisions (associates), or indirectly or directly 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.

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 consolidation are translated into euros on the basis of the functional currency concept pursuant to 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*. However, the effects on the consolidated financial statements are immaterial.

The following key exchange rates for the consolidated financial statements as of 30 September 2023 were used for currency translation:

		Closing rate		Average rate	
	1 € =	**30 Sep 2023**	30 Sep 2022	**2022/23**	2021/22
China	CNY	7.74	6.94	7.53	7.10
UK	GBP	0.86	0.88	0.87	0.85
Japan	JPY	158.10	141.01	148.19	134.45
South Korea	KRW	1,425.26	1,400.69	1,404.26	1,349.99
USA	USD	1.06	0.97	1.07	1.09

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 10 Goodwill and other 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 pursuant to IAS 38 *Intangible Assets*.
» Assessment of the expected probability of default when assessing trade receivables and other financial assets.
» The measurement of lease liabilities pursuant to 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. Revenue for product deliveries and services is partly based on variable price arrangements with external partners. Price variability is based, among other things, on estimates of the expected business development of 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. Prepayments 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, which usually corresponds to the relative individual selling prices spread among the individual performance obligations.

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 held to earn rentals is immaterial and recognized at cost less any accumulated depreciation and any accumulated impairment losses 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 incidental to ownership 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 to the “fair value through profit or loss” (FVTPL) measurement category. Entities may also opt to allocate equity instruments to the “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 on the grounds of immateriality do not fall under 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 three-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 pursuant to 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 pursuant to 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 past due. 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 3 months.

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 according to IAS 19 *Employee Benefits* using the projected unit credit method allowing for expected future adjustments to salaries and pensions.

The present value of pension obligations at German group entities are determined based on actuarial principles and using the 2018 G mortality tables published by Prof. Dr. Klaus Heubeck. At entities outside Germany, the present value of pension obligations is 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 net interest balance of defined benefit plans and the service cost in earnings before interest and income taxes in the consolidated income statement.

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 three monthly 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 if a detailed formal plan for restructuring is available by the reporting date, 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 according to 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 period of up to 5 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.

Deferred taxes on effects arising from applicable or announced tax regulations implementing the Pillar 2 Model Rules published by the Organization for Economic Co-operation and Development (OECD) are not recognized.

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 *Financial Instruments* 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.

Claims from short-term employee benefits reported as accrued liabilities are partially secured by financial assets. These assets generally meet the criteria of IAS 19 for plan assets and are included in other financial assets.

3 Basis of consolidation

The consolidated financial statements contain 42 (prior year: 40) fully consolidated German entities (including Carl Zeiss AG) and 122 (prior year: 121) 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 as an exhibit to the notes to the consolidated financial statements 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 Oct 2022	40	121	161
Additions in the reporting period	2	5	7
Disposals in the reporting period	0	4	4
30 Sep 2023	**42**	**122**	**164**

Additions to the basis of consolidation

The following entities were included in the consolidated financial statements for the first time:
» Audioptics Medical Inc., Halifax (Canada), from 25 July 2023 (acquired)
» Carl Zeiss Ireland Limited, Dublin (Ireland), from 13 June 2023 (incorporated)
» Carl Zeiss Meditec (Suzhou) Co., Ltd., Suzhou (China), from 19 January 2023 (incorporated)
» Carl Zeiss Venture Beteiligungsgesellschaft mbH, Oberkochen (Germany), from 1 October 2022 (altered significance of the company)
» GOM ITALIA S.R.L., Buccinasco (Italy) from 1 October 2022 (merger with Carl Zeiss S.p.A., Milan, Italy)
» tooz technologies GmbH, Aalen (Germany), from 28 February 2023 (acquired)
» tooz technologies Inc., White Plains (US), from 28 February 2023 (acquired)
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 Services S.a.r.l., Sablé-sur-Sarthe (France)
» GOM ITALIA S.R.L., Buccinasco (Italy)
» Ophthalmic Laser Engines, LLC, Lafayette (US)
» Photono Oy, Helsinki (Finland)
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.

Additions to the basis of consolidation from acquisitions in fiscal year 2022/23

Audioptics Medical Inc., Halifax (Canada)

With effect from 25 July 2023, Carl Zeiss Meditec AG, Jena (Germany), acquired 79.54% of the shares in Audioptics Medical Inc., Halifax (Canada), ("Audioptics") and thus fully acquired the investment previously measured at fair value through other comprehensive income (FVOCI).

Audioptics is developing a diagnostic device for non-invasive visualization of the middle ear. With this acquisition, ZEISS is further expanding its portfolio in the new field of diagnostics and treatment of ear diseases.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. In this context, the former investment of 20.46% of the shares was revalued at fair value due to the business combination achieved in stages, resulting in other comprehensive income of €3.8m. Cost including remeasured shares previously held amounted to €23.2m. This comprises a fixed component (including escrow amount) of €9.1m, discounted contingent purchase price components of €9.6m, and the remeasured shares already acquired in prior years of €4.5m. The contingent purchase price components are dependent on the achievement of contractually defined financial and non-financial targets. If all the targets are met, a maximum amount of €12.4m 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 can be reduced to a minimum of zero. As of 30 September 2023, ZEISS expects a fair value of €9.8m for the contingent purchase price components (due to exchange rate changes with other-wise unchanged assumptions) and has recognized this in non-current financial liabilities. Goodwill from the acquisition mainly relates to expected synergies from the integration of the entity into the existing operations of the strategic business unit Microsurgery. As expected, the goodwill will not be tax deductible.

Audioptics contributed €0.0m 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.

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	18,917
Property, plant and equipment	9
Deferred tax assets	782
Inventories	72
Other current non-financial assets	469
Cash and cash equivalents	238
Assets	**20,487**
Deferred tax liabilities	5,475
Current accruals	199
Current financial liabilities	153
Trade payables	50
Liabilities	**5,877**
Identifiable net assets	**14,610**
Goodwill from acquisition	8,552
Cost including remeasured shares previously acquired	**23,162**
Cash received	238
Cash outflow due to acquisition	9,075
Actual cash outflow from acquisition	**8,837**

tooz technologies Inc., White Plains (US), and tooz technologies GmbH, Aalen (Germany)
With effect from 28 February 2023, Carl Zeiss Venture Beteiligungsgesellschaft mbH, Oberkochen (Germany), acquired 50.0% of the shares in tooz technologies Inc., White Plains (US), and thus fully acquired the joint venture, including tooz technologies GmbH, Aalen (Germany), ("tooz"), which had previously been recognized at cost.

tooz specializes in the integration of correction solutions in AR glasses, which are stylish and can be mass produced. The optics, which are extensively patented by tooz (known as waveguides), project a virtual image in the wearer's field of view. The unique selling point is the integration of vision correction and style, making AR glasses with tooz optics almost indistinguishable from normal prescription glasses or sunglasses. The combination of tooz's expertise and technologies in the areas of design, engineering and the manufacturing process with ZEISS' existing production and process expertise as well as its experience in the approval of medical optics strengthens its competitiveness. Large players in the ecosystem in particular can be offered product solutions from development through to mass production to medical approval in order to place products with integrated correction solutions on the global markets.

The purchase price allocation in accordance with IFRS 3 *Business Combinations* was performed in the reporting period. In this context, the former investment of 50.0% of the shares was revalued at fair value due to the business combination achieved in stages, resulting in income of €12.4m in the financial result. Cost including remeasured shares previously held amounted to €51.3m. The goodwill from the acquisition results mainly from the expected market and corresponding revenue potential. As expected, the goodwill will not be tax deductible.

tooz contributed €0.0m to the revenue recognized in the consolidated income statement and minus €4.5m to consolidated profit/loss in the period between the acquisition date and the reporting date.

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	40,626
Property, plant and equipment	3,659
Inventories	39
Trade receivables	275
Other current non-financial assets	24
Cash and cash equivalents	3,565
Assets	**48,188**
Other non-current provisions	3
Deferred tax liabilities	11,386
Current accruals	136
Trade payables	137
Other current non-financial liabilities	231
Liabilities	**11,893**
Identifiable net assets	**36,295**
Goodwill from acquisition	15,005
Cost including remeasured shares previously acquired	**51,300**
Cash received	3,565
Cash outflow due to acquisition	27,500
Actual cash outflow from acquisition	**23,935**

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 and different accounting policies.

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%.

	2022/23	2021/22
	€ k	€ k
Revenue	2,089,300	1,902,836
Consolidated profit/loss	292,009	295,911
Other comprehensive income	-48,703	140,755
Total comprehensive income	243,306	436,666

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Non-current assets	1,121,197	1,030,964
Current assets	1,911,727	1,791,853
Non-current liabilities	298,375	253,410
Current liabilities	561,646	539,316
Equity	2,172,903	2,030,091

	2022/23	2021/22
	€ k	€ k
Cash flows from operating activities	250,861	188,199
Cash flows from investing activities	-110,980	-92,886
Cash flow from financing activities	-135,094	-94,244
Changes in cash and cash equivalents from exchange rate movements and changes in the basis of consolidation	-1,915	-779
Changes in cash and cash equivalents	2,872	290

	2022/23	2021/22
	€ k	€ k
Consolidated profit/loss attributable to non-controlling interests	119,432	121,028
Total comprehensive income attributable to non-controlling interests	99,512	178,596
Dividends paid to non-controlling interests	40,202	32,893
Equity attributable to non-controlling interests	888,717	830,307

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 2023	30 Sep 2022	**30 Sep 2023**	30 Sep 2022
	€ k	€ k	€ k	€ k
Non-current assets	44,897	44,963	1,271,391	1,039,845
Current assets	1,072,777	891,743	3,053,026	2,106,265
Non-current liabilities	2,589	107,699	962,232	362,179
Current liabilities	1,063,275	777,559	2,885,783	2,302,589
Equity	51,810	51,448	476,402	481,342
Other comprehensive income	55	823	4,996	150,333
Revenue	0	0	3,496,014	2,710,424
Profit/loss for the year	875,902	727,765	32,108	61,749

The dividends paid to the non-controlling shareholder ASML in the reporting year, amounting to €178,729k (prior year: €167,965k), were included in financial liabilities at the beginning of the reporting period. As of the reporting date, dividends of €218,023k are payable to ASML (prior year: €178,729k).

The list of shareholdings in accordance with Sec. 313 (2) HGB as an exhibit to the notes shows the capital share as defined by Sec. 285 no. 11 HGB and the beneficial share in capital. The latter is equivalent to the capital share economically attributable to Carl Zeiss AG excluding the capital shares of non-controlling interests.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

5 Revenue

Revenue by region breaks down as follows:

	2022/23		2021/22	
	€ k	%	€ k	%
Germany	740,155	7	676,349	8
EMEA (without Germany)	4,682,687	47	3,817,552	44
Americas	1,908,900	19	1,762,491	20
APAC	2,776,729	27	2,498,018	28
	10,108,471	**100**	**8,754,410**	**100**

Of revenue, €8,966m (prior year: €7,810m) is attributable to the sale of goods, €1,100m (prior year: €906m) to the rendering of services and €42m (prior year: €39m) to the granting of licenses.

Revenue of €1,138m (prior year: €851m) was still recognized under contractual liabilities at the beginning of the reporting period. Contracts with customers of €1,467m (prior year: €1,138m) 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 were met in the prior year increased by €86m in the reporting period (prior year: decrease of €66m).

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 €19m in fiscal year 2024/25 (prior year: €25m for fiscal year 2023/24) and €17m in the subsequent fiscal years (prior year: €17m). In addition, there are contractual performance obligations from the order backlog of €6,723m (prior year: €6,134m).

6 Other income

Other income includes income from cross-charging of Microsoft expenses to SCHOTT AG, Mainz, from the disposal of Ophthalmic Laser Engines, LLC, Lafayette (US), from the basis of consolidation, 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.

7 Other expenses

Other expenses include Microsoft expenses cross-charged to SCHOTT AG, Mainz (Germany), losses from the disposal of assets, losses from the disposal of Photono Oy, Helsinki (Finland), from the basis of consolidation, expenses from additions to other provisions and other operating expenses not attributable to functional costs.

8 Financial result

Profit/loss from investments accounted for using the equity method

	2022/23	2021/22
	€ k	€ k
Share of profit/loss from equity consolidation	-893	0
	-893	**0**

Interest result

	2022/23	2021/22
	€ k	€ k
Interest income	**48,624**	**31,172**
» thereof from affiliates	544	284
Interest expenses	**-28,259**	**-23,118**
» thereof to affiliates	-107	-23
» thereof from leases	-7,413	-6,214
Net interest balance on defined benefit plans	**-13,460**	**-15,548**
	6,905	**-7,494**

Other financial result

	2022/23	2021/22
	€ k	€ k
Income from investments	1,659	2,219
Income from profit transfer	249	716
Expenses for loss absorption	2,440	3,068
Result from exchange differences	14,184	-13,788
Result from changes in market value	35,107	-84,748
Sundry other financial result	-7,022	80,002
	41,737	**-18,667**

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.

9 Income taxes

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

	2022/23	2021/22
	€ k	€ k
Current tax expenses less tax refunds	-483,066	-466,058
Deferred tax income	6,526	59,414
» thereof from temporary differences	45,106	64,125
» thereof from changes in tax rates	-3,584	1,295
» thereof from unused tax losses including any reductions	-34,996	-6,006
	-476,540	**-406,644**

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 29.9%). The tax rates form the basis for the calculation of current taxes.

The nominal tax rates applicable outside Germany in the reporting period ranged between 6.2% and 35.0% (prior year: 7.5% and 35.0%).

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 €499,029k (prior year: €449,542k), based on earnings before taxes, to the current income tax expense of €476,540k (prior year: €406,644k).

The tax reconciliation statement is presented in the table below:

	2022/23	2021/22
	€ k	€ k
Earnings before taxes (EBT)	1,733,942	1,561,993
Expected income tax expense (= 28.78% x EBT; prior year: = 28.78% x EBT)	**-499,029**	**-449,542**
Differences from diverging tax rates	37,470	31,742
Effects of changes in tax rates	-3,584	1,295
Effects of non-deductible expenses	-20,792	-24,346
Effects of tax-free income	3,913	16,576
Effects relating to other periods	-36,584	-164
Permanent effects	38,299	12,750
Other	3,767	5,045
Current income tax expense	**-476,540**	**-406,644**

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

10 Goodwill and other intangible assets

	Goodwill	Patents, industrial rights, licenses, software	Development costs	Other intangible assets and prepayments	Total
	€ k	€ k	€ k	€ k	€ k
Cost					
1 Oct 2021	**1,377,930**	**548,536**	**401,913**	**275,852**	**2,604,231**
Change in the basis of consolidation	85,552	-319	58,427	44,484	188,144
Additions	2,452	8,364	42,847	34,903	88,566
Disposals	0	2,902	0	854	3,756
Reclassifications	0	4,213	0	-18,144	-13,931
Currency translation	64,623	18,088	34,001	14,045	130,757
30 Sep 2022	**1,530,557**	**575,980**	**537,188**	**350,286**	**2,994,011**
Amortization/impairment					
1 Oct 2021	**93,048**	**473,699**	**248,281**	**176,007**	**991,035**
Change in the basis of consolidation	0	-2,037	0	0	-2,037
Additions	0	27,621	31,029	21,282	79,932
Disposals	0	2,884	0	854	3,738
Reclassifications	0	0	0	0	0
Currency translation	7,239	16,360	15,997	8,463	48,059
30 Sep 2022	**100,287**	**512,759**	**295,307**	**204,898**	**1,113,251**
Carrying amounts as of 30 Sep 2022	**1,430,270**	**63,221**	**241,881**	**145,388**	**1,880,760**
Cost					
1 Oct 2022	**1,530,557**	**575,980**	**537,188**	**350,286**	**2,994,011**
Change in the basis of consolidation	23,483	51	49,733	-1,678	71,589
Additions	1,202	13,465	55,042	64,580	134,289
Disposals	0	1,306	0	1,074	2,380
Reclassifications	0	5,424	0	-6,450	-1,026
Currency translation	-35,983	-11,441	-17,915	-7,884	-73,223
30 Sep 2023	**1,519,259**	**582,173**	**624,048**	**397,780**	**3,123,260**
Amortization/impairment					
1 Oct 2022	**100,287**	**512,759**	**295,307**	**204,898**	**1,113,251**
Change in the basis of consolidation	0	-1,004	-391	-1,678	-3,073
Additions	0	21,304	33,882	16,456	71,642
Disposals	0	1,115	0	3	1,118
Reclassifications	0	6	0	-6	0
Currency translation	-3,695	-9,431	-8,488	-4,950	-26,564
30 Sep 2023	**96,592**	**522,519**	**320,310**	**214,717**	**1,154,138**
Carrying amounts as of 30 Sep 2023	**1,422,667**	**59,654**	**303,738**	**183,063**	**1,969,122**

The goodwill amounting to €1,422,667k (prior year: €1,430,270k) 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. Historical developments, budget plans for the following year and the future strategic direction of the strategic business unit or cash-generating unit (medium-term planning) form the basis for determining the respective plans. Furthermore, external sources of information, such as market studies and results from market observations and publications, are included in the analysis in order to take account of macroeconomic trends appropriately. The ZEISS Group's EBIT margin averages between 13% and 18% in the detailed planning period. 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.

The sensitivity analyses carried out for the respective impairment tests of the cash-generating units take into account possible changes to the discount rate and long-term growth rate measurement parameters. 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 therefore simulated. When both adjustments are combined, this simulation only indicates an impairment loss of €61.0m for the Industrial Quality Solutions strategic business unit. For the other business units, no sensitivity of parameters (individually or in combination) classified as probable would result in a need to recognize an impairment loss.

Goodwill is allocated to the cash-generating units on the basis of the internal organizational structure of the ZEISS Group. This generally allows goodwill to be allocated to the strategic business units. In addition, various smaller goodwill items are allocated to the corresponding cash-generating units and combined in Others.

	30 Sep 2023		30 Sep 2022	
	Carrying amounts	WACC (before tax)	Carrying amounts	WACC (before tax)
	€ k	%	€ k	%
» Semiconductor Mask Solutions	48,541	18.8	51,735	15.0
Semiconductor Manufacturing Technology	**48,541**		**51,735**	
» Industrial Quality Solutions	569,619	15.5	570,442	12.9
» Research Microscopy Solutions	51,164	16.3	54,365	13.6
Industrial Quality & Research	**620,783**		**624,807**	
» Ophthalmology	353,841	12.9	375,448	9.5
» Microsurgery	34,564	12.9	27,611	9.5
Medical Technology	**388,405**		**403,059**	
» Vision Care	332,526	12.5	333,263	9.8
Consumer Markets	**332,526**		**333,263**	
Others	**32,412**	15.5	**17,406**	12.4
Total	**1,422,667**		**1,430,270**	

The changes in the cash-generating units result from the first-time consolidation of Audioptics Medical Inc., Halifax (Canada), and tooz technologies GmbH, Aalen (Germany), as well as from the deconsolidation of Ophthalmic Laser Engines, LLC, Lafayette (US), and Photono Oy, Helsinki (Finland), 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.

The capitalized development costs include developments not yet completed in the amount of €160,591k (prior year: €140,782k).

The annual impairment test of intangible assets that are not yet ready for use on the basis of their value in use did not indicate any impairment.

11 Property, plant and equipment

	Land and buildings	Technical equipment and machinery	Other equipment, furniture and fixtures	Prepayments and assets under construction	Right-of-use assets	**Total**
	€ k	€ k	€ k	€ k	€ k	€ k
Cost						
1 Oct 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 Sep 2022	**947,405**	**1,371,515**	**1,716,299**	**550,842**	**519,687**	**5,105,748**
Amortization/impairment						
1 Oct 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 Sep 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**
Cost						
1 Oct 2022	**947,405**	**1,371,515**	**1,716,299**	**550,842**	**519,687**	**5,105,748**
Change in the basis of consolidation	0	2,898	1,091	0	-730	3,259
Additions	69,561	33,300	127,958	1,018,843	110,385	1,360,047
Disposals	8,265	42,428	98,087	8,100	39,969	196,849
Reclassifications	23,104	147,207	105,045	-274,308	0	1,048
Currency translation	-15,008	-39,427	-28,951	-8,874	-24,637	-116,897
30 Sep 2023	**1,016,797**	**1,473,065**	**1,823,355**	**1,278,403**	**564,736**	**6,156,356**
Amortization/impairment						
1 Oct 2022	**372,517**	**851,797**	**1,047,055**	**0**	**168,172**	**2,439,541**
Change in the basis of consolidation	0	0	113	0	-730	-617
Additions	42,462	104,643	132,187	0	78,807	358,099
Disposals	3,276	37,973	90,246	0	33,477	164,972
Reclassifications	2	85	-87	0	0	0
Currency translation	-4,928	-19,459	-17,102	0	-7,140	-48,629
30 Sep 2023	**406,777**	**899,093**	**1,071,920**	**0**	**205,632**	**2,583,422**
Carrying amounts as of 30 Sep 2023	**610,020**	**573,972**	**751,435**	**1,278,403**	**359,104**	**3,572,934**

Property, plant and equipment with a net carrying amount of €54,445k (prior year: €51,302k) 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 €1,004,372k as of the reporting date (prior year: €682,787k).

12 Investments accounted for using the equity method

Investments accounted for using the equity method amount to €12,870k (prior year: €0k) and include the shares in Photono Oy, Helsinki (Finland), Vibrosonic GmbH, Mannheim (Germany), and Wuxi Carl Zeiss Vision Pro Medical Technology Co., Ltd., Wuxi (China).

Photono Oy, Helsinki (Finland), was deconsolidated in the reporting year. The share amounts to 49.0% and is accounted for using the equity method due to the significant influence.

In the reporting year, 18.8% of the shares in Vibrosonic GmbH, Mannheim (Germany), were acquired. Due to various exclusive approval rights with regard to an extensive catalog of decisions, there is significant influence, which is why the shares are accounted for using the equity method.

The joint venture Wuxi Carl Zeiss Vision Pro Medical Technology Co., Ltd., Wuxi (China) was founded in the reporting year. The share amounts to 50.0% and is accounted for using the equity method on account of the joint control.

13 Other financial assets

	30 Sep 2023		30 Sep 2022	
		thereof due in more than 1 year		thereof due in more than 1 year
	€ k	€ k	€ k	€ k
Shares in affiliates	68,551	68,551	55,967	55,967
Investments	53,088	53,088	22,789	22,789
Loans	63,260	55,138	41,519	34,662
Securities	921,422	269,228	928,525	359,317
Derivatives	23,201	5,914	16,716	5,170
Sundry other financial assets	667,321	442,876	585,561	435,325
	1,796,843	**894,795**	**1,651,077**	**913,230**

The shares in affiliates relate to non-consolidated subsidiaries. In the reporting year, NCam Technologies Limited, London (UK), is included for the first time for an amount of €9.8m.

The increase in loans is mainly due to loans to affiliates and customers. Loans cover default risks according to the expected credit loss model of €3.4m (prior year: €0.8m). Current macroeconomic uncertainties were taken into account in the calculation.

Sundry other financial assets mainly include assets of entities within and outside Germany from overfunded pension plans amounting to €256.0m (prior year: €276.4 million), assets in connection with the financing or securing of short-term obligations to employees amounting to €179.4m (prior year: €112.9m) as well as time deposits and cash pool receivables from non-consolidated subsidiaries.

14 Other non-financial assets

Other non-financial assets mainly comprise tax refund claims from taxes other than income taxes and prepaid expenses.

15 Deferred taxes

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 2023 is allocated to the following items of the statement of financial position:

	30 Sep 2023		30 Sep 2022	
	Assets	Liabilities	Assets	Liabilities
	€ k	€ k	€ k	€ k
Non-current assets	**53,738**	**144,903**	**38,158**	**128,389**
Intangible assets	24,591	100,507	4,019	82,875
Property, plant and equipment	21,731	38,713	23,571	40,353
Other non-current assets	7,416	5,683	10,568	5,161
Current assets	**164,104**	**44,737**	**144,630**	**25,444**
Inventories	146,947	5,655	126,906	5,893
Receivables and other current assets	17,157	39,082	17,724	19,551
Non-current liabilities	**354,588**	**30,164**	**348,102**	**63,518**
Provisions for pensions and similar obligations	307,443	18,916	303,927	38,498
Other non-current liabilities and provisions	47,145	11,248	44,175	25,020
Current liabilities	**141,905**	**9,532**	**157,425**	**6,641**
Retained earnings	**0**	**3,700**	**0**	**3,100**
Unused tax losses	**47,345**	**0**	**82,342**	**0**
Total deferred taxes	**761,680**	**233,036**	**770,657**	**227,092**
Offsetting	132,119	132,119	143,636	143,636
Deferred taxes, net	**629,561**	**100,917**	**627,021**	**83,456**

The item retained earnings contains 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 €9,962k (prior year: minus €243,860k) 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, France, UK, Canada, Netherlands and the US (prior year: Germany, Australia, Brazil, China, Finland, France, Netherlands and the US).

In the fiscal year, there were deferred tax assets amounting to €102,706k (prior year: €131,453k) at German group entities with tax losses. These were recorded 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 unused tax losses for which no deferred taxes were recognized amount to €855,353k (prior year: €463,430k). Thereof, an amount of €839k (prior year: €1,554k) is available for offsetting for more than five years while an amount of €854,514k (prior year: €461,876k) 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 2023	30 Sep 2022
	€ k	€ k
Germany	805,245	403,127
France	36,282	42,497
Japan	839	1,554
Singapore	52	850
South Africa	11,047	13,655
Hungary	1,877	1,732
Other	11	15
Unrecognized unused tax losses	**855,353**	**463,430**

16 Inventories

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Materials and supplies	951,052	760,387
Work in progress	1,209,724	916,252
Finished goods and merchandise	921,492	799,043
Prepayments	55,868	46,663
	3,138,136	**2,522,345**

The carrying amount of inventories recognized at net realizable value comes to €1,094,429k (prior year: €1,059,794k). The carrying amounts contain write-downs of €288,297k (prior year: €269,994k).

The write-downs recorded on inventories, which are recognized under cost of sales in the consolidated income statement, amounted to €107,155k in the reporting period (prior year: €84,987k). Write-downs of €12,120k (prior year: €16,324k) were reversed through profit or loss.

Cost of materials amounted to €3,318m in the fiscal year (prior year: €2,825m).

17 Cash and cash equivalents

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Cash funds	1,698,165	1,810,842
Securities due in less than 90 days of their acquisition date	978	438
	1,699,143	**1,811,280**

Cash is composed of checks, cash on hand and cash at banks.

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 €101,500k was distributed in the reporting period (prior year: €78,200k).

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

Retained earnings primarily contain:
» the legal reserve of Carl Zeiss AG of €5,951k
» the consolidated profit of the reporting year as well as the past results generated by the entities included in the consolidated financial statements less the associated non-controlling interests
» 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 €159,544k in the reporting period (prior year: €134,123k).

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 2023	30 Sep 2022	**30 Sep 2023**	30 Sep 2022
	%	%	%	%
Interest rate	4.10	3.75	1.13 to 9.50	0.68 to 9.25
Future salary increases	3.00	3.00	0.00 to 5.00	0.00 to 5.00
Future pension increases	2.25	2.25	0.00 to 3.40	0.00 to 3.70

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.

For pensioners in Germany, whose pensions are adjusted in line with the consumer price index, an additional valuation surcharge is taken into account for the disproportionately high pension adjustments that have accrued but not yet taken place, as well as for timely annual adjustments up to 2025, due to the significantly higher inflation since the last pension adjustment dates. The expected pension adjustment is approximately 15% for a three-year adjustment cycle and 6% for an annual adjustment.

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

			30 Sep 2023
	Defined benefit obligations (DBO)	Fair value of plan assets	Net carrying amount
	€ k	€ k	€ k
Germany	1,992,027	1,659,648	332,379
Other countries	229,590	180,570	49,020
Carrying amount	**2,221,617**	**1,840,218**	**381,399**
» thereof pension provisions			637,351
» thereof other non-current financial assets			255,952

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

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

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Present value of funded pension obligations	1,592,963	1,590,062
Fair value of plan assets	1,840,218	1,856,811
Funded status (net)	**-247,255**	**-266,749**
Present value of unfunded pension obligations	628,654	652,346
Carrying amount	**381,399**	**385,597**
» thereof pension provisions	637,351	662,026
» thereof other non-current financial assets	255,952	276,429

Pension provisions developed as follows:

	2022/23	2021/22
	€ k	€ k
1 Oct	**662,026**	**1,141,994**
Recognized through profit or loss		
Service cost	83,337	100,109
Net interest cost	13,460	15,548
Not recognized through profit and loss		
Benefits paid	-52,289	-50,820
Remeasurements	-7,267	-776,389
Employer contributions	-37,469	-34,225
Exchange differences on translation	-3,511	4,972
Change in the basis of consolidation	0	-4,293
Other	-20,936	265,130
30 Sep	**637,351**	**662,026**

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

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

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

	2022/23	2021/22
	€ k	€ k
1 Oct	**2,242,408**	**3,121,935**
Change in the basis of consolidation	0	-4,293
Service cost	83,337	100,109
Interest cost	85,217	44,615
Plan settlement	0	-2,961
Benefits paid	-97,727	-95,452
Remeasurements		
» Actuarial gains/losses as a result of changes in demographic assumptions	-2,177	585
» Actuarial gains/losses as a result of changes in financial assumptions	-106,914	-995,114
» Actuarial gains/losses as a result of experience adjustments	30,691	47,020
Exchange differences on translation	-11,796	25,928
Other	-1,422	36
30 Sep	**2,221,617**	**2,242,408**

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

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Active employees	920,332	941,373
Former employees with vested rights	167,669	185,615
Pensioners	1,133,616	1,115,420
	2,221,617	**2,242,408**

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

	2022/23	2021/22
	€ k	€ k
1 Oct	**1,856,811**	**1,991,641**
Change in the basis of consolidation	0	0
Interest income	71,757	29,067
Remeasurements	-71,133	-171,120
Employer contributions	37,469	34,225
Employee contributions	366	348
Withdrawals for benefit payments	-45,438	-44,632
Plan settlement	0	-3,094
Exchange differences on translation	-8,285	20,956
Other	-1,329	-580
30 Sep	**1,840,218**	**1,856,811**

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 outside Germany for the following fiscal year are expected to amount to €2,414k (prior year: €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 were previously managed using an absolute return approach with the objective of achieving an attractive return over the investment horizon while controlling and limiting short-term risks. Against the backdrop of an increase in the coverage ratio, primarily due to the interest rate trend, this approach was supplemented in the reporting year by a liability-dependent component, which is implemented in a liability-driven investment (LDI) portfolio.

The aim of the LDI portfolio is to partially secure the IFRS coverage ratio (in the amount of the capital invested in the LDI portfolio) against changes in interest and inflation levels, i.e. the LDI portfolio should track the interest and inflation-driven development of the obligations as closely as possible.

The CTA's other investments continue to follow the previous risk-controlled absolute return approach. The risk management implemented there aims to reduce the risk of loss in relation to the strategic asset allocation (SAA) for these investments (excluding the LDI portfolio) while at the same time generating a return comparable to the SAA over 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 2023	30 Sep 2022
	€ k	€ k
Equities and equity funds	517,136	565,481
Bonds and bond funds	564,462	586,286
Real estate and real estate funds	230,232	268,543
Alternative investments	360,321	262,637
Cash and cash equivalents	186,421	121,770
Other	-18,354	52,094
	1,840,218	**1,856,811**

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 €223,687k (prior year: €260,825k).

Changes in the relevant actuarial assumptions would have the following effects on the present value of the defined benefit obligations (DBO) as of the reporting date:

	30 Sep 2023	
	Increase by 0.5%	Decrease by 0.5%
	€ k	€ k
Interest rate	-158,419	180,295
Future salary increases	10,305	-9,730
Future pension increases	79,032	-72,685

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. In this case, the DBO would have been €94,992k higher as of the reporting date.

For the DBOs 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:

	30 Sep 2023	30 Sep 2022
	€ k	€ k
in the next fiscal year	101,189	96,327
in the second fiscal year	104,714	100,139
in the third fiscal year	107,254	102,476
in the fourth fiscal year	109,033	105,305
in the fifth fiscal year	111,653	107,236
in the sixth to tenth fiscal year	597,181	570,035

As of the reporting date, the average weighted duration of the pension plans is about 16 years in Germany (prior year: around 17 years), about 10 years in the US (prior year: around 10 years) and about 12 years in the UK (prior year: around 13 years). The duration is an expression of the period over which the invested capital is committed for the pension obligations and depends on the payout profile and the interest rate level.

20 Other provisions

	30 Sep 2023		30 Sep 2022	
		thereof due within 1 year		thereof due within 1 year
	€ k	€ k	€ k	€ k
Provisions for personnel-related obligations	28,260	5,962	31,543	7,738
Provisions for sales-related obligations	138,296	107,347	139,663	102,362
Sundry other provisions	85,099	53,233	97,736	63,832
	251,655	**166,542**	**268,942**	**173,932**

Provisions for personnel-related obligations contain long-service awards, phased retirement obligations 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 risks of legal costs, environmental risks and restructuring.

	1 Oct 2022	Change in the basis of consolidation	Utilization	Reversal	Additions	Unwinding of the discount and effects from changes in the discount factor	Currency translation	30 Sep 2023
	€ k	€ k	€ k	€ k	€ k	€ k	€ k	€ k
Provisions for personnel-related obligations	31,543	0	-13,491	-1,397	12,733	10	-1,138	28,260
Provisions for sales-related obligations	139,663	0	-36,033	-12,844	54,999	-1,418	-6,071	138,296
Sundry other provisions	97,736	3	-22,912	-1,775	14,483	-532	-1,904	85,099
	268,942	**3**	**-72,436**	**-16,016**	**82,215**	**-1,940**	**-9,113**	**251,655**

21 Accruals

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Accruals for personnel-related obligations	724,265	622,739
Accruals for sales-related obligations	387,146	371,935
Outstanding invoices	469,341	349,145
Other accruals	26,259	22,752
	1,607,011	**1,366,571**

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

22 Financial liabilities

	30 Sep 2023			30 Sep 2022		
		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	254,217	32,581	0	256,360	5,605	0
Derivatives	14,405	14,405	0	61,218	61,218	0
Lease liabilities	388,791	79,420	108,341	380,041	73,136	131,408
Other financial liabilities	1,322,549	308,996	625,913	681,034	262,806	229,716
	1,979,962	**435,402**	**734,254**	**1,378,653**	**402,764**	**361,124**

Liabilities to banks

Promissory note loans of €200m were placed in fiscal year 2008/09 and 2013/14. In June 2016, some of the promissory note loans were renewed and some were refinanced at new conditions. After early repayment in fiscal year 2019/20 and further regular repayments, the remaining fixed-interest portion of the promissory note loans amounts to €27.5m as at the reporting date and will be repaid on schedule in December 2023.

A loan agreement in the amount of €220m was concluded with 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 it 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

The other financial liabilities are as follows:

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Loans payable	912,400	306,093
Dividends payable	218,025	178,728
Purchase price liabilities	113,883	121,870
» thereof Carl Zeiss Meditec Cataract Technology, Inc., Reno (USA)	28,428	32,238
» thereof Preceyes B.V., Eindhoven (Netherlands)	25,313	22,800
» thereof Kogent Surgical LLC, Chesterfield (USA)	23,638	26,682
» thereof Capture 3D, Inc., Santa Ana (USA)	17,854	21,851
» thereof Audioptics Medical Inc., Halifax (Canada)	9,770	0
» thereof InfiniteVision Optics S.A.S., Strasbourg (France)	5,511	6,150
» thereof Katalyst Surgical LLC, Chesterfield (USA)	3,369	3,308
» thereof Photono Oy, Helsinki (Finland)	0	8,841
Sundry other financial liabilities	78,241	74,343
	1,322,549	**681,034**

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 arranged 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, 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 three-year repayment-free period. The agreement includes an option to repay the loan that can be exercised ahead of schedule at any time.

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. 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 ahead of schedule at any time.

On 27 September 2023, Carl Zeiss SMT GmbH drew on an additional credit facility under this framework loan agreement with a nominal volume of €548.0m. The loan has a term of 10 years until 27 September 2033 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 ahead of schedule at any time.

Dividends payable

As in the prior year, dividends are payable to ASML.

Purchase price liabilities
Purchase price liabilities relate to (contingent) purchase price components from the acquisition of the shares in the specified companies.

Sundry other financial liabilities
Sundry other 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 2023		30 Sep 2022	
		thereof due within 1 year		thereof due within 1 year
	€ k	€ k	€ k	€ k
Contract liabilities				
» Prepayments received on account of orders	1,243,123	1,243,123	938,651	938,651
» Deferred income	246,294	210,589	230,033	188,071
» Other contract liabilities	13,150	13,150	11,662	11,662
Other liabilities	138,820	128,011	120,165	111,746
	1,641,387	**1,594,873**	**1,300,511**	**1,250,130**

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 2023	30 Sep 2022
	€ k	€ k
Trade and other receivables (gross)	**1,966,287**	**1,671,719**
Impairment losses	46,954	46,751
Allowance for exchange differences	657	2,166
Trade and other receivables (net)	**1,919,990**	**1,627,134**
» thereof due in more than 1 year	45,513	44,842

Trade and other receivables include finance lease receivables of €25,229k (prior year: €26,310k).

Identifiable credit risks are accounted for by specific allowances on trade and other receivables. Impairment losses of €28,760k (prior year: €30,050k) are recognized for credit risks.

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

	2022/23	2021/22
	€ k	€ k
1 October	**46,751**	**44,277**
Change in the basis of consolidation	30	-1
Utilization	-5,612	-3,407
Reversal	-9,050	-10,256
Additions	16,697	13,469
Exchange rate effects	-1,862	2,669
30 Sep	**46,954**	**46,751**

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 2023		30 Sep 2022	
	€ k	%	€ k	%
Not past due	1,406,221	0.4	1,317,311	0.4
Up to 30 days past due	262,599	1.1	167,005	1.7
31 to 60 days past due	81,229	2.5	40,749	4.2
61 to 90 days past due	62,462	3.3	37,001	5.0
More than 90 days past due	153,776	4.6	109,653	7.4
Trade and other receivables (gross)	**1,966,287**		**1,671,719**	

Macroeconomic forecasts were taken into account when calculating expected losses in order to reflect the credit risk expected by the market compared to past years. In general, a full default is assumed when a payment is 365 days past due.

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

	30 Sep 2023	30 Sep 2022
	€ k	€ k
Derivatives with a positive market value	23,201	16,716
Amount available for offsetting in the event of insolvency	12,130	16,252
Remaining credit risk	**11,071**	**464**

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 liquidity risk with regard to trade payables, credit notes received are reported at the net amount in the statement of financial position provided there is a legal right to settle the liability on a net basis.

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 2023	30 Sep 2022
	€ k	€ k
Derivatives with a negative market value	14,405	61,218
Amount available for offsetting in the event of insolvency	12,130	16,252
Remaining liquidity risk	**2,275**	**44,966**

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 and the revolving credit facility concluded with a banking syndicate with a total original volume of €500m and an original term until 2 August 2026, which was refinanced early and increased to €1.0b with effect from 6 October 2023, give the ZEISS Group adequate flexibility to cover the Group's refinancing needs. After refinancing, the facility has a five-year term and two 1-year extension options.

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 2023**
	€ k	€ k	€ k	€ k
Trade payables	838,478	0	0	**838,478**
Financial liabilities				
» Liabilities to banks	42,517	248,582	0	**291,099**
» Lease liabilities	83,721	207,229	111,498	**402,448**
» Other financial liabilities	318,349	448,397	692,354	**1,459,100**

	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**

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 2023**
	€ k	€ k	€ k	€ k
Derivative financial liabilities settled on a gross basis				
» Cash outflows	660,553	0	0	**660,553**
» Cash inflows	644,714	0	0	**644,714**

	Undiscounted cash outflows			
	due within 1 year	due in 1 to 5 years	due in more than 5 years	Total as of 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**

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 € =	**2022/23**	2021/22
China	CNY	7.43	7.21
UK	GBP	0.87	0.85
Japan	JPY	144.35	133.53
South Korea	KRW	1,376.76	1,360.54
USA	USD	1.08	1.12

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 2023		30 Sep 2022	
	Nominal value	Market value	Nominal value	Market value
	€ k	€ k	€ k	€ k
Derivatives not used for hedge accounting				
» Derivatives with a positive market value	619,549	23,201	458,305	16,716
» Derivatives with a negative market value	646,196	14,405	1,045,360	61,218

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).

Value at risk amounted to €5.4m as of the reporting date (prior year: €4.1m).

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 +/- 100 base points for the variable rate financial instruments would have an effect of +/- €18.2m (prior year: +/- €19.5m) on profit or loss.

Fair value risk: Assuming a change of +/- 100 base points, the fixed-rate securities allocated to the "fair value through other comprehensive income" (FVOCI) measurement category would have an effect of -/+ €4.9m on equity (prior year: -/+ €5.8m). Assuming a change of +/- 100 base points, the financial instruments allocated to the "fair value through profit or loss" (FVPL) category would have an effect of +/- €1.3m (prior year: +/- €3.4m) 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 2023 Carrying amount € k	30 Sep 2022 Carrying amount € k
Trade and other receivables			
» Trade receivables	AC	1,894,761	1,600,824
» Other assets	n/a*	25,229	26,310
Other financial assets			
» Shares in affiliates	n/a*	68,551	55,967
» Investments	FVPL	34,830	6,005
	FVOCI	8,584	10,803
	n/a*	9,674	5,981
» Loans	AC	63,260	41,519
» Securities	AC	93,792	132,634
	FVPL	659,165	630,081
	FVOCI	168,465	165,810
» Derivatives	FVPL	23,201	16,716
» Sundry other financial assets	AC	232,000	196,276
	n/a*	435,321	389,285
Cash and cash equivalents	AC	1,699,143	1,811,280
Financial assets		**5,415,976**	**5,089,491**
Trade payables	FLAC	838,478	692,831
Sundry other financial liabilities			
» Liabilities to banks	FLAC	254,217	256,360
» Derivatives	FVPL	14,405	61,218
» Lease liabilities	n/a*	388,791	380,041
» Other financial liabilities	FLAC	1,208,666	568,005
	FVPL	113,883	113,029
Financial liabilities		**2,818,440**	**2,071,484**
Aggregated by measurement category in accordance with IFRS 9			
Financial assets at amortized cost	AC	3,982,956	3,782,533
Financial assets at fair value through other comprehensive income	FVOCI	177,049	176,613
Financial assets at fair value through profit or loss	FVPL	717,196	652,802
Financial liabilities at amortized cost		2,301,361	1,517,196
Financial liabilities at fair value through profit or loss	FVPL	128,288	174,247

* n.a.: Not attributable to any of the measurement categories pursuant to 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 2023		30 Sep 2022	
		Carrying amount	Fair value	Carrying amount	Fair value
	Categories of IFRS 9	€ k	€ k	€ k	€ k
Securities	AC	93,792	93,615	132,634	128,688
Liabilities to banks	FLAC	254,217	250,119	256,360	241,852
Other financial liabilities	FLAC	1,208,666	1,016,554	568,005	543,877

Fair value measurement

Financial instruments are measured at fair value based on a three-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 pursuant to 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:

				30 Sep 2023
	Level 1	Level 2	Level 3	Total
	€ k	€ k	€ k	€ k
Investments	0	0	43,414	43,414
Securities	918,317	2,928	0	921,245
Derivatives	0	23,201	0	23,201
Financial assets	**918,317**	**26,129**	**43,414**	**987,860**
Liabilities to banks	0	250,119	0	250,119
Derivatives	0	14,405	0	14,405
Other financial liabilities	0	1,016,554	113,883	1,130,437
Financial liabilities	**0**	**1,281,078**	**113,883**	**1,394,961**

				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**

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

			2022/23
	Investments	Other financial liabilities	Total
	€ k	€ k	€ k
1 Oct 2022	**16,808**	**113,029**	**129,837**
Additions and disposals	24,219	9,561	33,780
Changes in fair value recognized through profit or loss	-1,656	2,960	1,304
Changes in fair value recognized in other comprehensive income	4,249	-	4,249
Payment of contingent purchase price obligations	-	-5,622	-5,622
Exchange rate effects	-206	-6,045	-6,251
30 Sep 2023	**43,414**	**113,883**	**157,297**

			2021/22
	Investments	Other financial liabilities	Total
	€ k	€ k	€ k
1 Oct 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 Sep 2022	**16,808**	**113,029**	**129,837**

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

Level 3 investments allocated to the measurement category "fair value through other comprehensive income" (FVOCI) comprise Precise Bio, Inc., Winston-Salem (US), at €6,224k (prior year: €5,715k) and OcuTerra Therapeutics, Inc., Boston (US), at €2,360k (prior year: €2,565k). The investment in Audioptics Medical Inc, Halifax (Canada), which was reported at €619k in the prior year, was acquired in full in the reporting year and included in the consolidated financial statements.

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

The financial liabilities allocated to category 3 relate to contingent purchase price obligations from the acquisitions of Carl ZEISS Meditec Cataract Technology, Inc, Reno (US), Preceyes B.V., Eindhoven (Netherlands), Kogent Surgical LLC, Chesterfield (US), Capture 3D, Inc, Santa Ana (US), Audioptics Medical Inc, Halifax (Canada), Katalyst Surgical LLC, Chesterfield (US) and InfiniteVision Optics S.A.S., Strasbourg (France), which was acquired as part of an asset deal. The change in fair value recognized through profit or loss includes the annual unwinding of the discount on these liabilities and also the adjustment of cost of capital to measure the liabilities. The income from the remeasurement of contingent purchase price obligations 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 1 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 achievements 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*:

				2022/23
		thereof from interest	thereof from subsequent measurement	thereof from disposals
	€ k	€ k	€ k	€ k
Financial assets at amortized cost	-33,472	29,026	-62,478	-20
Financial assets at fair value through other comprehensive income	3,342	6,041	-340	-2,359
Financial assets and liabilities at fair value through profit or loss	103,486	1,852	38,902	62,732
Financial liabilities measured at amortized cost	-20,245	-17,704	-2,541	0

				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

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 operating activities are derived indirectly from the consolidated profit/loss for the year. The cash flows from investing activities and financing activities is generally 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.

When performing the indirect calculation, changes in items of the statement of financial position considered are adjusted for the effects from currency translation, changes in the basis of consolidation and non-cash effects. Changes in the items of the statement of financial position concerned can therefore not be reconciled with the figures published in the consolidated statement of financial position.

Changes to liabilities from financing activities are shown in the table below. Cash changes include both proceeds from loans as well as repayment of liabilities from financing activities. The other non-cash changes in lease liabilities relate to new contracts and contract amendments from leases.

	1 Oct 2022	Cash changes	Non-cash changes			**30 Sep 2023**
			Currency translation	Changes in the basis of consolidation	Other changes	
	€ k	€ k	€ k	€ k	€ k	€ k
Liabilities to banks	256,360	-1,998	-145	0	0	254,217
Lease liabilities	380,041	-75,800	-18,914	-313	103,777	388,791
ASML loans	306,093	548,000	0	0	58,307	912,400
	942,494	**470,202**	**-19,059**	**-313**	**162,084**	**1,555,408**

	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**

In addition to the cash and cash equivalents of €1,699,143k (prior year: €1,811,280k) reported in the statement of financial position and the statement of cash flows, the Group has access to a revolving credit facility concluded between Carl Zeiss AG and a banking syndicate. On 6 October 2023, Carl Zeiss AG refinanced the existing revolving credit facility of €500m with an original term until 2 August 2026 ahead of schedule and increased it to €1.0b. At the same time, the refinanced credit facility was given a five-year term and the option to extend it thereafter twice by a year each time. 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

Contingent liabilities amount to €2,061k (prior year: €1,283k) and were not recognized as provisions because the probability of an outflow of resources is considered remote.

27 Average headcount for the year and personnel expenses

	2022/23	2021/22
	Number	Number
Germany	18,244	15,757
EMEA (without Germany)	5,179	4,880
Americas	7,628	7,830
APAC	9,643	8,306
	40,694	**36,773**
Trainees	517	453
Total	**41,211**	**37,226**

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

Personnel expenses break down as follows:

	2022/23	2021/22
	€ k	€ k
Wages and salaries	2,928,596	2,470,736
Social security	461,309	389,125
Pension costs	91,583	108,476
Total	**3,481,488**	**2,968,337**

28 Leases

ZEISS as lessee

The Group has entered into lease agreements for properties, technical equipment and machines as well as furniture and fixtures. The contracts have terms of between one and more than five 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 2023	30 Sep 2022
	€ k	€ k
Land and buildings	307,088	313,425
Technical equipment and machinery	480	1,038
Other equipment, furniture and fixtures	51,536	37,052
Carrying amounts for right-of-use assets	**359,104**	**351,515**

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

	2022/23	2021/22
	€ k	€ k
Land and buildings	57,985	53,728
Technical equipment and machinery	464	790
Other equipment, furniture and fixtures	20,358	18,423
Depreciation of right-of-use assets	**78,807**	**72,941**

Lease liabilities of €75,800k (prior year: €72,162k) were repaid in fiscal year 2022/23. Interest expenses from the unwinding of the discount on lease liabilities are presented in the financial result and amount to €7,413k (prior year: €6,214k).

The lease expenses include expenses for short-term leases of €14,088k (prior year: €12,004k) and expenses for leases of low-value assets of €15,556k (prior year: €13,180k).

In fiscal year 2022/23, cash outflows for leases totaled €112,857k (prior year: €103,560k).

Future cash outflows of €49,443k (prior year: €73,454k) were not included in the lease liability because it is not reasonably certain that the leases will be renewed or not terminated.

The future cash outflows for leases that have not yet begun as of the reporting date amount to €10,570k (prior year: €0k).

Income of €1,218k (prior year: €417k) from the sublease of right-of-use assets was also recognized.

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 2023	30 Sep 2022
	€ k	€ k
Land and buildings	17,725	24,051
Technical equipment and machinery	10,701	7,935
Other equipment, furniture and fixtures	45	81
Carrying amounts for operating leases	**28,471**	**32,067**

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 contract termination ahead of schedule 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 €7,690k (prior year: €7,445k) in fiscal year 2022/23. 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 2023	30 Sep 2022
Term to maturity	€ k	€ k
Due within year 1	8,190	6,651
Due within year 2	4,600	5,060
Due within year 3	2,846	3,447
Due within year 4	2,748	2,322
Due within year 5	2,605	2,176
Due in more than 5 years	4,883	6,030
Total minimum lease payments	**25,872**	**25,686**

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.

In the current fiscal year, profits from finance leases amounted to €3,236k (prior year: €1,693k).

Outstanding minimum lease payments under finance leases are as follows:

	30 Sep 2023	30 Sep 2022
Term to maturity	€ k	€ k
Due within year 1	7,269	8,146
Due within year 2	6,224	5,590
Due within year 3	5,112	4,631
Due within year 4	3,479	3,597
Due within year 5	2,092	2,142
Due in more than 5 years	1,731	2,863
Future undiscounted cash inflows	**25,907**	**26,969**
Unearned finance income	678	659
Finance lease receivables	**25,229**	**26,310**

29 Government grants

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

	2022/23	2021/22
	€ k	€ k
Research and development grants	8,020	8,232
Grants related to assets	3,312	5,771
Other grants related to expenses	13,251	14,167
	24,583	**28,170**

30 Related parties

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 2022/23, the ZEISS Group procured goods and services from SCHOTT AG, Mainz (Germany), of €13,600k (prior year: €7,938k) and provided a negligible volume of goods and services to SCHOTT AG, Mainz (Germany). In addition, Microsoft expenses of €5,036k (prior year: €3,495k) were cross-charged to SCHOTT AG, Mainz (Germany). As of the reporting date, a prepayment of €3,954k (prior year: €4,760k) had been made to SCHOTT AG, Mainz (Germany). 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	
	2022/23	2021/22	**2022/23**	2021/22
	€ k	€ k	€ k	€ k
Non-consolidated subsidiaries	16,899	21,545	48,780	46,646
Associates and joint ventures	1,752	3,611	12,564	6,746
	18,651	**25,156**	**61,344**	**53,392**

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 2023	30 Sep 2022	**30 Sep 2023**	30 Sep 2022
	€ k	€ k	€ k	€ k
Non-consolidated subsidiaries	6,564	8,983	18,255	45,308
Associates and joint ventures	947	954	843	100
	7,511	**9,937**	**19,098**	**45,408**

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 2023	30 Sep 2022	**30 Sep 2023**	30 Sep 2022
	€ k	€ k	€ k	€ k
Non-consolidated subsidiaries	4,118	5,430	6,841	4,789
Associates and joint ventures	244	432	60	43
	4,362	**5,862**	**6,901**	**4,832**

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 (www.zeiss.de/meditec-ag/ir).

32 Audit fees

The following fees were recognized as expenses for the services provided by the auditor of the consolidated financial statements PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (prior year: Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft):

	2022/23	2021/22
	€ k	€ k
Audit services	2,048	2,230
Other attestation services	0	281
Other services	23	1,348

33 Subsequent events

On 6 October 2023, Carl Zeiss AG refinanced the existing revolving credit facility of €500m with an original term until 2 August 2026 ahead of schedule and increased it to €1.0b. At the same time, the refinanced credit facility was given a five-year term and the option to extend it thereafter twice by a year each time.

There were no other 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 €15,212k in fiscal year 2022/23 (prior year: €20,993k), comprising fixed remuneration as well as short-term and long-term variable remuneration components. Of the total remuneration, €1,512k (prior year: €6,128k) is attributable to service cost for pension obligations. Current fixed and variable remuneration comes to €13,700k (prior year: €14,865k). 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 €14,545k (prior year: €13,956k) and further obligations from outstanding remuneration (depending on defined key figures) of €10,283k (prior year: €10,492k) toward members of the Executive Board.

The total benefits paid to former members of the Executive Board and their surviving dependents amounted to €3,325k for fiscal year 2022/23 (prior year: €3,078k). Provisions totaling of €58,194k (prior year: €58,195k) 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 €1,352k in fiscal year 2022/23 (prior year: €1,258k).

Oberkochen, 7 December 2023

The Executive Board of Carl Zeiss AG

Dr. Karl Lamprecht

Susan-Stefanie Breitkopf

Sven Hermann

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 2023

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	Oberkochen	Carl Zeiss Venture Beteiligungsgesellschaft mbH		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

Country	City	Name of entity	Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial share in capital
			%	%
1. Fully consolidated subsidiaries				
Germany	Aalen	tooz technologies GmbH	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
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	Suzhou	Carl Zeiss Meditec (Suzhou) Co., Ltd.	100.0	59.1
China	Shanghai	Carl Zeiss Meditec Holding (Shanghai) Co., Ltd.	100.0	59.1
China	Suzhou	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
France	La Rochelle, Périgny	Atlantic SAS	100.0	59.1
France	Rueil-Malmaison	Carl Zeiss Meditec France S.A.S.	100.0	59.1
France	La Rochelle, Périgny	Carl Zeiss Meditec SAS	100.0	59.1
France	Rueil-Malmaison	Carl Zeiss SAS	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

Country	City	Name of entity	Share in capital acc. to Sec. 285 No. 11 HGB	Beneficial share in capital
			%	%
1. Fully consolidated subsidiaries				
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
Ireland	Dublin	Carl Zeiss Ireland Limited	100.0	100.0
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	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	Halifax	Audioptics Medical Inc.	100.0	59.1
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

Country	City	Name of entity	**Share in capital acc. to Sec. 285 No. 11 HGB**	**Beneficial share in capital**
			%	%
1. Fully consolidated subsidiaries				
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
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, LLC	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	Ontario	Carl Zeiss Meditec Production, LLC	100.0	59.1
USA	Dublin	Carl Zeiss Meditec USA, Inc.	100.0	59.1
USA	Dublin	Carl Zeiss Meditec, 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	White Plains	tooz technologies Inc.	100.0	100.0
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	Oberkochen	Carl Zeiss Grundstücks-Verwaltungs GmbH	100.0	100.0
Germany	Ulm	Carl Zeiss MES Solutions GmbH	100.0	100.0
Germany	Rostock	Carl Zeiss Microscopy Software Center Rostock 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 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	Cologne	VenTrade GmbH	100.0	100.0
Germany	Hohenbrunn	XETOS AG	51.0	51.0
Belarus	Minsk	JV ZEISS-BelOMO OOO	60.0	60.0
Brazil	Petrópolis	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	100.0	100.0
France	Strasbourg	InfiniteVision Optics SAS	100.0	59.1
UK	Coventry	GOM UK LIMITED	100.0	100.0
UK	London	Ncam Technologies Limited	100.0	100.0
UK	London	Ncam Ventures Limited	100.0	100.0
Poland	Slupsk	Carl Zeiss IQS Software R&D Center Sp. z o.o.	100.0	100.0
Poland	Poznan	Lenso 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
Serbia	Ruma	Carl Zeiss d.o.o. Ruma	100.0	100.0
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	100.0
USA	Princeton	EMMETROPIA, INC	100.0	59.1
USA	Charlotte	GOM Americas Inc.	100.0	100.0
USA	Santa Monica	Ncam Technologies 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 accounted for using the equity method					
Germany	Mannheim	Vibrosonic GmbH		18.8	11.1
China	Wuxi	Wuxi Carl Zeiss Vision Pro Medical Technology Co., Ltd		50.0	29.6
Finland	Helsinki	Photono Oy		49.0	29.0
4. 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		29.5	29.5
Germany	Ulm	Scantinel Photonics GmbH		43.0	43.0
Germany	Lalling	Umami Ware GmbH		31.4	31.4
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	Lafayette	Ophthalmic Laser Engines, LLC		52.0	30.8
USA	Fort Worth	TEC Evolution, LLC		20.0	20.0
United Arab Emirates	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

Independent Auditor’s Report

“Independent Auditor’s Report

To Carl Zeiss AG, Oberkochen

Audit Opinions

We have audited the consolidated financial statements of Carl Zeiss AG, Oberkochen, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 30 September 2023, and the consolidated statement of comprehensive income, consolidated statement of profit or loss, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 October 2022 to 30 September 2023, 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 financial year from 1 October 2022 to 30 September 2023.

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 § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 30 September 2023, and of its financial performance for the financial year from 1 October 2022 to 30 September 2023, 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 § 322 Abs. 3 Satz [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 Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB 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 audit opinions on the consolidated financial statements and on the group management report.

Other Information
The executive directors are responsible for the other information.

The other information comprises the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit 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 audit opinion or any other form of assurance conclusion thereon.

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

» is materially inconsistent with the consolidated financial statements, with the group management report disclosures audited in terms of content or with 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 § 315e Abs. 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 (i.e., fraudulent financial reporting and misappropriation of assets) 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 audit 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 § 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 audit 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 controls.

» 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 audit 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 audit 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 assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

» Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit 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 audit 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, 7 December 2023

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

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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.

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