

## COMBINED MANAGEMENT REPORT

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# **GROUP INFORMATION**

As a technical services provider, for more than 150 years TÜV SÜD has been protecting people, the environment and property against technical risks, facilitating technological progress in the process.

TÜV SÜD's range of services covers certification and testing, inspection, auditing and system certification, knowledge services and training. As committed and responsible process specialists with extensive sector-specific knowledge, we develop tailored solutions – for retail customers and for industry, trade and government. As experts, we optimize technology, systems and knowhow, always with an eye on the entire value-added chain.

More than 25,000 employees at over 1,000 locations in around 50 different countries work to provide security and added value for our customers.

## Legal structure guarantees independence

TÜV SÜD stands for independence and impartiality, which are guaranteed by the specific structure of the Group. In its capacity as management holding company, the parent company TÜV SÜD AG with registered offices in Munich, manages its subsidiaries around the world. The beneficial owners of TÜV SÜD shares are TÜV SÜD e. V., Munich, and the TÜV SÜD Foundation, Munich. Both have transferred their shares to the independent TÜV SÜD Gesellschafterausschuss GbR, a shareholder committee with registered offices in Munich. The purpose of the civil law association is to hold and manage this shareholding under stock corporation law.

The governing bodies of TÜV SÜD e.V., the TÜV SÜD Foundation and TÜV SÜD Gesellschafterausschuss GbR, are largely independent of the supervisory bodies of TÜV SÜD AG. This ensures their independence.

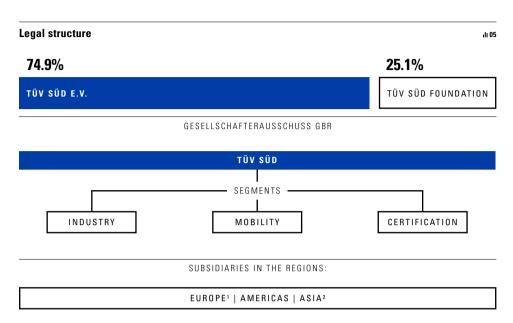
The TÜV SÜD Foundation publishes its own report annually.

→ WORLD MAP SEE PAGES 10 - 11 33 Corporate governance report

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1 Germany, Western Europe, Central & Eastern Europe.

2 \_ North Asia, ASMEA (South & South East Asia, Middle East & Africa).

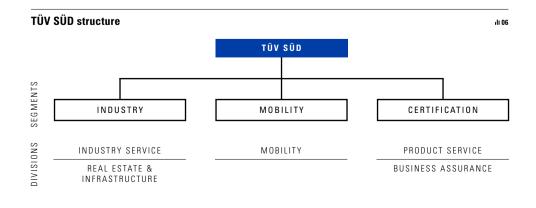
## **Clearly defined management structure**

TÜV SÜD is managed as a matrix organization. The Board of Management consists of the Chief Executive Officer (CEO), Chief Financial Officer (CFO) and Chief Operating Officer (COO).

Below the Board of Management, the Leadership Council is established as a body comprising both the Board of Management and the heads of the divisions and key regions. The Council supports the implementation of overarching topics such as strategy, employee development, innovation and digitization.

TÜV SÜD's services are grouped into three segments: INDUSTRY, MOBILITY and CERTIFICATION. The INDUSTRY Segment comprises the Industry Service and Real Estate & Infrastructure Divisions. The MOBILITY Segment contains the Mobility Division. The Product Service and Business Assurance Divisions make up the CERTIFICATION Segment.

While the divisions are responsible for implementing global strategies, local business development is the responsibility of the regions. The divisional and regional structure of our activities remained unchanged in the fiscal year 2019.



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## **Business model**

We are a reliable partner when it comes to safety and sustainability. With our solutions, we create measurable added value for our customers, in the physical and digital world.

Our services meet two of our customers' key requirements:

- We facilitate access to the market with our testing services and certifications. Our experts are increasingly involved as early as the development process, helping to meet all of the requirements of the target markets - often long before a product is introduced onto the market.
- We evaluate and reduce risks, from risk assessments at facilities to cyber security evaluations. Increased networking between companies and across national borders is helping our experts work closer and closer with our customers.

## The market for technical services

As a technical services provider, TÜV SÜD is active on the market for TIC services (Testing, Inspection, Certification). This is a market with an estimated global volume of around € 75 billion, and one that has been growing steadily for many years.

The largest markets for technical services are the US, China and Germany. Market players include regulatory authorities, accreditation and standardization authorities, technical service providers like TÜV SÜD, research and development institutions, manufacturers, retailers and systems operators. Large international companies such as TÜV SÜD along with a large number of small specialists operate as technical service providers on the market.

The development of the TIC market is influenced by several factors:

Megatrends such as the ongoing process of digitization, sustainability or the evolution of individual mobility are driving growth on the TIC market. Positive effects also stem from the Real Estate & Infrastructure Division, in which potential can be seen in particular in facility management and advisory services. The increasing complexity and ever greater connectivity displayed by products is also having a positive impact on market development.

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This is dampened by developments that are curtailing global trade such as trade disputes, political tensions or the impact of Brexit. A downturn in economic growth in China would also have a negative impact on the development of the TIC market. Last but not least, increasing uncertainty in key industries coupled with lower investing activities may also slow the development of the TIC market.

In light of this, for the coming year we expect annual market growth of between 3% and 4%. Therefore, accessible market volume could rise to around € 90 billion by the year 2025.

Above all, we want to grow organically and increase our revenue with high-quality services. We would also like to make targeted acquisitions in order to move into new lines of business, specifically in the field of digital technologies.

# Industry-specific environment

Since it was established more than 150 years ago, TÜV SÜD has made use of technological advances and the challenges these present to realizing the company's purpose, namely to make technological progress attainable and safe for people and the environment.

Increasing levels of digitization and new mobility trends, such as highly-automated driving and electromobility, have an impact on society. This presents us with both opportunities and challenges. We support our customers with this transformation and develop new processes to respond to the changing requirements and framework conditions. Our working environment and the way in which we work are also changing on account of technological change. We view technological advances primarily as an opportunity to further develop our company. ılı 07

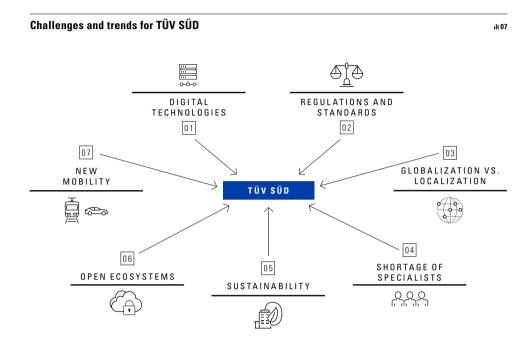
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#### Our business is shaped by these trends and challenges:

- **Digital technologies** 01
- The development of digital technologies, for example in the field of sensor technology, analytics and artificial intelligence (AI), is gathering pace. For us and for our customers this opens up numerous opportunities for new services, for the way in which services are provided in the future and for new processes.
- INNOVATIONS REPORT **SEE PAGES 27 – 28**
- N2 **Regulations and standards**  $\rightarrow$ Regulations and standards must be constantly adapted to keep up with rapid technological developments so that they continue to offer security and value to society. The wealth of experience of our experts allows us to make a significant contribution to this. TÜV SÜD is also involved in various different bodies around the world. These also include international standardization bodies such as the International Electrotechnical Commission (IFC) and the International Organization for Standardization (ISO).

#### 03 **Globalization vs. localization**

- Companies and their supply chains are becoming interwoven and increasingly global. This requires an understanding of and compliance with the various different national and international standards in effect at present. At the same time, the local markets in economies such as China are becoming more important. Local know-how and representation are required in order to serve these markets.
- MARKET FOR TECHNICAL SERVICES SEE PAGES 22 - 23

Shortage of specialists N4 The TIC market needs well-trained  $\rightarrow$ experts who are also capable of operating in an internationally networked environment. These specialists are in high demand on local markets; in Germany, recruitment is made even more difficult by demographic change EMPLOYEE REPORT

#### **SEE PAGES 73 – 79**

#### 05 Sustainability

The energy mix will become progressively climate-neutral, and power will be used more efficiently. More and more companies are striving to work in a more sustainable manner, they want to preserve resources and design their supply chains accordingly. This development is being driven by more stringent environmental and regulatory capital market requirements, but also by a change in the mindset of society. This is also shifting the focus for our industry. Skills and services relating to sustainability, climate and environmental protection are coming to the forefront. In this regard, there is a development focus on the use of resources and therefore also on renewable energies and the associated challenges of energy storage and power arids.

SUSTAINABILITY AS THE GROUP'S PURPOSE **SEE PAGES 31 – 32** 

#### 06 Open ecosystems

- Digitization is giving rise to new business  $\rightarrow$ models and partnerships in the TIC industry; however, new competitors are also moving into the market. Data and platform-based services are increasingly being developed in order to better meet customers' needs and introduce new business models to the market.
- INNOVATIONS REPORT **SEE PAGES 27 – 28**

#### New mobility 07

 $\rightarrow$ 

The future of mobility is electric and highly automated. Mobility is becoming more and more a service and sharingbased models will be an important aspect of mobility in the future. This will present new challenges for the testing of vehicles, driver assistance systems and the entire charging infrastructure. **BUSINESS DEVELOPMENT** 

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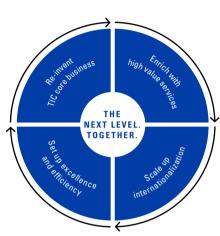
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## Strategy

With our strategy "The Next Level. Together.", which runs until 2025, we want to reach the next level in the development of our company. This is because new trends and developments, driven in particular by digital technologies, offer additional opportunities, both for us and for our customers. We pursue four strategic angles in order to exploit this potential:

#### The Next Level. Together.



#### $\rightarrow$ Set up excellence and efficiency:

We want to always offer our customers the best services – and our customers should notice the difference. This requires excellence in our services, distribution, processes and excellence of our employees. In light of this, in 2019 we pushed forward with the expanding strategic customer management and bolstered our digital marketing and e-business activities. This is highlighted by our new website.

#### $\rightarrow$ Re-invent TIC core business:

Our expertise in almost every industry, combined with knowledge of the possibilities of digitization, enables us to develop data-based, continuous and automated testing services, and also develop standards for new fields of technology.

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#### Enrich with high-quality services: $\rightarrow$

Based on our expertise, we want to offer technical consulting with renewed focus while making our business digital and customer-oriented by developing platforms. For example, the web-based customer portal "PS UCI Portal" allows for modern customer communication including project status updates and data exchange in the Product Service Division.

#### Scale up internationalization: $\rightarrow$

We aim to be market leaders in our core countries. Our focus is always on offering services and skills across national boundaries. We want to make our relationships with our customers increasingly global and build up our business activities around the world. A prime example of this is the completion of our testing facilities in China and the UK in the fiscal year.

In order to implement these four strategic angles, we defined strategic priorities and initiatives at a group level and for each of our divisions in 2018. The focus in the fiscal year 2019 was on the rigorous implementation of these initiatives. This is as we also want to be a partner for our customers in the future with respect to safety and sustainability, in both the physical and the digital world. We want to continue to sustainably improve the revenue and profitability of our business. To this end, we are planning to invest more than € 100 million each year. But above all, we want to live up to the vision that we have been pursuing for more than 150 years: to protect people, property and the environment against technical risks, facilitating technological progress in the process.

 $\rightarrow$  business development SEE PAGES 40 - 44

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## Innovation is key

If we stand for the security of technology, then we must be at the forefront of technological change ourselves. And those who want to remain competitive in the long term must also take every opportunity within their own company to work efficiently and offer a customer the highest possible quality of service.

That is why TÜV SÜD has been practicing active innovation management for many years. In the fiscal year 2019 we invested approx. € 20 million (prior year: € 19.9 million) in research and development for highly innovative projects. Our goal is to develop innovations that are clearly tailored to the market and to quickly and effectively translate them into specific products.

Our activities in 2019 were shaped by the digital transformation of our core business and the expansion of our new, technology-driven business models. And as these are best put to the test in practice, there was also a particular focus in this fiscal year on joint pilot projects with customers and partners.

## SHAPING THE DIGITAL REVOLUTION

The ongoing process of digitization is changing business models, and constantly presenting us and our customers with new challenges. TÜV SÜD spotted this trend early on. TÜV SÜD Digital Service GmbH (TÜV SÜD Digital Service), Munich, and its two competence centers for digital services in Singapore and Munich offer experts and know-how to assist our customers with almost any issue relating to digitization. While the main focus of the competence center in Singapore is on the rapid implementation of pilot projects in the city-state's highly innovative environment, the competence center in Munich develops the key technologies that are relevant to TÜV SÜD and drives group-wide initiatives and projects.

In the field of Advanced Analytics we use our technical and sector-specific expertise to offer our customers new or expanded services such as data-based projection models. We expect applications in the field of artificial intelligence in particular to provide a significant boost to existing services as well as entirely new lines of business.

With comprehensive cyber security services, TÜV SÜD is a reliable partner in all matters relating to IT security, particularly for our customers in industry. Our services in this context include certifications in connection with the "Internet of Things", device and version management for factory automation, and penetration and security tests for industrial, IT-assisted applications. As a member of the "Charter of Trust" initiative, we work with renowned industrial corporations to promote cyber security at all levels and foster trust in it. To this end, the initiative outlines key principles for coordinated action on the part of politics, society and business partners.

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We make use of the possibilities offered by machine learning and artificial intelligence in various projects in order to develop new or enhanced services – with corresponding added value for our customers.

Consequently, on account of our participation in Digital Vehicle Scan GmbH & Co. KG (DVS), Passau, we are able to offer customers in the MOBILITY sector a standardized and automated digital vehicle scan. This makes processes quicker and more transparent in any situation where vehicle condition needs to be quickly and reliably assessed – for example in the rental car business or fleet management. Even large volumes of vehicles can be quickly and reliably documented. The enhancement of our camera robot PhotoFairy Robot MIC allows us to generate high-resolution 360° photo models automatically, in a standardized manner and without costly infrastructure. The data are available online immediately after they have been captured, also providing efficient support for the sale of lease returns.

We are currently already working on automatic damage recognition and categorization using artificial intelligence, which will support the technical experts when evaluating damage and thereby further optimize the inspection of the vehicle condition. A pilot project with a renowned automobile manufacturer is planned for mid-2020.

In Singapore, we are working with several partners on designing building facade inspections in an efficient manner. Using drones fitted with high-resolution cameras and thermal imaging systems, our experts are also able to more reliably detect damage, even in hard-to-reach places, without having to be on-site themselves. This involves detecting anomalies such as corrosion and cracks greater than 0.2 mm in size in the facade of a high-rise building, which already pushes conventional inspection methods to their limits. Artificial intelligence also supports the process in this instance: The recordings are automatically presorted and marked for anomalies so that critical areas can be immediately viewed by experts, providing effective support to the inspection process. In addition, the individual recording can be used to create a "digital twin" of the facade, which can be used for further services.

In 2019, we successfully established our activities in highly-automated driving (HAD) as a new unit in the MOBILITY Segment. Numerous new partnerships in this area have contributed towards us being able to offer our customers even more comprehensive services in this topic of the future.

More than 300 companies in Asia and Germany have since been through the Smart Industry Readiness Index, which TÜV SÜD developed together with the Singapore Economic Development Board. This assessment helps companies to evaluate how advanced their progress is on the path towards Industry 4.0 and digital transformation – in terms of their processes, technology and organization. Alongside determining the Industry 4.0 maturity level, this TÜV SÜD service also includes a delta, risk and productivity analysis.

We will also continue to rigorously invest in the development of technology in the future – and above all in the know-how and skills of our employees, as they are the ones who advance the transformation of the company. An amount in the double-digit million range will be spent on the development of new services relating to the field of digitization in the next three years alone.

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## Our management system

TÜV SÜD's management system is based on the integrated controlling system and strategic corporate planning. We use various key figures as indicators to manage and measure the performance of the Group.

We have defined revenue growth and earnings before interest, before other financial result and before income tax, but after income from participations (EBIT) and the EBIT margin as key financial performance indicators.

These indicators are supplemented at group level by the value-based indicator Economic Value Added (EVA®), which has been adapted to the requirements of TÜV SÜD. This measures the value added by the Group and takes into account the cost of capital used to generate the respective earnings. The EVA indicator is a key component of variable compensation in the compensation system for the first and second levels of management.

At Group level, we also use free cash flow and earnings before taxes (EBT) as additional, non-material financial indicators. The free cash flow shows the extent to which we generate long-term cash flows from our operating activities.

Various non-financial performance indicators have been defined for our key asset, our employees. These indicators include headcount, the average age of employees, the proportion of female employees and the average duration of employment at the company. ≡ 02

Definition of financial performance indicators at TÜV SÜD		≡ 02
KEY INDICATOR	DEFINITION	
EBIT	Earnings before interest, before other financial result and before income tax, but after income from participations	
	NOPAT – GROUP'S COST OF CAPITAL	
	Net operating profit after tax (NOPAT) = EBIT — income tax (flat rate of 30%), excluding the at-equity result from the flat-rate taxation	
	Capital employed = non-current operating assets + inventories and receivables - non-interest bearing liabilities and provisions <sup>1</sup>	
EVA	Group's cost of capital = average capital employed × weighted average cost of capital (WACC: 7%)	
Free cash flow	Cash flow from operating activities – Cash outflow for investments in intangible assets, property, plant and equipment and investment properties	

1 \_ Non-interest bearing liabilities and provisions include current provisions and tax liabilities.

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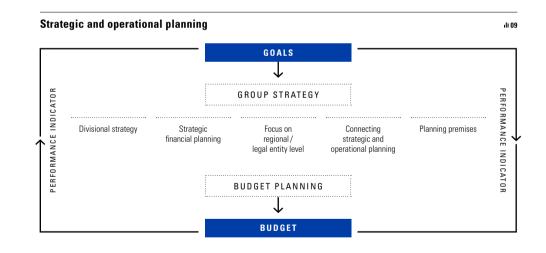
This value-based management is implemented in our **integrated controlling system**. It is based on a group-wide management information system, a harmonized global finance function, and accounting and reporting in accordance with International Financial Reporting Standards (IFRSs).

All performance indicators are determined as part of our planning and monitoring processes for the respective levels of the Group (segments, divisions, regions and legal entities) and are made available in standardized format via our internal reporting system.

The starting point for our planning and control processes is **strategic planning**. This aims to achieve profitable growth and a continuous increase in the value of the company.

In addition to quantitative factors and hitting operating targets, the reputation of the TÜV SÜD brand is at the forefront of everything we do. The quality of the services we provide and the satisfaction of our customers are crucial in this regard.

The Group's strategy, which is broken down into the respective divisional strategies, is derived from the long-term strategic goals. The divisions' targets are incorporated into the strategic financial planning and are specified in more detail at a regional level. The planning for the next year that is derived in this way, and three forecasts during the year in progress, combined with prompt monthly financial statements, form the basis for our analyses with which we measure the implementation of strategic goals and analyze deviations from the plan.



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## Sustainability as the Group's purpose\*

Sustainable action geared to protecting people and the environment is firmly anchored in TÜV SÜD's goals. Protecting people, property and the environment has shaped the company as its purpose since its foundation over 150 years ago.

#### Group purpose



TÜV SÜD offers extensive services in the area of sustainability. Ranging from audits and certifications of occupational health and safety and food safety to environmental management, energy efficiency, renewable energy or electromobility.

We also apply strict standards to our own actions. Absolute integrity and strict compliance with laws and standards are absolutely essential for us as a technical service provider. Alongside the TÜV SÜD Code of Ethics, we also focus on adhering to various standards and laws relating to human rights, working conditions and combating discrimination. Consequently, the Diversity Charter has applied since 2017; an annual declaration on the British Modern Slavery Act 2015 is also submitted.

A comprehensive compliance management within the Group ensures that our employees always meet the high standards that our customers and the public expect from us. Transparency is also an important aspect of sustainable activity, and also necessary in order to get better at everything we do. Therefore, our aim is to make our activities and their impact on our corporate environment measurable and comparable.

→ SEE WWW.TUVSUD.COM/EN/CAREERS/ LIFE-AT-TUV-SUD/DIVERSITY-AT-TUV-SUD ılı 10

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The content of this section is voluntary and, therefore, has not been audited, but critically read by the auditor. The following activities are examples of our efforts in connection with sustainability in the fiscal year:

#### $\rightarrow$ Supporting the next generation of scientists in Spain

In 2019, as part of the competition Jugend forscht Iberia" ["Youth Research Iberia"] TÜV SÜD Spain advocated the promotion of education in science and research. The largest and one of the most important meetings of young scientists in Europe brings young participants together each year to work together on scientific projects in fields such as chemistry and physics or environmental sciences.

#### ightarrow Awakening potential and providing opportunities in Germany

As part of the non-profit initiative to combat youth unemployment "JOBLINGE", TÜV SÜD and the TÜV SÜD Foundation support young people from socially disadvantaged backgrounds in entering the world of work. As volunteer mentors, TÜV SÜD employees help around 20 "Joblinge" [mentees] every year to find an apprenticeship, for example in retail or motor vehicle mechatronics.

#### $\rightarrow$ Supporting biodiversity

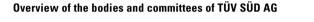
In Germany, we are creating more and more green spaces on the rooftops of our buildings. We use particularly biodiverse plants for our green spaces in order to offer food and a space to live to as many insects as possible.\*

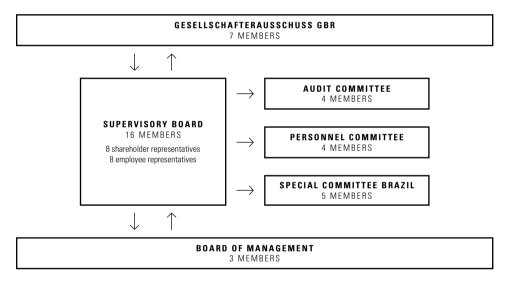
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# **CORPORATE GOVERNANCE REPORT**

The Board of Management and Supervisory Board of TÜV SÜD AG are guided by the requirements imposed by the German Corporate Governance Code on capital market-oriented companies.

We consider good corporate governance to mean responsible, transparent and values-based management. It is explained in greater detail in clear guidelines and regulations that apply throughout the company. We regularly review these principles and adapt them in line with new findings, changed legal provisions, and national and international standards. This creates transparency and this enhances the trust of our customers, our employees and the public in our work and allows us at the same time to meet the steadily increasing information requirements of national and international stakeholders.





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## **Composition of the Supervisory Board**

The Supervisory Board of TÜV SÜD AG comprises 16 members. In accordance with German law, half of the members are employee representatives and half are shareholder representatives, who are reputable representatives of business and the public. The Supervisory Board has two female members representing the shareholders.

The audit committee consists of four members and deals primarily with monitoring the financial reporting process, the effectiveness of the internal control system, the risk management system and the internal audit system. In particular, it receives reports on the Group's risk situation, the findings of internal audits, including compliance breaches, as well as planned investment and portfolio measures. It also deals with the audit of the annual financial statements and the independence of the auditors, the additional services provided by the auditors, the award of the audit engagement and the definition of audit priorities and the agreement of fees.

The personnel committee comprises four members. Its main tasks include preparing appointments and removal of members of the Board of Management, drafting recommendations on remuneration of the individual members of the Board of Management and designing and regularly reviewing the remuneration system.

A special committee was formed in the fiscal year as a consequence of the dam collapse in Brazil. The committee is tracking the internal and external handling of the incident. It receives regular status updates, also from independent technical experts and law firms engaged for this purpose.

The Supervisory Board as a whole is regularly informed by the respective committee chairmen of the activities of the respective committees.

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	Supervisory Board	Audit Committee	Personnel Committee	Special Committee Brazil
Prof. DrIng. Hans-Jörg Bullinger	Chairman	Member	Chairman	Chairman
Harald Gömpel	Deputy Chairman		Member	Member
Dr. Christine Bortenlänger	Member			
Wolfgang Dehen	Member			Member
Dr. Klaus Draeger	Member			Member
Thomas Eder	Member	Member	Member	Member
Jörg Frimberger	Member			
Dr. Jörg Matthias Großmann	Member	Chairman		
Albert Hofmann	Member			
Franz Holzhammer	Member	Member		
Peter Kardel	Member			
Wolfram Reiners	Member			
Angelique Renkhoff-Mücke	Member			_
Kurt Seitz	Member			
Prof. Dr. Rudolf Staudigl	Member			
DrIng. Eberhard Veit	Member		Member	
NUMBER OF MEETINGS				
	5 (of which 1 conference call)	5	2	14 (of which 2 conference calls)

The attendance rate at the meetings of the Supervisory Board and its committees was over 90% in 2019. At the Audit and Personnel Committees, the attendance rate was always 100%.

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## **Composition of the Board of Management**

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The Board of Management of TÜV SÜD AG has three members. It is responsible for running the company and manages its business. It is bound to act in the interest of the company and to increase the long-term value of the company. It discharges its management duties as a collegial body with joint responsibility for managing the company.

# Cooperation between the Board of Management and the Supervisory Board

TÜV SÜD's strategic direction is coordinated closely between the Board of Management and Supervisory Board of TÜV SÜD AG. The boards jointly discuss the status of strategy implementation at regular intervals. The Supervisory Board is informed by the Board of Management regularly, comprehensively and without delay about all relevant questions regarding business development, planning and the situation of the company, including the risk position and risk management, as well as compliance, in written and oral reports.

Further information on collaboration between the Board of Management and Supervisory Board of TÜV SÜD AG can be found in the Supervisory Board report. The members of the Board of Management and Supervisory Board are listed in the Boards of the group section.

# Declaration on the equal representation of women and men in management positions

In June 2017, TÜV SÜD AG set new targets for the inclusion of women in managerial positions for the period until December 31, 2021. An increase to the percentage of women on the Board of Management is currently not envisaged. For future appointments, women will be considered on an equal footing to men.  $\equiv 04$ 

Share already achieved Target rate (December 31, 2019) Deadline Supervisory Board 25% 13% December 31, 2021 Board of Management 0% Achieved December 31, 2021 First management level 20% 16% December 31, 2021 42% Second management level 35% December 31, 2021

Representation targets were also defined for the four German group companies affected by the legislation. The representation targets were at least on a par with those already achieved in 2017. December 31, 2021 was set as the deadline in most cases.

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## Compliance

Compliance with international rules and dealing fairly with our business partners and competitors are among our company's most important principles. TÜV SÜD has always felt bound by legal and internal requirements. Ethical principles are an integral part of our corporate culture.

TÜV SÜD takes a preventive approach to compliance and endeavors to achieve a corporate culture that proactively excludes potential breaches by raising employee awareness and educating the workforce. The necessary measures and compliance with implemented checks are monitored at regular intervals by the internal audit function. This involves systematically reviewing compliance and performing controls based on random samples, as well as investigating the facts in the event of actual suspicions.

The Chief Compliance Officer is supported in his work by the Global Compliance Officer, the Local and Regional Compliance Officers, the Corporate Compliance Officers and the Legal department. We have communicated concrete behavioral principles (the TÜV SÜD Code of Ethics) to all entities, and established them as an essential component of the Group's culture. The TÜV SÜD Code of Ethics consists of compliance regulations that include avoiding conflicts of interest and corruption, and observing embargo and trade control provision, among other things. Its guiding principles are independence, integrity and law-abiding behavior.

Through comprehensive training, including an e-learning program tailored to the company's specific requirements, we ensure that our corporate compliance requirements are put into practice within the company. Employees may contact the Chief Compliance Officer or Global Compliance Officer at any time by letter, e-mail or telephone. There are also Local Compliance Officers available as direct points of contact. In addition, the internet-based EthicsPoint platform is available to report compliance-related matters in selected countries.

Employees and business partners can also report indications of breaches and suspected violations to an external system of ombudsmen in individual countries, who are sworn to secrecy and anonymity. Breaches of the law or internal policies are subject to appropriate sanctions and may result in consequences for our employees under labor law, up to and including dismissal.

TÜV SÜD's procedure for processing personal data was adapted to the data protection provisions of the General Data Protection Regulation (EU-GDPR) during the fiscal year, the compliance risks were once again analyzed in the TÜV SÜD Group and the requisite countermeasures were taken.

## Risk management system

In our day-to-day work, we attach high importance to careful handling of potential risks for the company. Our risk management system is designed to identify risks, evaluate existing risk positions and optimize risks entered into. This is done in the risk committees set up for this purpose, comprising representatives of the divisions and segments. We continually adapt this system to the changing business environment.

→ SEE WWW.TUVSUD.COM/EN/ABOUT-US/ CODE-OF-ETHICS

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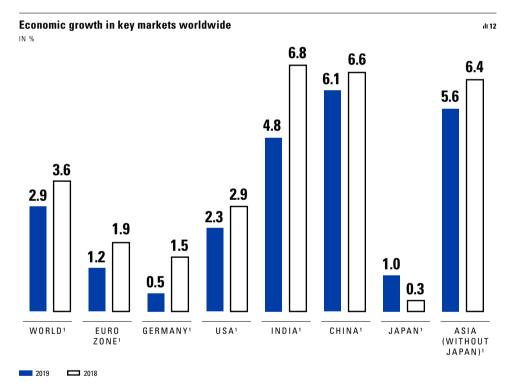
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# **ECONOMIC REPORT**

## Macroeconomic environment

The increasing uncertainty due to various trade disputes, the increase in global indebtedness and the slow-down of global industry hampered global economic development in 2019. Consequently, global economic output lost momentum over the year and only grew by 2.9%. The disparities in the economic trends of individual countries became less pronounced. The developed economies saw a drop in industrial output. Although industrial output still followed a slight upward trend in the emerging economies, the economy as a whole was restrained. Only the services sector saw steady growth.



1 \_ IWF world economic outlook (prior-year forecast updated with actual figures).

#### **SLOWED GROWTH IN EUROPE**

The economic growth of most countries in the European Union slowed noticeably during the fiscal year. GDP growth of 1.2% both in the euro zone and for the entire European Union was down on the prior year (1.9%). This was due to the lack of momentum from foreign trade for industrial output. A possible escalation of tensions regarding trade policy between the EU and the US has likewise dampened the economic forecast.

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The German economy cooled off in 2019. GDP growth was only minimal (0.5%), down from the 1.5% still seen in the prior year. Affected by uncertainty regarding economic policy around the world, the industrial sector entered into a mild recession. The decline in hitherto high levels of capacity utilization led to levels falling short of normal utilization in industrial enterprises. Momentum also slowed for ancillary corporate services. However, expansion in the areas of ancillary consumer services and construction continued, spurred on by continued cheap sources of financing. The continuing expansion of recruitment in the services sector and measures taken in terms of financial policy have had a positive impact on disposable income for private households.

The UK's decision to leave the European Union continued to impact its economic growth in 2019. At 1.4%, the UK's economic growth remained at the prior-year level. By contrast, economic momentum was unexpectedly robust in Central and Eastern Europe.

## **US: ECONOMIC GROWTH TAILS OFF**

Economic growth in the US continued in 2019 at a moderate pace. On an annual average, gross domestic product in the US grew by 2.3% (prior year: 2.9%), as tax incentives offered in the prior year expired and export activity was down. In addition, a drop in investing activities by companies along with decreasing consumer demand in comparison to the prior year also dampened economic growth.

## SOFT DEVELOPMENT IN EMERGING MARKETS

The moderate growth of the advanced economies also dampened demand in emerging economies. In addition, the uncertainty regarding trade policy did not only slow economic growth in China. At 6.1%, the Chinese economy grew at a slower pace than in the prior year (6.6%).

The Indian economy took a significant hit during the fiscal year. Economic growth slowed from 6.8% to 4.8%. This was due to problems in the shadow banking sector, which plays an important role in financing private households and small enterprises.

## EXPANSIVE MONETARY POLICY

Key interest rates in the euro zone remain at historically low levels. The lowering of the base rate by the US Federal Reserve in 2019 also allowed interest rates to be lowered in emerging economies. On the whole, the divergence in financial policy has only created low levels of momentum for economic growth. Many advanced economies continue to pursue an expansive monetary policy.

The euro continued to depreciate against the US dollar in the course of the fiscal year 2019 and stood at US 1.12 dollar (prior year: US 1.15 dollar) at the end of the year. Over the year, the euro also depreciated in value against other important currencies for TÜV SÜD. The development of the most important reference currencies is shown in the notes to the consolidated financial statements.

→ NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS, CURRENCY TRANSLATION SEE PAGE 110

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## **Business and economic environment**

The focus of our activities in our segments in the fiscal year 2019 was on continuing to operationalize our Strategy for 2025. In particular, we would like to put the opportunities offered by digitization and new technologies to good use for our customers – around the world and in all our markets.

We want to grow further and make targeted investments in our competence centers and expanding our networks of testing laboratories. We are focusing our activities on stable economic areas. In some segments and markets, the success of our business is closely linked to economic development. Therefore, positive economic development – such as steady economic growth in Asia – provides stimulus, while events such as Brexit in the UK could have a negative impact.

At the same time, technological change on the markets has an impact on our business and economic environment. New drive technology, the mainstream implementation of electromobility, regulations relating to climate and environmental protection and alternative forms of mobility are topics that the automotive industry, and therefore also our customers, are tackling at a global level.

In 2019, we devoted a lot of time and effort to managing the consequences of the dam collapse in Brazil. The plan of action derived from this included reviewing the product portfolio and business activities. In this regard, the most important criteria are relevance for the TIC market and strategic importance of the services offered. Selected testing services were discontinued in certain markets as a consequence of the accident in Brazil in the past fiscal year.

As of the end of the fiscal year, TÜV SÜD AG acquired TÜV SÜD Föderation GmbH from TÜV SÜD e.V. The company solely holds pension obligations.

#### INDUSTRY

In the fiscal year, the strategic priorities of the INDUSTRY Segment focused on global market penetration in the areas of automated process monitoring, renewable energy and power supply. In addition, we further expanded out integrated innovation and digitization management in the segment with the aim, amongst others, of driving forward the digitization of testing services.

Against the background of the renewable energy revolution, our commitment to renewable energies is a guiding principle. Alongside the certifications Green Hydrogen (green or renewably produced hydrogen) and CertifHy Scheme (guarantee of origin for green hydrogen), we also offer certifications for biomethane, biofuels or eco-electricity. These services are supplemented by certification for "Energiewendeunternehmen" that companies satisfy the requirements of the energy revolution, which targets energy providers and the manufacturing industry. Wind energy is also part of the renewable energy initiative and thus also a strategic focus.

Our comprehensive experience with onshore and offshore wind farms won us various certification and testing contracts in Germany and elsewhere in Europe. In Germany, we also offer our customers inspections of facilities that are subject to special control by the German ordinance on industrial health and safety (BetrSichV).

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The advance of digitization is increasing demand for more secure and readily available performance and capacity in data centers. TÜV SÜD offers certification of data centers based on the European standard EN 50600. By setting requirements for the physical set-up, infrastructure and operational management, the standard creates transparency on the security of data center and allows for demand-optimized planning.

In July 2019, TÜV SÜD was recognized by the German National Accreditation Body (DAkkS) as a testing body for the safety of measurement, control and feedback control technology based on the German industrial standard DIN EN ISO/IEC 17020:2012. Functional safety in plant and mechanical engineering is not only a key requirement to protect people and the environment, but also to minimize the danger to technical equipment and machinery.

New products or materials, which are manufactured using additive processes or used in additive manufacturing as pressure equipment, also have to conform to safety requirements. We offer certification in this field, which is based on the European Pressure Equipment Directive and other standards, supplemented by our extensive experience in the field of plant safety.

With our competence center for Building Information Modeling (BIM), we support property owners, developers and investors in gaining a quantifiable benefit from the advantages offered by this method. Building Information Modeling simulates the entire life cycle, and can be supplemented by other technologies in order to reduce costs during the construction and operation phase, and mitigate risks, for example using sensor-based moisture detection. Through strategic partnerships, development work on the modeling of digital twin buildings continued. To date, projects have been realized in Germany, Austria, Singapore and the Middle East.

We also use new technologies such as aerial photographs taken by drones and 3D models when carrying out building inspections and construction supervision. In this field, we provide services to construction projects in South Korea, China and the Middle East, amongst others.

Our lift certification services are in demand internationally and allow for cross-selling potential for further services such as building automation. For the approval of lift models, we are currently developing hardware and software, which should be applicable across all global markets.

We are further driving the internationalization of our expertise in railway transport. In addition, we acquired simulation software for inspection runs of railway vehicles for the Swedish market. In doing so, we are further expanding our digital inspection capabilities in the railway sector.

In August 2019, we sold Signon Österreich GmbH (Signon Austria), Vienna, Austria. In 2020, we aim to sell our German planning business for railway systems.

An impairment loss was once again recognized on assets and property, plant and equipment from the restructuring of the US company PetroChem Inspection Services Inc. (PetroChem), Pasadena. The expectations regarding future company development led to impairment losses on assets at the South African company TUV SUD South Africa Pro-Tec (Pty) Ltd., Middleburg, South Africa, and the German company TÜV SÜD Advimo GmbH, Munich.

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#### MOBILITY

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Strategic priorities in the MOBILITY Segment focused on new technologies in the area of mobility and the development of new business models and innovative services. In this way, through the further internationalization of our services, we are facing up to the far-reaching change in the automotive industry.

Alongside our home market of Germany, our activities in the regulated sector are concentrated on Austria, Turkey and Spain. Regulated business is currently being set up in Slovakia. However, we offer a far greater proportion of our performance spectrum internationally in the non-regulated sector.

On account of our investment in DVS in 2019 we are able to offer our customers in the rental car business and fleet management a standardized and automated digital vehicle scan.

In the fiscal year, collaboration commenced with a strategic partner for the fleet management business, with a view to integrating the existing business model into intermodal mobility, i.e., the combination of various means of transport in an urban environment, and pave the way for further growth using the additional range of services coupled with greater connectivity.

In Heimsheim, we have been expanding our testing facilities for emission and consumption measurements as well as the engine and roller testing rigs since fall 2017 and have grown into the largest mobility testing facility in Europe. The testing facility already offers independent engine and exhaust-gas analyses. In the future, type approvals can also be carried out at this facility in compliance with all international guidelines. Completion is scheduled for 2020.

Our activities in the field of highly automated driving are progressing and were transferred over into the operational business during the fiscal year.

Together with other organizations, TÜV SÜD founded the International Alliance for Mobility Testing and Standardization (IAMTS). The role of the IAMTS is to develop and harmonize globally standardized inspection methods and uniformly recognized standards relating to automated driving, and in doing so provide effective support to the development and market introduction of automated mobility.

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### CERTIFICATION

Strategic priorities in the CERTIFICATION Segment are focused on digital transformation and expanding our service in the area of medical technology, connected and additive manufacturing along with electromobility. In this regard, we are supporting our customers around the world in transforming their business models and opening up access to global markets. Our range of services encompasses the entire product lifecycle of industrial, medical and consumer goods. We provide our services globally in close proximity to the production or distribution site. The product portfolio is complemented by cyber security services and a range of certification and training offerings in relation to digitization.

Electromobility and highly-automated driving are examples of new forms of mobility within our society. In this regard, we support our customers in safely designing electromobility and to this end we are making targeted investments in expanding our testing facilities. For example, in November 2019 we opened a testing facility in China for plug-in electric vehicles. Further locations are planned in Asia, Germany and the US.

In our numerous testing facilities in China, alongside chemical analyses and tests of electromagnetic compatibility, we also offer certification services according to ENEC (European Norms Electrical Certification) and ENEC+ for electronic and lighting products. On account of new standards and regulations, we see additional potential to expand our testing facility capacity and realize optimizations using efficiency programs, in the chemical and EMC services in particular.

TÜV SÜD offers testing and certification services for medical products throughout their entire life cycle, from the idea for the product through to market maturity and eventually the end of the cycle. We are constantly expanding our portfolio of services in this area. In the fiscal year, activities were focused on the transition to the new Medical Devices Regulation (MDR). TÜV SÜD is one of the first providers in the world to offer the new certification. In September 2019, after having successfully received accreditation, we issued our first MDR certificate. The IT security of medical products is becoming increasingly important. We have developed a test flow chart for this purpose and carried out initial pilot projects, for example a cyber security check for infusion pumps. Furthermore, we also expanded our range of testing services for biological and chemical tests.

The new ISO 14155 (Good Clinical Practice) certification has also been established internationally on the market.

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The strategic cooperation with flowtify GmbH, Cologne, has added a digital component to our quality management services for food safety. Alongside digital, cloud-based quality and hygiene checks, we will also digitize the audit process.

We are driving digitization across all of our services and gear our innovations to our services towards the needs of our customers. For example, we address the requirements of the "quality manager" customer segment using a quality management platform. In this way, we are providing our customers with digital tools to analyze audit results, perform internal audits and supplier audits, carry out training sessions and briefings and implement new legal requirements.

We have expanded our IT-related services to include TISAX (Trusted Information Security Assessment Exchange), a standard defined by the automotive industry for information security in the value chain of the automotive industry. Our TISAX services include assessments, audits, certifications and comprehensive training.

Digitization of training is also being driven forward in the TÜV SÜD Digital Academy. This includes digital training sessions on our e-learning platform along with virtual reality (VR) assisted training sessions. Moreover, in the fiscal year TÜV SÜD also started collaborating with a renowned research institute to offer further practice-relevant training on cyber security. In the training session, participants get to grips with application-based and practice-oriented approaches and effects of attacks on production systems using cyber attack case studies.

At the Italian company P.H. S.r.l., Florence, we recognized impairment losses on property, plant and equipment after we had identified asset erosion.

We recognized a write-down on our participation in Uniscon identity control GmbH (Uniscon), Munich, after the earnings forecast was dampened somewhat due to delays in product development and market launch. Group information Corporate governance report **Economic report** 

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## **Business development**

In the fiscal year 2019, TÜV SÜD was able to grow organically in a difficult environment. Some of our markets were negatively impacted by political uncertainty and subdued economic growth. The implications of the dam collapse in Brazil, which occurred on January 25, 2019, and disposals of entities during the year also had a negative impact on business development.

### DAM COLLAPSE IN BRAZIL

#### Summary of the situation and investigations

The accident at the dam near to the village of Brumadinho in Brazil in January 2019 continues to impact the Group's financial performance and position. Various lawsuits have been filed against both our subsidiaries in Brazil and TÜV SÜD AG in connection with the certificate of stability issued in 2018 by our Brazilian subsidiary TÜV SÜD Brasil Engenharia e Consultoria Ltda. (TÜV SÜD BRASIL; formerly TÜV SÜD Bureau de Projetos e Consultoria Ltda.); further lawsuits have been threatened.

Alongside the internal investigations, which started in 2019 and have not yet been concluded, by internationally recognized technical experts and renowned law firms in Germany and Brazil, TÜV SÜD is also cooperating with the responsible investigating authorities.

#### Impact on the financial performance and position of the Group and TÜV SÜD AG

The probability-weighted scenarios used in the consolidated financial statements as of December 31, 2018 have been further developed on the basis of the current status of the investigations in order to realistically estimate the exposure. The amounts that have been estimated in this manner for the various scenarios stemming from lawsuits and bases of liability were accounted for in these financial statements as provisions. However, as the aforementioned investigations and TÜV SÜD's internal investigations are still ongoing and the factors of influence to be considered in a legal dispute are multi-faceted, the actual exposure may deviate from these estimates. Further disclosures on the estimates in respect of the financial implications and disclosures on uncertainty regarding the amount or maturity of amounts of the provisions have not been made in this regard pursuant to IAS 37.92, so as not to compromise the findings of potential proceedings and the Group's interests. Furthermore, provisions for legal defense and advisory costs of € 28.5 million have been recognized in the consolidated financial statements and provisions of € 23.7 million have been recognized in the annual financial statements of TÜV SÜD AG. Part of the legal defense costs may be covered by an insurance policy. Should the outcome of the legal proceedings find to the detriment of TÜV SÜD, this may result in substantial damage payments in subsequent years that could have a significant negative impact upon the financial performance and position and reputation of the Group and TÜV SÜD AG. The ability of the Brazilian subsidiary TÜV SÜD BRASIL and its direct shareholder TÜV SÜD SFDK Laboratório de Análise de Produtos EIRELI (TÜV SÜD SFDK), São Paulo, Brazil, to continue as a going concern is jeopardized should these companies be held liable for the dam collapse in Brazil and no further financial support were to be provided by the shareholders. For further explanations please refer to the remarks in the sections "Compliance and other risks" and "Overall statement on risks faced by the Group". Moreover, we also engaged an investigative commission consisting of external, internationallyrenowned technical experts, to provide an independent expert opinion on technical issues. The investigations have not yet been completed.

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Targets and results ≡0			
	2018	2019 Outlook	2019
Revenue Development compared to prior period	€ 2,498.5 million 2.9%	€ 2.6 billion 4% – 6%	€ 2,590.1 million 3.7%
EBIT Development compared to prior period	€ 105.5 million -47.6%	€ 220 million to € 240 million Corridor of 5% – 10%	€ 202.8 million 92.2%
EBIT margin	4.2%	High single-digit percentage range	7.8%
EVA	€ 12.9 million	€ 85 – 95 million	€ 64.0 million
Employees Development compared to prior period	22,424 1.4%	1%-6%	23,024 2.7%

Our forecast for the growth of our business in the fiscal year is based on the existing services business in operation at the time of planning, and therefore defined as organic growth.

The possible negative effects from the accident in Brazil and effects from the first-time application of IFRS 16 "Leases" were only taken into account for the outlook on fiscal year 2019 to a qualitative extent. In this respect, a deviation, in particular for the projected EVA target, was to be expected.

Despite the sale of a company in Austria, the INDUSTRY Segment achieved its forecast growth. Targeted EBIT growth – based on a low starting point – was exceeded. The EBIT margin also reached the planned upper single-digit percentage range.

The MOBILITY Segment exceeded its defined revenue targets in the fiscal year. The EBIT margin was above the expected corridor. However, planned EBIT was not achieved on account of higher personnel expenses in particular.

The CERTIFICATION Segment was not able to realize the targeted levels of revenue growth. Earnings targets were also not attained. Besides increased personnel expenses resulting from anticipated future market opportunities and higher expenses for IT projects, this was also due to a lower than planned utilization of test laboratories in some markets.

At  $\notin$  202.8 million, earnings before interest, before other financial result and before income tax, but after income from participations (EBIT), fell short of the expected corridor from a group perspective, primarily due to one-off effects. At 7.8%, the EBIT margin lay within the expected range and above the prior-year EBIT margin (4.2%).

The growth of revenue and slight decline in purchased service cost provided a good foundation for the growth of EBIT. However, this was exhausted in full by the year on year increase in personnel expenses and increased amortization of intangible assets and right-of-use assets and depreciation of property, plant and equipment and investment property. The first-time application of the new lease accounting pursuant to IFRS 16 also had an impact in this regard. Lower other expenses and positive earnings from investments accounted for using the equity method were not able to compensate for these negative effects.

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Adjusted EBIT, which is better suited for a multi-year comparison with other companies in the industry, at  $\notin$  225.9 million was 1.6% above the prior-year figure ( $\notin$  222.3 million) and thus, within the forecast range. The adjusted EBIT margin of 8.7% was below the prior year (8.9%), but within the anticipated planning corridor.

Consolidated earnings before taxes (EBT) increased – based on a low prior-year figure – by 94.9% to  $\notin$  184.4 million and thus exceeded the targeted growth rate. EBT adjusted for one-off effects was in line with the expected figure of  $\notin$  212.5 million, as was the adjusted EBT margin at 8.2% (prior year: 8.5%).

At € 132.6 million, consolidated earnings after taxes were € 84.4 million above the prior-year level of € 48.2 million and thus once again neared the level seen before the accident in Brazil (2017: € 138.8 million).

At € 64.0 million group EVA is above the prior-year figure (€ 12.9 million), however this is outside of the corridor we had assumed. This is due to the first-time recognition of right-of-use assets from leases and negative effects from the investigation into the dam collapse in Brazil. This key indicator is calculated from the net operating profit after tax (NOPAT) of € 148.3 million, less the Group's cost of capital, yielded by the product of average capital employed (€ 1,204.9 million) and WACC of 7.0%. NOPAT was positively influenced by the development of business from the INDUSTRY and MOBILITY Segments, however it also contains expenses in connection with the dam collapse in Brazil. Average capital employed was € 279.9 million above the unadjusted prioryear figure of € 925.0 million on account of the first-time recognition of right-of-use assets from leases (IFRS 16). The higher NOPAT led to a higher EVA figure. As expected, this was lower than projected in the 2019 forecast on account of the significant increase in capital employed and negative effects in connection with the investigation into the accident in Brazil. Adjusted for these effects, which were taken into account to a qualitative extent in the 2019 planning, the resulting comparable figure would have been within the expected corridor.

The average increase in FTEs from 22,424 to 23,024 is within the lower third of the anticipated range at 2.7%; this was due to the disposal of fully consolidated subsidiaries and targeted job cuts required to respond to local business development.

Planning and management of the TÜV SÜD Group is based on International Financial Reporting Standards (IFRSs). The key financial performance indicators defined for the TÜV SÜD Group are not relevant for TÜV SÜD AG in its function as a management holding company and are therefore not reliable.

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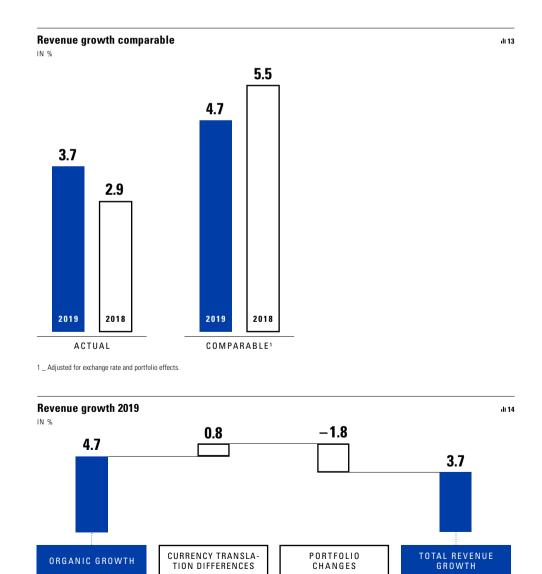
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## **Financial performance**

In the fiscal year 2019, TÜV SÜD generated **revenue** of  $\notin$  2,590.1 million, equivalent to an increase of  $\notin$  91.6 million or 3.7% compared to the prior year. Consequently, revenue growth was only slightly below the target corridor and we almost achieved our revenue target of  $\notin$  2.6 billion despite negative portfolio effects.

The basis for this was formed by organic growth of our existing service business. Here we generated revenue growth of  $\in$  117.5 million or 4.7% and thus achieved an increase in revenue within the targeted range of 4% to 6%. Positive currency effects of  $\in$  18.9 million (up 0.8%) also bolstered revenue development. By contrast, the sale of the fleet management business and Signon Austria in the fiscal year, together with the disposals of the German company APZ Auto-Pflege-Zentrum GmbH (APZ), Darmstadt, and the South Korean company TÜV SÜD KOCEN Ltd., Segonam-si, in the prior year led to a negative portfolio effect of 1.8% or  $\in$  44.8 million, which we were largely able to compensate for.

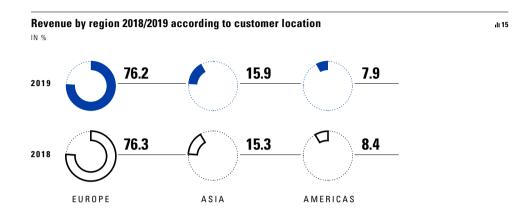


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Despite the divestitures, the German entities generated most of the revenue growth, with  $\notin$  55.1 million or 60.1% (prior year: 96.8%). The non-German entities contributed  $\notin$  36.5 million or 39.9% (prior year: 3.2%) to the revenue increase.



The share of total revenue generated abroad in the fiscal year was unchanged at 41.0% and thus exceeded the long-term target of 40.0%. Our European home market remains the strongest region in terms of revenue.

**Purchased service cost** decreased by 0.2% and developed at a lower rate than revenue. The decline results from the sale of the business for the preparation of vehicles during the second half of 2018. This was counteracted by the expansion of our services relating to vehicle management that require a lot of purchased services and our expanded academy offering in Germany along with general business development in China. At 12.0% (prior year: 12.5%), the ratio of purchased service cost to revenue declined year on year.

**Personnel expenses** rose by 4.2% to  $\notin 1,572.9$  million. At 68.9%, the ratio of personnel expenses to operating performance was roughly on par with the prior year (68.8%).

Expenses for wages and salaries including social security contributions rose by 4.1% compared to the prior year. Alongside the rise in headcount as a result of new hires, particularly in Germany, the US and China, coupled with collective wage increases in Germany, currency effects also contributed to this increase.

Retirement benefit costs increased by 4.9% to  $\notin$  107.8 million (prior year:  $\notin$  102.8 million). This is primarily due to the increased employer's share of pension insurance in Germany on account of the workforce expansion and payments to defined contribution pension funds in Germany and the UK. By contrast, current service costs decreased, in particular due to the lower number of active employees with pension entitlements in Germany and the UK.

Incidental personnel expenses rose by 3.6% to  $\notin$  28.9 million (prior year:  $\notin$  27.9 million) on account of increased training activities and higher fringe benefits for our employees in Germany.

Amortization, depreciation and impairment losses of intangible assets, right-of-use assets from leases, property, plant and equipment and investment property came to  $\notin$  150.2 million in the fiscal year, which was an increase of  $\notin$  68.6 million on the prior year. Scheduled amortization and depreciation of  $\notin$  145.2 million are  $\notin$  69.5 million (91.8%) higher than in the prior year ( $\notin$  75.7 million). Of this amount,  $\notin$  62.4 million is attributable to the first-time application of

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IFRS 16 Leases. Adjusted for the effects from leases, scheduled amortization and depreciation was  $\notin$  7.1 million (9.4%) above the prior-year figure due to high levels of investing activities ( $\notin$  126.0 million; prior year:  $\notin$  100.6 million).

Impairment losses were also recognized on property, plant and equipment as well as right-ofuse assets and intangible assets that had been capitalized in purchase price allocations. The unsatisfactory business development of individual subsidiaries in Germany, Italy and South Africa along with the US company PetroChem meant that impairments had to be recognized.

There was no **impairment of goodwill** during the fiscal year 2019. In the prior year, impairments totaling  $\in$  27.1 million were recognized, in particular on our business activities in Brazil and the fleet management business in Germany, which was held for sale.

**Other expenses** decreased by 22.8% to  $\notin$  430.8 million. This was primarily due to the first-time application of IFRS 16 and reduced expenses from dealing with the consequences of the dam collapse in Brazil in January 2019. While expenses for rented premises and travel expenses declined compared to amortization and depreciation on account of the new lease accounting, legal and consulting fees and other expenses decreased overall. By contrast, IT costs increased on account of both group-wide and segment specific digitization projects along with expenses for loss allowances on trade receivables in Germany and Spain. Cost of purchased administrative services, which also includes the use of temporary staff, also increased along with expenses for equipment maintenance.

In the prior year, **other income** mostly stemmed from the sale of APZ. As a consequence, this item decreased by 25.2% from  $\notin$  80.8 million in the prior year to  $\notin$  60.4 million. Alongside exchange rate gains, income from the reversal of provisions and rental and lease income remained the most significant items.

The **financial result** decreased by  $\leq 1.9$  million to  $\leq -4.9$  million in the fiscal year 2019 (prior year:  $\leq -3.0$  million). The positive contribution to earnings from investments accounted for using the equity method was completely absorbed by the negative interest result.

Earnings from investments accounted for using the equity method increased to  $\notin$  17.3 million and were significantly above the prior-year level ( $\notin$  8.5 million). Despite the unfavorable exchange rate between the euro and the Turkish lira, at  $\notin$  19.1 million the joint ventures TÜVTÜRK in Turkey delivered a significant positive contribution to earnings. Since the sale of the majority of the fleet management business in October 2019, our remaining stake has also been recognized as a joint venture. Our investments accounted for using the equity method in France and Spain showed positive earnings development, while the German company Uniscon once again recorded a negative contribution to earnings.

The other income/loss from participations includes expenses in connection with the remeasurement of Uniscon in particular. Income from the sale of an investment and from the reversal of impairment losses on non-consolidated companies in Spain and the remeasurement of the remaining minority interest in the fleet management business were not able to compensate for this. Consequently, other income/loss from participations was down by  $\notin$  3.2 million from  $\notin$  –0.6 million to  $\notin$  –3.8 million.

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The interest result declined by  $\notin 10.5$  million to  $\notin -20.8$  million in the fiscal year. It was negatively impacted for the first time in the amount of  $\notin 6.3$  million by interest expenses from lease liabilities. At the same time, the interest rate effect from unwinding the discount on provisions for long-service bonuses and medical benefits at  $\notin -2.5$  million and the discounting of a loan issued at  $\notin -2.5$  million also had a negative impact on other interest expenses. However, the net interest expense from pension provisions (unwinding of discount on pension obligations less interest income from plan assets) improved on account of the higher funding ratio of pension obligations. This resulted in a disproportionately large decrease in interest expenses (down  $\notin 0.2$  million) in relation to planned income (up  $\notin 1.4$  million).

Other financial result of € 2.4 million largely contains gains and losses from a special fund.

**Income before taxes** came to  $\notin$  184.4 million. This represents an increase of 94.9% on the prior year. The income tax expense increased by  $\notin$  5.4 million or 11.6% to  $\notin$  51.8 million. At 28.1%, the effective tax rate is below the prior-year figure of 49.0% and thus once again within a normal range.

**One-off effects** that were negative on a net basis totaling  $\notin 28.1$  million (prior year: negative effects of  $\notin 116.8$  million) had an impact on the development of earnings in the fiscal year:  $\equiv 06$ 

One-off effects		≡ 06	
IN & MILLION	2019	2018	
PPA amortization and impairment losses	10.2	12.2	
One-off effects, provisions and reversals of impairments	13.8	99.6	
Income from deconsolidation	-4.5	-23.2	
Impairment of goodwill	0.0	27.1	
One-off effects in income/loss from participations	3.6	1.1	
With EBIT effect	23.1	116.8	
One-off effect in interest income	5.0	0.0	
With EBT effect	28.1	116.8	

In **personnel expenses** we corrected the effect of  $\in$  2.8 million on the measurement of provisions for long-service awards, which resulted from the raised retirement age.

We recognized adjustments amounting to  $\in$  5.8 million in the **amortization of intangible assets**, which we identified in the course of a purchase price allocation (PPA amortization). One-off impairments of intangible assets, such as capitalized customer relationships, amounting to  $\notin$  4.4 million were also recognized in Germany and South Africa, as well as for property, plant and equipment in the US and Italy. In the prior year, one-off impairment losses totaled  $\notin$  5.7 million.

**Other expenses** were adjusted for technical advisory and legal costs which were incurred during the year in connection with the dam collapse in Brazil. In the prior year, alongside the provisions for potential obligations due to various liability risks and provisions for technical advisory and legal costs – also in connection with the disposal of entities – losses from the discontinuation of operations in South Korea and Singapore were also eliminated.

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Adjustments to **other income** largely relate to the gain on disposal of Signon Austria. In the prior year, this item contained gains on the disposal of APZ and RCI Consultants Inc., Houston, US.

In the prior year, **impairment of goodwill** from the petrochemical business in the US and the fleet management business that was sold in the interim was eliminated along with our activities in Brazil.

**Income**/loss from participations includes expenses associated with Uniscon along with reversals of impairment losses on non-consolidated companies and the gain on disposal of a participation in Spain. In the prior year, the write-down of an Indonesian participation was adjusted.

Alongside the effect from the change in the interest rate on the unwinding of the discount on the provisions for long-service bonuses and medical benefits, we also adjusted the discounting of a loan issued to Uniscon in the **interest result**.

In fiscal year 2019, at  $\in$  202.8 million **EBIT** was 92.2% above the prior-year figure of  $\in$  105.5 million after having decreased in the prior year by 47.6% or  $\in$  95.8 million.

The EBIT margin increased compared to the prior year by 3.6 percentage points to 7.8%. Adjusted EBIT increased by 1.6% to  $\in$  225.9 million (prior year:  $\in$  222.3 million). The adjusted EBIT margin stands at 8.7% (prior year: 8.9%). This shows that business activities were negatively impacted to a greater extent by operational factors for which adjustments are not to be made, for example the higher than proportional increase in personnel expenses compared to revenue along with higher amortization, depreciation and impairment losses on intangible assets, right-of-use assets from leases, property, plant and equipment and investment property. One-off effects on EBIT totaled  $\in$  23.1 million (prior year:  $\in$  116.8 million).

**NOPAT** increased by 91.1% to  $\notin$  148.3 million (prior year:  $\notin$  77.6 million). Alongside operating performance (up 4.1%), the fact that one-off negative factors such as goodwill impairment did not occur in the fiscal year also had a positive impact. However, even more favorable NOPAT development was prevented by the disproportionately high increase in personnel expenses.

At  $\notin$  1,204.9 million, **average capital employed** exceeded the unadjusted prior-year figure of  $\notin$  925.0 million by  $\notin$  279.9 million. The significant increase in non-current assets due to investing activities and the recognition of right-of-use assets from leases fully offset the decline in working capital. Other interest-bearing liabilities remained almost unchanged at the prior-year level. As of the reporting date, capital employed also showed an increase compared with the prior year (up  $\notin$  292.0 million).

At € 64.0 million **group EVA** is € 51.1 million above the prior-year figure of € 12.9 million.

At  $\notin$  184.4 million, **EBT** was above the prior-year level ( $\notin$  94.6 million). The adjusted earnings before taxes increased by  $\notin$  1.1 million to  $\notin$  212.5 million (prior year:  $\notin$  211.4 million).

The return on sales, calculated in proportion to earnings before taxes (EBT), stood at 7.1% in the fiscal year (prior year: 3.8%). The positive trend in business development continued in terms of EBT despite a lower financial result compared to the prior year. The adjusted EBT margin, which is more suitable for assessing results over time, declined to 8.2% (prior year: 8.5%) despite the adjustments carried out in the financial result.

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→ NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS, NOTES TO THE CONSOLIDATED INCOME STATEMENT SEE PAGES 117-122 In the fiscal year 2019, the **consolidated net income** increased to  $\notin$  132.6 million, exceeding the prior-year figure of  $\notin$  48.2 million by  $\notin$  84.4 million or 100%.

For further analyses of significant items of the consolidated income statement, we refer to the notes to the consolidated financial statements.

## **Cash flows**

## PRINCIPLES OF FINANCE MANAGEMENT AND FINANCIAL STRATEGY

With our financing activities, we aim always to maintain a sound financial profile while ensuring TÜV SÜD has sufficient liquidity reserves to meet its payment obligations at all times.

Further objectives of our corporate treasury function include managing the foreign exchange risk effectively and optimizing interest rates on an ongoing basis. Due to the significant volume of assets transferred to cover pension obligations, the investment and risk management of these positions is of great importance for us.

## **CAPITAL STRUCTURE**

TÜV SÜD finances itself with cash flows from operating activities. The available cash and cash equivalents are supplemented by a syndicated credit line of  $\notin$  200 million, with a term until the end of 2021, to give us the financial flexibility necessary to reach our growth targets. The contract also gave TÜV SÜD the opportunity to extend the credit line in 2018 one last time until the year 2021.

With this credit facility, the available cash and the annual free cash flow, the company has sufficient liquidity to finance its planned organic and external growth.

TÜV SÜD strives to ensure its credit rating remains firmly in the investment grade.

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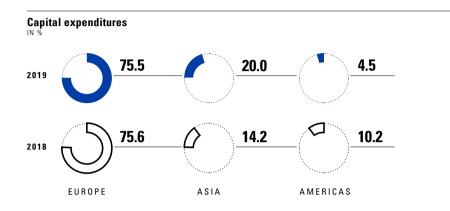
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## CAPITAL EXPENDITURES

The volume of capital expenditures excluding business combinations and excluding financial assets and securities came to  $\notin$  126.0 million in the fiscal year 2019 (prior year:  $\notin$  100.6 million).



At € 77.7 million, more than half of capital expenditures was carried out in our home market Germany. Investments were made in various IT application software but also in innovative software solutions such as the Training PowerHouse project in the Business Assurance Division. We invested further funds to expand the mobility testing facility in Heimsheim, to modernize the technical service centers and investments were made in testing laboratories, including those to perform battery tests and test of electromagnetic compatibility (EMC).

In Western Europe, we invested a total of  $\notin$  12.5 million, mainly in equipping our research and development center for the calibration of flow pressure instruments near Glasgow, UK. In Central & Eastern Europe, investing activities focused on the MOBILITY Segment. We invested a total of  $\notin$  4.4 million in expanding the testing facilities for dynamic component testing (DYCOT) and highly automated driving (HAD) as well as modernizing our center for emissions testing.

We are investing  $\notin$  25.0 million in the ASIA Region, this equates to 20.0% of the total investment volume. Investments were primarily carried out in battery testing and EMC testing facilities along with chemical testing facilities within the Product Service Division. We spent around  $\notin$  5.6 million or 4.5% of our total volume of investment in the AMERICAS Region. The focus here was also on equipment for the testing laboratories, including for environmental simulation and testing electromagnetic compatibility.

We invested  $\in$  18.0 million in the acquisition of entities in 2019 (prior year:  $\in$  2.1 million). This includes payments to acquire shares in consolidated and non-consolidated affiliated companies.

As of the reporting date, there were no material investment obligations.

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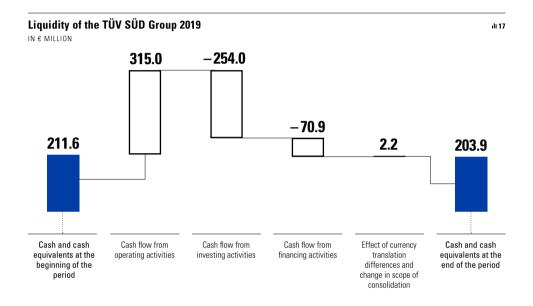
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Cash and cash equivalents decreased by  $\notin$  7.7 million or 3.6% to  $\notin$  203.9 million in the fiscal year 2019; of this,  $\notin$  0.6 million is recognized as non-current assets and disposal groups held for sale. Cash and cash equivalents correspond to 8.4% of total assets (prior year: 10.2%). Cash and cash equivalents as presented in the consolidated statement of financial position stand at  $\notin$  203.3 million. The development of cash and cash equivalents in the fiscal year is presented in detail in the consolidated statement of cash flows.



Consolidated net income, as the starting point used in the statement of cash flows, stands at  $\notin$  132.6 million in the fiscal year and was thus  $\notin$  84.4 million higher than in the prior year ( $\notin$  48.2 million), which had been burdened by the provisions in connection with the accident in Brazil.

Gains from the disposal of land in Germany and the earnings from the sale of German and Austrian subsidiaries and a participation in Spain reduced the basis for the statement of cash flows by  $\in$  4.6 million (prior year:  $\in$  19.1 million). The non-cash items amortization, depreciation, impairment losses and reversals of impairments come to  $\in$  153.3 million and were therefore  $\in$  40.2 million higher than the prior-year figure of  $\in$  113.1 million. Amortization, depreciation and impairment losses include amortization and impairment losses on right-of-use assets due to the first-time application of IFRS 16 in the amount of  $\in$  64.1 million. Impairment losses were once again recognized on intangible assets such as customer relationships, and on property, plant and equipment. Other non-cash income and expenses particularly include the rolling forward of the at-equity valuation and the fair value adjustment of an option to acquire further shares in a participation accounted for using the equity method.

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The changes in working capital and the other assets and other liabilities resulted in a cash outflow in the fiscal year of  $\in$  3.4 million compared to a cash inflow in the prior year of  $\in$  52.9 million. The cash tied up in current assets resulted from the general increase in revenue in Germany and China, particularly in the MOBILITY and CERTIFICATION Segments. However, the decline in revenue in the INDUSTRY Segment experienced in the US, Spain and Germany did have an impact. On the equity and liabilities side, cash tied-up was positively impacted due to trade payables, including service contracts not yet invoiced in the CERTIFICATION Segment and other liabilities. The prior year was characterized by the provisions recognized in connection with the dam collapse in Brazil. **Cash flow from operating activities** therefore increased by  $\notin$  106.8 million or 51.3% from  $\notin$  208.2 million to  $\notin$  315.0 million.

**Cash outflow from investing activities** fell by  $\notin$  3.8 million to  $\notin$  254.0 million in the fiscal year. Cash paid for investments in intangible assets, and property, plant and equipment increased by  $\notin$  14.7 million to  $\notin$  117.7 million (prior year:  $\notin$  103.0 million). Investments were made mainly in software, technical service centers and testing facilities. Cash received from the disposal of assets primarily relates to the sale of land and software in Germany.

There was a net outflow in financial assets, among other things due to an increase in the shareholding in and an increase in the loan to Uniscon, spending on the acquisition of participations in Germany and China along with the freezing of the funds of TÜV SÜD BRASIL. In the prior year, the change in financial assets was above all influenced by the increase of the loan to Uniscon.

A cash inflow of  $\notin$  6.8 million was generated from transactions during the year, in particular the sale of the fleet management business and Signon Austria. In the prior year, there was an overall cash inflow of  $\notin$  10.3 million from the sale of fully consolidated subsidiaries. This was balanced by the acquisition of the operations of the official inspection body for the state of Baden-Württemberg and the payment of the earn-out liability for the Spanish ATISAE group.

The acquisition of securities in a special fund and the liquidation of various different securities investments in China and South Korea resulted in a net payment outflow of  $\notin$  8.0 million (prior year:  $\notin$  69.2 million).

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The external financing of pension obligations increased by € 21.4 million from € 95.3 million to € 116.7 million. Alongside the reinvestment of pension payments, extraordinary contributions were made to TÜV SÜD Pension Trust e.V. (€ 30.0 million; prior year: € 30.0 million) and TÜV Hessen Trust e. V. (€ 20.5 million; prior year: € 0.0 million).

Free cash flow – defined as cash flow from operating activities less cash paid for investments in intangible assets, property plant and equipment and investment property – was € 197.3 million in the fiscal year 2019 (prior year: € 105.2 million). This represents an increase of 87.5% on the prior year. Increases in investments in intangible assets and property, plant and equipment were financed entirely from the higher cash flow from operating activities. At a value of 1.49, the cash conversion rate, which is calculated from the ratio of free cash flow to consolidated net income, is therefore below the prior-year figure of 2.18.

Cash outflow from financing activities increased by € 58.4 million to € 70.9 million (prior year: € 12.5 million), largely due to the effect from the first-time application of IFRS 16 "Leases" of € 59.8 million. The dividend distribution to TÜV SÜD Gesellschafterausschuss GbR remained unchanged. Payments to non-controlling interests were almost unchanged on a par with the prior year. On the whole, repayments of loans and other financial obligations were made in the amount of € 3.0 million (prior year: € 0.4 million).

The value of cash and cash equivalents of  $\notin$  203.9 million – consisting of checks, cash in hand, bank balances and securities with an original term of less than three months and including the cash and cash equivalents of disposal groups – was  $\in$  7.7 million lower than the prior-year level. With the securities disclosed in other financial assets which can be liquidated at any time, there are cash and cash equivalents totaling € 323.0 million (prior year: € 323.4 million). Additional financing flexibility is provided by various credit lines (€ 12.9 million) and the existing syndicated loan agreement of € 200.0 million.

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Composition of the statement of financial position of the TÜV SÜD Group: Assets/Equity and liabilities

## **Financial position**

IN % ASSETS 2019 2018 65.0 58.1 NON-CURRENT ASSETS thereof<sup>1</sup> 20.4 27.1 INTANGIBLE ASSETS 0.0 16.5 RIGHT-OF-USE ASSETS FROM LEASES 33.1 40.5 PROPERTY, PLANT AND EQUIPMENT 17.9 20.4 DEFERRED TAX ASSETS 35.0 41.9 CURRENT ASSETS thereof<sup>1</sup> 57.9 56.1 TRADE RECEIVABLES 23.8 24.1 CASH AND CASH EQUIVALENTS EQUITY AND LIABILITIES 2019 2018 37.2 38.8 EQUITY 36.4 34.5 NON-CURRENT LIABILITIES thereof<sup>1</sup> 61.7 79.6 PENSION AND SIMILAR OBLIGATIONS 23.4 0.0 NON-CURRENT LEASE LIABILITIES 26.4 26.7 CURRENT LIABILITIES thereof<sup>1</sup> 23.3 27.6 CURRENT PROVISIONS 33.0 35.3 OTHER CURRENT LIABILITIES TOTAL ASSETS € 2,440.2 MILLION TOTAL ASSETS € 2,071.8 MILLION

1 \_ As a percentage of current or non-current item, not of total assets.

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## ASSET AND CAPITAL STRUCTURE

Total assets increased by  $\notin$  368.4 million or 17.8% to  $\notin$  2,440.2 million in the fiscal year (prior year:  $\notin$  2,071.8 million).

Non-current assets rose by  $\notin$  381.5 million to  $\notin$  1,585.0 million. Current assets decreased by  $\notin$  13.1 million to  $\notin$  855.2 million.

**Intangible assets** decreased by  $\notin$  2.6 million or 0.8% to  $\notin$  323.0 million. Goodwill decreased due to the reclassification of a fully consolidated subsidiary in Germany to assets and disposal groups held for sale. Other intangible assets are at the prior-year level. Scheduled amortization and impairments of intangible assets, in particular of software and customer relationships, were almost fully compensated for by the extension of a software licensing agreement in Germany.

**Right-of-use assets from leases** were recognized for the first time in line with IFRS 16, which led to a value of  $\notin$  269.7 million at the time of initial recognition. At year-end, right-of-use assets from leases recognized totaled  $\notin$  261.1 million; scheduled amortization amounted to  $\notin$  62.4 million in the fiscal year.

Additions to **property, plant and equipment** related to investments in the expansion and modernization of testing facility capacity in Germany, the Czech Republic, China and the UK. There were also considerable investments in furniture and fixtures, particularly in Germany. The sale of land in Germany reduced the portfolio of **investment properties** by  $\notin$  0.3 million to  $\notin$  3.0 million.

Investments accounted for using the equity method increased by  $\in$  9.2 million to  $\in$  48.7 million. After the sale of the majority interest in the fleet management business in October 2019, the company in question will be run together with a strategic partner as a joint venture, the remaining minority interest was reclassified to this item. In addition, the significant contribution to earnings of the Turkish joint ventures TÜVTÜRK led to a significant increase, despite the unfavorable exchange rate. The development of the German company Uniscon ran counter to this.

**Other non-current financial assets** increased by  $\notin$  38.6 million to  $\notin$  131.9 million, due in particular to the purchase of securities ( $\notin$  21.4 million) in the special fund. This item also contains shares in a newly established Chinese company.

The increase in **deferred tax assets** of  $\notin$  38.6 million to  $\notin$  284.3 million primarily stemmed from the changes to pension provisions and plan assets.

**Trade receivables** increased by € 8.3 million or 1.7% in fiscal year 2019 to € 495.5 million. Therefore, they developed at a lower rate than revenue growth, which stood at 3.7%. Trade receivables – excluding contract assets – decreased by € 0.3 million or 0.1% to € 368.3 million. The change was for billing-related reasons, primarily from the companies in the US and Spain.

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Contract assets increased due to ongoing large contracts in Germany and China by  $\in$  8.6 million or 7.2% to  $\in$  127.2 million.

As a result of the decision to discontinue or sell the remaining petrochemical business in the US and to sell our planning business for railway systems, the corresponding trade receivables ( $\notin$  15.7 million) were reclassified to non-current assets and disposal groups held for sale. This is equivalent to 3.2% of receivables.

Days sales outstanding (DSO), including receivables reported in accordance with IFRS 5, stand at 55 days (prior year: 58 days) on average throughout the Group.

**Other receivables and other assets** decreased by  $\notin$  3.4 million, from  $\notin$  104.7 million to  $\notin$  101.3 million (down 3.2%), mainly due to the liquidation of securities investments in China and South Korea. The position also includes financial derivatives with positive market values.

**Cash and cash equivalents** decreased by  $\notin$  6.3 million to  $\notin$  203.3 million. They are therefore equivalent to 8.3% of total assets (prior year: 10.1%).

As of December 31, 2019, **non-current assets and disposal groups held for sale** contained the assets of the planning business for railway systems, for the first time, and the assets of the US company PetroChem.

**Equity** increased by  $\notin$  102.1 million (up 12.7%) in the fiscal year, and stood at  $\notin$  906.8 million as of the reporting date. The increase is mainly due to the positive consolidated net income of  $\notin$  132.6 million (prior year:  $\notin$  48.2 million). Actuarial losses after taking into account deferred taxes and dividend distributions had the opposite effect. The equity ratio decreased by 1.6 percentage points to 37.2%.

**Non-current liabilities** rose by  $\in$  175.9 million to  $\in$  889.7 million. The material change resulted from the first-time recognition of non-current lease liabilities according to IFRS 16 ( $\notin$  208.6 million).

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Provisions for pensions and similar obligations decreased by 3.4% or € 19.5 million to € 548.8 million (prior year: € 568.3 million).

The group-wide defined benefit obligation reported at € 2,256.3 million is € 191.9 million higher than the prior-year figure (€ 2,064.4 million). An increase of € 172.5 million was observed in Germany. Actuarial losses from the change to the discount rate from 1,70% to 0,95% and experience losses exceed the gains from demographic assumptions after the required raising of the retirement age. Pension payments, which exceeded the total of service and interest cost, had the opposite effect. The change outside of Germany (up € 19.4 million) was largely attributable to the lower discount rate and exchange rate losses.

In order to extend the external financing of pension obligations in Germany, TÜV SÜD has transferred operating assets to TÜV SÜD Pension Trust e.V., Munich, and TÜV Hessen Trust e.V., Darmstadt, under a contractual trust agreement. The funds are administered by these two associations in a fiduciary capacity, and serve solely to finance pension obligations. Pursuant to IAS 19, the transferred trust funds are to be treated as plan assets, and are therefore offset against pension obligations. As of the reporting date, the plan assets totaled  $\notin$  1,707.5 million. Of this figure, € 1,510.1 million was attributable to the trust assets of TÜV SÜD Pension Trust e.V., and € 55.2 million to TÜV Hessen Trust e.V. The remaining plan assets of € 147.2 million consisted mainly of policy reserves due to employer's pension liability insurance and assets for pension plans in other countries.

Across the entire Group, plan assets increased by  $\notin$  211.4 million. The increase was attributable in particular to the actual return on plan assets in Germany and abroad of € 159.6 million as well as one-off additions in Germany of € 50.5 million. The pension payments made in Germany of € 61.7 million (prior year: € 58.6 million) were recontributed as part of refund entitlements and thus strengthen the plan assets.

Due to the increase in the plan assets, which was higher than the increase in the defined benefit obligation, the percentage of pension obligations funded by plan assets improved overall from 72.5% in the prior year to 75.7% as of the reporting date. In Germany, coverage stood at 75.3% (prior year: 71.9%).

For a detailed presentation of the development of pension obligations and plan assets, please refer to the notes to the consolidated financial statements.

 $\rightarrow$  notes to the consolidated FINANCIAL STATEMENTS **PROVISIONS FOR PENSIONS AND** SIMILAR OBLIGATIONS SEE PAGES 131 - 138

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**Other non-current provisions** decreased by  $\notin$  4.0 million to  $\notin$  107.3 million. These contain provisions for long-services awards and special allowances for long-standing employees, which have increased on account of the change in the interest rate and adjustment of the retirement age. A reclassification ( $\notin$  9.8 million) to current provisions led to a decline in this item, under which the non-current portion of the provisions in connection with the dam collapse in Brazil is also recognized. It is not yet possible to recognize a possible insurance refund claim relating to this.

**Other non-current liabilities** fell by  $\notin$  7.1 million to  $\notin$  0.1 million. This item largely contains a put option from the sale of a share in South Africa, which has now been reclassified to current liabilities.

**Current liabilities** increased by  $\notin$  90.4 million to  $\notin$  643.7 million, in particular due to the firsttime recognition of short-term lease liabilities pursuant to IFRS 16 ( $\notin$  55.2 million) and higher trade payables.

**Current provisions** mainly relate to bonus obligations to employees, severance payments, provisions for legal and advisory costs and restructuring provisions.

The volume of **trade payables**, including contract liabilities, increased by  $\notin$  30.7 million to  $\notin$  181.3 million. This change was driven by the increase in trade payables in Germany for billing-related reasons, while contract liabilities increased in particular in China, Singapore and the US. Advance payments have also been reported in this position since the implementation of IFRS 15 "Revenue from Contracts with Customers".

**Other current liabilities** increased by  $\notin$  17.1 million to  $\notin$  212.3 million. Among other things, these include obligations to employees for vacation and overtime, as well as obligations for outstanding invoices. Other liabilities increased predominantly due to the outstanding purchase price payment for TÜV SÜD Föderation GmbH, Munich, which was acquired as of December 31, 2019.

Liabilities directly associated with assets and disposal groups held for sale mainly include other current liabilities attributable to the petrochemical business and the planning business for railway systems.

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### SUMMARY REVIEW OF THE SITUATION

2019 met our expectations in terms of revenue development. Organic revenue growth was within the target corridor of 4% to 6%, the projected revenue target of  $\in$  2.6 billion was almost reached. All this was achieved despite the sale of some fully consolidated subsidiaries. Development was supported by positive currency effects and the organic growth of existing companies in particular.

All segments made a positive contribution to the growth of the Group's revenue. With the exception of the AMERICAS Region, the regions, including our core market of Germany, saw positive revenue development.

The decline in purchased services had a positive impact on EBIT development, as did the lower level of other expenses compared to the prior year, which were burdened to a far lesser extent by technical advisory and legal costs than in the prior year. The overall favorable development of income from investments accounted for using the equity method also contributed to the EBIT increase. By contrast, increased personnel expenses and higher amortization and depreciation ultimately prevented projected EBIT from being reached. The EBIT margin rose to 7.8% (prior year: 4.2%). Despite adjustments made on a small scale, adjusted EBIT (€ 225.9 million) developed positively and thus within the target range of € 220 million to € 240 million. The adjusted EBIT margin stood at 8.7% and is thus below the prior-year figure of 8.9%.

There was also an increase in earnings before taxes (EBT) after adjusting for one-off effects. However, at 8.2% the adjusted EBT margin is also below the prior-year level (8.5%).

The substantial investment plans, securities investments and the one-off additions to pension assets have been financed exclusively from the cash flow from operating activities. Consequently, cash and cash equivalents are almost at the prior-year level.

TÜV SÜD still has comfortable liquidity secured thanks to our good credit ratings and the existing syndicated credit line.

This is how we fulfil our mission today and in the future. We protect people, the environment and assets around the world while maintaining neutrality and objectivity. To this end, we develop and use high-quality, innovative and sophisticated services for virtually all sectors. In doing so, we lay the foundation for TÜV SÜD's success - today and in the future.

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## Comments on TÜV SÜD AG

In addition to reporting on the TÜV SÜD Group, we explain below the financial performance and position of TÜV SÜD AG's annual financial statements in accordance with German GAAP.

TÜV SÜD AG is the management holding company of TÜV SÜD Group. In the fiscal year 2019 the Group comprised a total of 49 (prior year: 47) German and 119 international entities (prior year: 123). In addition to providing support to the participations, TÜV SÜD AG provides central services, in particular in the areas of legal, HR, finance and controlling, innovation, organization, as well as sales and marketing. Via an agency agreement with TÜV SÜD Business Services GmbH, Munich, the real estate owned by the company is leased at arm's length prices, primarily to subsidiaries within the TÜV SÜD Group. Thus, the economic development of TÜV SÜD AG depends on dividend distributions and profit and loss transfer agreements of the participations, income from the leased real estate, income from investments, income from charges relating to trademarks, offsetting between divisions and regions, charges of company-specific holding services, as well as management and other services.

## FINANCIAL PERFORMANCE

Income statement of TÜV SÜD AG		≡ 07
IN € MILLION	2019	2018
Revenue	114.7	103.5
Total operating performance	114.7	103.5
Other operating income	270.1	6.9
Cost of materials	- 29.7	-25.8
Personnel expenses	-32.4	-34.4
Amortization, depreciation and impairment losses	-8.6	-8.6
Other operating expenses	- 92.9	- 150.3
Financial result	151.5	11.3
Income taxes	-4.7	- 19.9
Earnings after taxes = net income for the year (prior year: net loss for the year)	368.0	-117.3
Profit carried forward	0.1	119.5
Retained earnings	368.1	2.2

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TÜV SÜD AG's total operating performance increased by € 11.2 million or 10.8% to € 114.7 million in the fiscal year 2019. Income realized from the management services charged to subsidiaries rose due to the increase in cost allocations in Germany and abroad, as well as the favorable development of revenue.

Other operating income increased by  $\notin$  263.2 million and thus by more than 100% to  $\notin$  270.1 million, This results in particular from the merger of TÜV SÜD Umwelt GmbH, Munich, and its subsidiaries at fair value.

Personnel expenses decreased by € 2.0 million or 5.8% to € 32.4 million, retirement benefit costs declined in particular on account of the change to demographic assumptions on the retirement age.

The amortization and depreciation of intangible assets and property, plant and equipment was on a par with the prior year at  $\in 8.6$  million.

Other operating expenses decreased by € 57.4 million or 38.2% to € 92.9 million. This item continues to be impacted by ongoing technical advisory and legal costs along with additional provisions in connection with the dam collapse in Brazil.

The financial result increased by € 140.2 million to € 151.5 million, primarily due to the considerably higher return on plan assets. In addition, the contributions to earnings by subsidiaries with profit and loss transfer agreements were above the prior-year level and our Turkish joint ventures made a positive value contribution despite negative currency effects (€ 6.3 million, prior year: € 4.5 million).

Income and expenses related to the CTA are presented net in the interest result. CTA investments generated income of € 147.4 million (prior year: € 29.6 million) in the fiscal year. A gain was also realized from interest rate and currency hedging.

The operating result, defined as earnings before taxes and the financial result, at € 221.1 million was above the prior-year figure of € – 108.7 million.

Taxes on income resulted in a € 15.2 million lower tax expense of € 4.7 million (prior year:  $\in$  19.9 million). This is due to higher tax additions to pension provisions in the TÜV SÜD AG tax group along with lower taxable income in connection with the Oktagon fund.

The € 368.0 million net income for the year is € 485.3 million above the prior year's net loss of € 117.3 million.

The TÜV SÜD Group is managed using performance indicators based on figures prepared in accordance with IFRS. These are not relevant to TÜV SÜD AG's separate financial statements as the Group parent.

TÜV SÜD AG's net result for the year in accordance with German GAAP is primarily influenced by the financial result, which depends on the interest rate as well as on the profit distributions from subsidiaries.

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## **NET ASSETS**

Statement of financial position of TÜV SÜD AG		≡ 08
IN & MILLION	Dec. 31, 2019	Dec. 31, 2018
Assets		
Intangible assets	13.0	4.7
Property, plant and equipment	105.4	104.1
Financial assets	1,092.0	917.2
Fixed assets	1,210.4	1,026.0
Receivables and other assets	66.5	37.0
Cash and cash equivalents	61.0	80.9
Current assets	127.5	117.9
Prepaid expenses	2.1	2.3
Excess of covering assets over pension and similar obligations	314.7	168.1
Total assets	1,654.7	1,314.3
Equity and liabilities		
Capital subscribed	26.0	26.0
Capital reserve	124.4	124.4
Revenue reserves	405.1	405.1
Retained earnings	368.1	2.2
Equity	923.6	557.7
Tax provisions	14.0	9.9
Other provisions	113.1	101.3
Provisions	127.1	111.2
Liabilities	604.0	645.4
Total equity and liabilities	1,654.7	1,314.3

Within fixed assets, intangible assets increased primarily as a result of the conclusion of a software licensing agreement. The increase in property, plant and equipment largely results from investments in the mobility testing facility in Heimsheim. The acquisition of TÜV SÜD Föderation GmbH, Munich, and the shares of subsidiaries in Germany transferred as part of the merger of TÜV SÜD Umwelt GmbH, Munich, led to a higher amount of financial assets. The capital reductions at TUV SUD Asia Pacific Pte. Ltd., Singapore, and TUV SUD China Holding Ltd., Hong Kong, had an offsetting effect.

Receivables and other assets rose by  $\notin$  29.5 million to  $\notin$  66.5 million, mainly due to receivables from affiliated companies relating to in-house cash transactions (cash pool).

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The excess of covering assets over pension and similar obligations increased by € 146.6 million to € 314.7 million on account of the favorable development of the participation held in the Oktagon fund and the PT "Alternatives" SICAV-FIS S.A.

An increase of  $\notin$  4.1 million to  $\notin$  14.0 million was recorded for tax provisions resulting from adjustments to tax liabilities for prior years.

Other provisions increased by € 11.8 million to € 113.1 million. They contain provisions for various liability risks and technical advisory and legal costs that are expected for coming years as a result of the accident in Brazil. It was not yet possible to recognize a possible insurance refund claim.

The year on year decrease in liabilities of  $\notin$  41.4 million to  $\notin$  604.0 million largely results from repaid loan obligations in particular by TUV SUD Asia Pacific Pte. Ltd., Singapore, and TUV SÜD Energietechnik GmbH Baden-Württemberg, Filderstadt.

## CASH FLOWS AND CAPITAL STRUCTURE

Our financial management aims to maintain solvency at all times and continuously optimize liquidity.

Cash and cash equivalents came to  $\notin$  61.0 million, which is significantly lower than the figure for the prior year ( $\notin$  80.9 million). The transfer of  $\notin$  30.0 million to the CTA, and the settlement of liabilities for subsidiaries was a key factor in this regard. Payments by the subsidiaries from operating activities, which flowed to TÜV SÜD AG via the cash pool, had an offsetting effect.

Equity increased by € 365.9 million to € 923.6 million. The increase corresponds to the net income for the year of  $\notin$  368.0 million less the dividend payment of  $\notin$  2.1 million to TÜV SÜD Gesellschafterausschuss GbR, Munich. Together with the profit carried forward from the prior year, retained earnings come to € 368.1 million.

Total assets increased by € 340.4 million to € 1,654.7 million. The equity ratio increased from 42.4% to 55.8%.

## OVERALL STATEMENT ON TÜV SÜD AG'S SITUATION

The fiscal year 2019 was in line with the expectations of the Board of Management. Revenue and liquidity developed in line with our forecast.

Going forward, TÜV SÜD AG will continue to depend on the business development of its subsidiaries. The discount rate for the pension obligations and the covering assets influence earnings as external factors. The Board of Management of TÜV SÜD AG expects the financial position and cash flows to remain stable in the future. The dividend distribution is ensured for the coming years.

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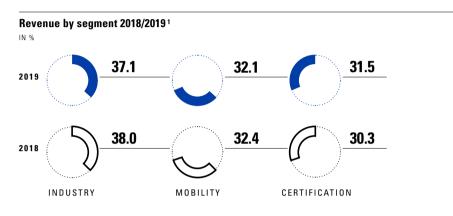
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## Segment report

In an economic environment characterized by political uncertainty and technological changes, all operating segments continued to grow in the fiscal year 2019.



1 \_ Without OTHER and reconciliation.

#### INDUSTRY

The 7,453 employees (FTE average) of the INDUSTRY Segment generated revenue of  $\notin$  960.8 million. This is equivalent to 37.1% of consolidated revenue. The development of revenue (up 1.1%) was in line with our expectations; the projected revenue growth was achieved.

The **Industry Service Division** still makes the greatest contribution to the segment's revenue, with a share of around 60%. An increase in revenue (up 0.3%) was recorded in the fiscal year. There was a negative impact on business development in particular due to the temporary suspension of our experts in certain Spanish provinces, the discontinuation of selected services after sharpening our product portfolio and – owing to the uncertainties surrounding Brexit – delays in awarding projects in the UK. In addition, the market environment for our petrochemical services in the US remains challenging, as does the market for conventional power generation in Germany.

By contrast, positive impetus for growth came from pipeline projects in Germany and from our services for mobile constructions, in particular in amusement parks in Germany and the Middle East. The innovative sound emission inspection also recorded very good revenue growth.

Around 40% of revenue in the segment was generated by the **Real Estate & Infrastructure Division**. The focus remained on the inspection of lifts and buildings in Germany and internationally in Spain, the Middle East and China. The order situation in the UK remained at a low level due to the political uncertainty. Growing trends such as energy-efficient and sustainable buildings fueled growth. Despite the sale of Signon Austria, revenue growth in the division was around 2%.

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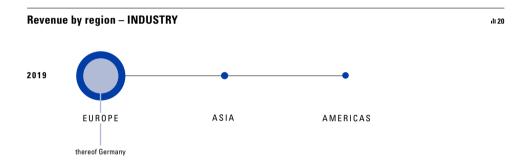
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At  $\notin$  86.9 million, EBIT in the INDUSTRY Segment was 34.5% above the prior-year figure of  $\notin$  64.6 million, which was negatively impacted by impairment losses at subsidiaries and the provisions recognized for technical advisory and legal costs. The increase in EBIT that was achieved thus exceeded our expectations. On the basis of a slight increase in revenue and supported by lower personnel expenses, the development of EBIT was negatively impacted by higher amortization and depreciation resulting inter alia from the first-time application of the new lease accounting.

The EBIT margin stands at 9.0% (prior year: 6.8%) and is in line with the projected target margin.

Segment assets increased by  $\notin$  41.3 million to  $\notin$  543.9 million (prior year:  $\notin$  502.6 million) and resulted mainly from the first-time recognition of right-of-use assets from leases.

€ 16.6 million was invested in, among other things, the completion of a research and development center for the calibration of flow pressure instruments near Glasgow, UK. #20



## MOBILITY

With 6,121 employees (FTE average), the MOBILITY Segment generated revenue of  $\notin$  830.6 million in the fiscal year. This is equivalent to 32.1% of consolidated revenue. The increase in revenue of  $\notin$  21.1 million or 2.6% is in line with our expectations.

We achieved revenue growth once again with our core business of roadworthiness tests and exhaust gas analyses. In Germany, we performed more than 5.7 million roadworthiness tests and thus expanded our market share further. The development was also supported by price adjustments. An increase in volume was also achieved in Turkey, while the market in Spain stagnated. We continued on our internationally oriented growth trajectory with the business in damage assessment reports. Due to the sale of the fleet management business, there was a decrease in revenue from services relating to fleet management. Our homologation services were in demand particularly in Germany, the Czech Republic and China, although downtimes in Germany due to the implementation of the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP) had to be compensated for. There was also positive growth in medical/psychological services, which we offer exclusively in Germany.

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The business model in the MOBILITY Segment is partly geared to franchising as a growth driver. At 14.0% (prior year: 15.1%), the ratio of purchased service cost to revenue is thus above the group-wide ratio of purchased service cost to revenue of 12.0%. The decrease in the fiscal year results from the sale of the business for the preparation of vehicles in the prior year. At  $\notin$  71.1 million, EBIT did not reach the level anticipated. EBIT development was impacted by higher personnel expenses – as a result of collective pay increases and provisions for long service awards – and higher IT expenses. This could not be offset by the positive contribution to earnings from the joint ventures TÜVTÜRK in Turkey.

As of the reporting date, segment assets came to  $\notin$  442.6 million (prior year:  $\notin$  372.6 million). Within fixed assets, the effect from the sale of the fleet management business was more than offset by the first-time recognition of right-of-use assets from leases. In addition, trade receivables and other receivables increased the working capital.

In 2019,  $\notin$  25.4 million was invested in, among other things, the ASPro IT application system, innovative software products such as DVS Visual AI, a software for the automated detection of damages, as well as the modernization of the technical service centers and the mobility testing facility in Heimsheim.



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### CERTIFICATION

The CERTIFICATION Segment contributed 31.5% to consolidated revenue ( $\notin$  817.1 million). The average headcount (FTE average) in this segment was 7,338 in the fiscal year 2019. With an increase in revenue of  $\notin$  60.0 million or 7.9%, the expected growth rate was not achieved; however, the absolute revenue generated was within the planned corridor.

The **Product Service Division** generated around two thirds of the segment's revenue. It also made the biggest absolute contribution to the increase in the segment's revenue, with revenue growth of 10.4%. Our focus markets are Germany, China and the US. Consumer goods audits and certifications were in demand particularly in China and Germany. The trade dispute between China and the US as well as the uncertainties surrounding Brexit led to a shift in demand and created price pressure in the market. In the industrial goods sector, we are positioning ourselves as a solution provider for electromobility, connected mobility and global market access. The highest revenue growth in this sector was generated in Germany, China and the UK, with our services relating to battery testing recording strong growth. As the largest Notified Body, we benefit from the growth of the global medical market in all countries. The small number of available Notified Bodies for testing in accordance with the European Medical Device Regulation (MDR) led to a considerable increase in demand on the European market. We also benefited in the US from the increasing requirements for the security of medical products. Testing of food and cosmetic products saw a positive development particularly in ASMEA as well as Brazil.

The **Business Assurance Division** recorded a positive development in revenue (up 3.1%), with most of the revenue being generated in Germany (around 65%). The portfolio of services relating to quality, environmental, energy and IT security management systems contributes significantly to the division's revenue. As expected, the positive trend from the audits of the two management system standards ISO 9001 and IATF 16949 in the prior year could not be continued, resulting in a slight decline in revenue. By contrast, the academy business recorded strong growth. Germany remains our core market in this respect, with a contribution to revenue of more than 90%, primarily in the open seminars area. Global market penetration is steadily growing, with initial revenue generated in Japan, South Korea and the US. Cyber Security Services is growing steadily. Apart from Germany, these services were in demand particularly in Eastern Europe and China.

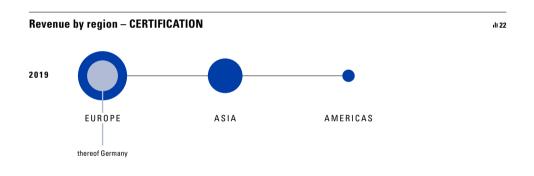
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Purchased services in the segment developed at a lower rate than revenue. The ratio of purchased service cost to revenue is 15.8% (prior year: 16.5%), due in particular to the customary commissioning of external service providers in the academy business. Personnel expenses and amortization and depreciation increased at a faster rate than revenue. Personnel expenses increased in particular in Germany, as a result of collective pay increases, China, the UK and the US. The first-time amortization of right-of-use assets from leases impacted on amortization, depreciation and impairment losses. In other expenses, IT costs in particular rose due to spending on innovation projects. EBIT in the CERTIFICATION Segment amounted to  $\in$  65.8 million; the EBIT margin achieved was 8.1%. Both figures fell short of the projected targets.

Segment assets increased to  $\notin$  452.0 million. This is equivalent to an increase of  $\notin$  79.8 million compared to the prior year. The development was due to investments in fixed assets, including the first-time recognition of right-of-use assets from leases, and increased billing.

The investment volume in the segment amounted to  $\notin$  41.4 million. The focus was on the expansion of the network of testing laboratories in China and Germany as well as the development of software solutions.



## OTHER

In OTHER, we report on the corporate functions, where revenue amounted to  $\in$  33.6 million in the fiscal year.

EBIT in OTHER amounted to  $\notin -21.2$  million in the fiscal year and is thus at a level comparable to 2017 ( $\notin -22.6$  million), after the prior year had been burdened by the provisions recognized in connection with the dam collapse in Brazil and decreased to  $\notin -104.5$  million. Segment assets increased in 2019 by  $\notin$  123.7 million from  $\notin$  260.0 million to  $\notin$  383.7 million. Besides the first-time recognition of right-of-use assets from leases, investments in software and financial assets also contributed to this increase.

For an overview of the development of revenue in the segments, including OTHER, and in the regions, please refer to segment reporting in the notes to the consolidated financial statements.

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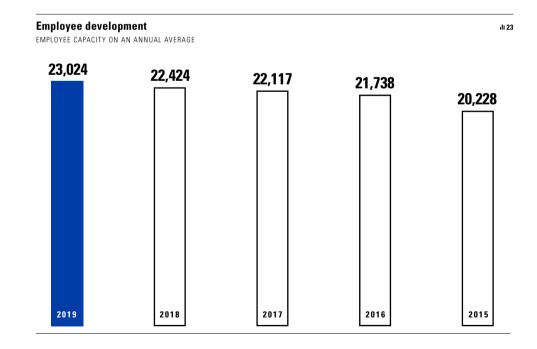
# NON-FINANCIAL PERFORMANCE INDICATORS

## Employee report

The motivation, expertise and skills of our employees lay the foundation for the ongoing and long-term development of the company, both today and in the future. At year end 2019, TÜV SÜD employed over 25,000 people (prior year: more than 24,000), roughly half of whom worked outside Germany. We anticipate that headcount will also further increase over the coming years. In Germany, the average age of our employees is around 44.7 years, making them older than their colleagues in other countries (38.9 years). The average period of company affiliation in Germany (11.3 years) is also higher than in other countries (6.6 years). Voluntary fluctuation across the Group came to 7.3% in 2019, which is above the figure for the prior year (6.0%). Turnover in Germany remained at a comparatively low level at 3.6% (prior year: 3.5%). An increase to 11.3% was observed outside Germany (prior year: 8.3%).

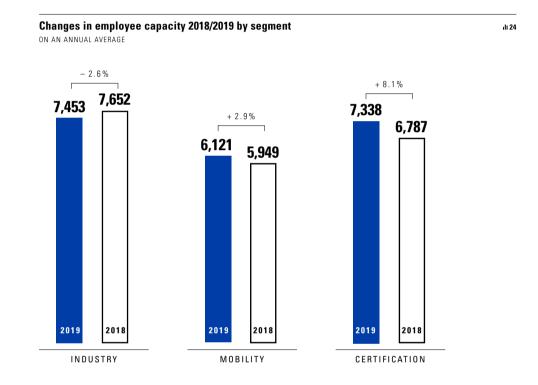
## CHANGES IN HEADCOUNT

The average number of employees in 2019 was 23,024 FTEs, which is a slight increase of 2.7% in comparison to the prior year (22,424 FTEs). An increase of 4.3% was observed in Germany and 1.1% outside of Germany.



As of December 31, 2019, 23,051 employees (FTE) were employed by TÜV SÜD (prior year: 22,530). In Germany, 433 new jobs were created in the existing companies. Headcount outside Germany increased by 88 FTEs. This change takes into account the reduction of the workforce in connection with the sale of entities (228 employees, prior year: 338 employees) in Germany, Belgium, France, Finland and Austria.

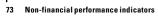
## CHANGES IN HEADCOUNT IN THE SEGMENTS AND REGIONS



The reduction in headcount in the INDUSTRY Segment related in particular to our presence in Brazil and South Africa, where the weak order situation in the respective markets was taken into account. Reduced headcount continued in the US as part of the restructuring of the petrochemicals business. Despite a decline in the number of employees, the INDUSTRY Segment continues to have the largest number of employees. The increase in headcount in the MOBILITY Segment was mainly in Germany. The CERTIFICATION Segment continued the targeted expansion of its workforce in the fields of consumer goods and medical products. The expansion of the global network of testing facilities also continued.

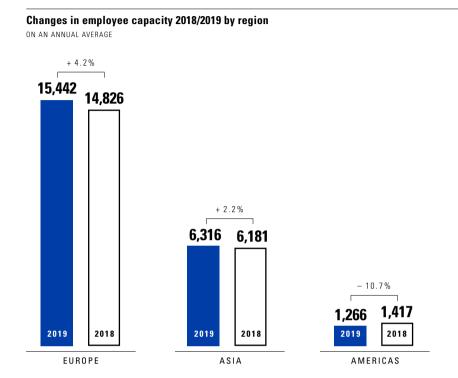
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More than half of the total TÜV SÜD workforce is employed outside Germany. We expanded our workforce in the EUROPE Region. The focus of recruitment activities was on our home market Germany, where the effect from the sale of the fleet management business was offset in full. The number of jobs in the ASIA Region was slightly higher than in the prior year. Job cuts in the AMERICAS Region continued in response to the persistently weak order situation in Brazil and the structural realignment of the petrochemical business in the US.

### **HR STRATEGY AND CORPORATE CULTURE\***

As part of our HR Strategy 2025 we want to promote a culture of collaboration at TÜV SÜD, and allow it to develop into a tangible benefit for our employees and managers in combination with a clear focus on our customers.

In light of this, we launched a wide-ranging culture initiative. As our markets change, our way of working has to change too – across all borders and hierarchical levels, towards a corporate culture that is embraced by all employees. This change process is being shaped by all regions across the globe. In the fiscal year 2019, we held almost 40 workshops, which were attended by approx. 600 employees from all divisions and regions. By year end, this had produced a target vision, which will shape future collaboration at TÜV SÜD.

\* The content of this section is voluntary and, therefore, has not been audited, but critically read by the auditor. **Group** information

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The content of this section is voluntary and, therefore, has not been audited, but critically read by the auditor. The employee survey in 2019 also showed us that there has been a positive response to our corporate culture and areas such as leadership, further development, working conditions and employee satisfaction. It was conducted for the first time across all TÜV SÜD regions and divisions. Improvements were seen in virtually all areas in comparison with the survey conducted in 2015 and there were no significant deteriorations in the results. The trusting working relationship with direct management along with high levels of satisfaction with the opportunities available to put the employees' own experience and skills to use in their work were particularly well received. As we process the findings, improvement measures will be discussed, agreed and implemented globally and across all levels.

## GLOBALLY ATTRACTIVE EMPLOYER

Extrapolations show that only a smaller part of our global workforce will stay the same in the future. The planned expansion of capacity and average turnover at a normal level will lead to approx. 30,000 new employees needing to be recruited over the coming ten years on account of the size of the company. These people must be identified, carefully selected and given specialist training. Our HR strategy defines the specific areas that need to become even more efficient and effective. Focal points include strategic planning, a structured approach in an applicant-centric recruitment process, the use of modern technology and the promotion of the recruitment of international talent and mobility as well as positioning TÜV SÜD's employer brand. Gaining a reputation as an attractive employer and the ability to attract qualified personnel to the company are increasingly becoming key competitive factors.

TÜV SÜD has been one of Germany's top-ranked employers for many years now, and we have also gained an outstanding reputation outside Germany. According to a study conducted by the business magazine "Actualidad Economica" in 2019, TÜV SÜD is once again among Spain's top 100 employers. In Asia, we were able to further reinforce our strong position among the best employers. In the fiscal year, we once again received the "100 Excellence Employer of China 2019" award for exemplary HR management.

## DIGITIZATION

We systematically take advantage of the possibilities offered by digitization in order to ease the burden of routine work from staff in HR and offer management a reliable basis on which to make decisions in HR matters. The HR Dashboard provides an overview of the key indicators and shows the development of the turnover rate or age structure, for example. High levels of transparency allow potential problems to be recognized at an early stage or even avoided.

We particularly made use of the possibilities offered by digitization and artificial intelligence (AI) for our recruitment in China. An algorithm supports HR employees there when pre-screening applicants. The corresponding pilot project was launched in 2019 and is to be further expanded through 2021.\*

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The content of this section is voluntary and, therefore, has not been audited, but critically read by the auditor. Division heads and HR are also working on integrated staffing planning in order to be able to plan and cover staffing requirements in a more targeted manner. This systematic and data-supported process, which also incorporates the respective market data, provides a basis for a demand-based forecast in order to introduce corresponding measures to attract and retain employees. An initial pilot got underway in the Real Estate & Infrastructure Division in 2019 and will continue in 2020. The aim is to put this structured and demand-based approach into action in coming years with further business units, progressively ramping it up until it is used globally by 2025.

## HR DEVELOPEMENT

HR development plays a crucial role against the backdrop of the digital revolution and our clear focus on the customer. A wide range of learning opportunities need to be created in order to be able to successfully master the new challenges and tasks. To this end, we want to use all available resources and especially all the possibilities offered by digitization to develop those employee skills that are crucial to the implementation of the company's strategy as efficiently as possible. We view integrated learning platforms and specific further training offerings as a key success factor in this regard.

Besides offerings that are open to all employees, there are also some offerings targeted at certain groups of employees such as senior experts or managers in order to prepare them in the key skills they will need to tackle digital challenges. Innovation, product development and a customerorientation are as much a focus as change management and knowledge sharing.

Overall, in the fiscal year 2019 our employees attended approx. 67,700 days of training (prior year: approx. 64,400 days).

## **VOCATIONAL TRAINING SECURES THE FUTURE**

The training of young people is of great importance to TÜV SÜD and it offers a range of internships, placements where students can complete their thesis, cooperations with universities, traditional traineeships and combined degrees. During the fiscal year 2019, 127 (prior year: 155) trainees started their careers at TÜV SÜD in Germany. This year, cooperative courses of study were once again offered in partnership with renowned educational institutions, particularly in the fields of mechanical, electrical and automotive engineering. TÜV SÜD always seeks to retain as many graduates as possible, and to train them within the company as test engineers or certified experts.\* 20 Group information

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## DIVERSITY

TÜV SÜD promotes diversity and equality of opportunity. Everyone in the company should have the same opportunities to develop personally and professionally.

As part of the Group's Gender Balance initiative, which is part of our efforts to promote diversity at the company, we have been working since 2016 to significantly increase the proportion of women in specialist and management careers. The focus is on creating the conditions and structures and providing impetus for a diverse and inclusive corporate culture. This is helped by strategic development programs and the expansion of the work-life-balance program.

The proportion of women at the highest level of management (excluding the Board of Management) rose to 9.1% in 2019 at a global level (prior year: 7.5%). At 10.3%, the proportion of women one level below is slightly above the prior-year level (9.7%). Group-wide, women made up 31% of the total workforce in the fiscal year (prior year: 31%), with the proportion at TÜV SÜD's international locations (33%) being slightly higher than in Germany (29%) (prior year: 33% and 29% respectively). This can be partly attributed to the fact that the number of women studying scientific subjects in Germany is still relatively low, and TÜV SÜD recruits most of its workforce from this field.

### WORK-LIFE-BALANCE

Reconciling the demands of career and family is a key element of our HR policy and simultaneously an important aspect of our corporate social responsibility. To this end, for some years now we have offered our employees a wide range of programs, which we are constantly adding to. The services offered range from generally accessible information and specific support such as reserved daycare and kindergarten spaces and holiday/emergency care to a large number of working hours models and mobile working. We also look at the topic of work-life-balance against the backdrop of growing numbers of people requiring care. Employees can access this range of offerings through a dedicated online portal, which also serves as an information hub. To continuously optimize our commitment, we have regularly participated in the "berufundfamilie" audit since 2009.\*

Reconciling the demands of career and family <sup>1</sup>		≡ 09
	2019	2018
Employees on parental leave	801	700
Percentage of employees in part-time employment during parental leave	25.1%	25.1%
Total percentage of employees in part-time employment	19.6%	19.6%
Average duration of parental leave	4.0 months	4.6 months
Thereof women	14.7 months	12.4 months
Thereof men	1.3 months	1.8 months

1 \_ Germany only.

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## HEALTH MANAGEMENT

Our employees can also take advantage of a wide range of offerings in relation to occupational health management. Our Global Health Policy, alongside the corresponding works council agreements, provides the framework for this. Internationally orientated, it defines company-wide minimum standards and key indicators in the areas of first aid and emergency management, risk assessment and workplace hygiene among others.

We also supported personal preventative healthcare with company-wide health campaigns. In 2019, we successfully wrapped up the two-year campaign "Listen to your heart". The planning for the next campaign has also been concluded. This time the focus will be on the issues of sleep and resilience.

Moreover, a Germany-wide prevention campaign for diabetes also got underway in the fiscal year, as part of which employees and their dependents can have their blood sugar levels tested in the laboratory using a free test kit and have a consultation with a doctor in the event there are any irregularities.\*

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# **OPPORTUNITY AND RISK REPORT**

Dealing responsibly with risks and opportunities is key to our success. That is why, at the TÜV SÜD Group, we use an internal control system and a comprehensive risk management system to identify and proactively manage the risks and opportunities arising from our business activities.

## INTEGRATED INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM FOR THE FINANCIAL REPORTING PROCESS

The financial reporting internal control and risk management system plays a decisive role in the financial statements of TÜV SÜD AG and the TÜV SÜD Group. It comprises measures designed to ensure complete, correct and timely submission of the information necessary to prepare the separate financial statements of TÜV SÜD AG and the consolidated financial statements and combined group management report. These measures are intended to minimize the risk of material misstatement in the books and records and external reporting.

The TÜV SÜD Group has a decentralized accounting organization. Consolidated companies handle accounting tasks independently and at their sole responsibility or transfer them within the Group's central shared service centers.

The TÜV SÜD IFRS accounting guidelines ensure uniform recognition and measurement of transactions and the exercise of options on the basis of the rules applicable to the parent company. These include in particular specific instructions on applying statutory provisions and dealing with industry-specific matters. They also set out in detail the components of the financial reporting packages to be prepared by the Group companies, as well as the guidelines for reporting and processing internal transactions.

Control activities at group level comprise analyzing and, if necessary, adjusting the financial reporting in the reporting packages submitted by the subsidiaries. This takes into account the reports presented by the independent auditor and the results of the closing discussions with representatives of the individual affiliated companies. During the closing meetings, the plausibility of the separate financial statements and critical individual matters at the subsidiaries are discussed. In addition to plausibility checks, other control mechanisms used during the preparation of the separate and consolidated financial statements of TÜV SÜD AG include the clearly defined segregation of responsibilities and the dual control principle.

Moreover, the financial reporting internal control system is also independently audited by the Group's internal audit function in Germany and abroad and assessed by the Group's independent auditor.

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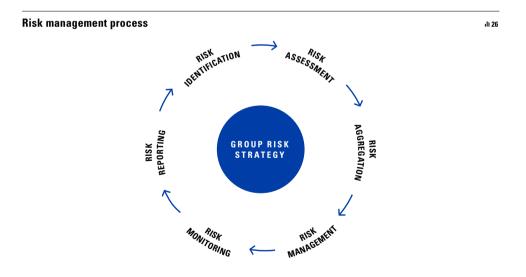
## INTEGRATED CONSOLIDATION AND PLANNING SYSTEM

We can consolidate and analyze historical accounting data and future-oriented controlling data via the "TÜV SÜD Business Portal". The system offers central master data maintenance, standardized reporting and outstanding flexibility with regard to changes in the legal framework. This provides us with a future-proof technological platform that benefits the Group's accounting and controlling functions alike. The data consistency of the TÜV SÜD Business Portal is ensured by a multi-level validation system.

## **RISK MANAGEMENT SYSTEM**

As an operational component of the business processes, the risk management of the Group is geared toward identifying potential risks at an early stage and in a structured manner and assessing their extent. Bids are reviewed based on defined criteria including resulting reputational risks during the contract acceptance process. In this way, appropriate countermeasures can be taken in a timely manner against pending damage to the company and any risk to the company's ability to continue as a going concern can be ruled out at an early stage. Alongside the impact on the financial performance, the impact on non-financial metrics such as reputation or strategy are also taken into account in the risk analysis.

We are prepared to take limited risks that are proportionate to the anticipated benefit from business activities.



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We identify risks and opportunities based on commonly used standards. The categories for risks and opportunities have been adapted to suit TÜV SÜD. The risks are assessed on a standardized basis throughout the Group according to the potential loss amounts and likelihood of occurrence. When assessing qualitative risks, we also take into account, among other things, their potential impact on TÜV SÜD's reputation and on public bodies, such as accreditation authorities, as well as on the achievement of corporate goals.

The risk situation of the company is continuously recorded, evaluated and documented as part of the early warning system for the detection of risks. Events that could give rise to a risk are identified and assessed locally in the divisions, regions as well as in the subsidiaries. Suitable countermeasures are initiated without delay, and their effects assessed over time. Risk Committees have been set up at the division level, and there is also a Corporate Risk Committee for group-wide issues. These committees convene every quarter to analyze and evaluate the situation with respect to risks and opportunities, and to discuss corresponding measures. Implementation of the measures is monitored by the committees.

The results of risk management are factored into budgeting and controlling. The strategic risks relevant for TÜV SÜD are addressed and assessed as a part of the internal strategy implementation process. Together with targets agreed in the planning meetings, these are subject to ongoing review during the revolving revisions to planning. At the same time, the results of the measures already implemented to counter the risks are promptly included into the forecasts for further business development. In this way, the Board of Management also receives an overall picture of the current risk situation during the year via the documented reporting channels.

Reporting on identified risks and implemented countermeasures represents an integral component of our standardized corporate planning and monitoring processes and is firmly anchored in the Group's leadership process. It is incorporated in TÜV SÜD's information and communication system. Risk and opportunity reports are submitted to the Board of Management, the Audit Committee and Supervisory Board on a quarterly basis. Over and above these standardized reporting processes, significant issues are communicated via internal ad hoc reports.

The procedural rules, guidelines, instructions and descriptions are recorded systematically and are largely available online. Compliance with these regulations is ensured by internal controls. In addition, user training is carried out at regular intervals.

The independent auditor annually verifies the procedures and processes implemented for the early warning system for the detection of risks as well as the appropriateness of the documentation.

## CONTINUOUS MONITORING AND FURTHER DEVELOPMENT

The internal control and risk management system is constantly being optimized as part of our continuous monitoring and improvement processes. In this way, we take into account internal and external requirements alike. The aim of the monitoring and improvement process is to ensure the effectiveness of the internal control and risk management system. The results form part of regular and ad hoc reports to the Board of Management, Audit Committee and Supervisory Board of TÜV SÜD AG.

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## **Risk report**

The ten most important risks are reported internally to the Board of Management, Audit Committee and Supervisory Board as the "top 10 risks". We report here only on the material risks with an effect on earnings that TÜV SÜD is exposed to in its business operations.

Apart from the top 10 risks, we report on the effects of a change in the interest rate on benefit obligations, such as pensions and allowances. This takes account of the predominantly equity character of this risk and the limited extent to which it can be controlled. As of the reporting date, the weighted net risk resulting from the further reduction in the discount rate amounts to about  $\notin$  51 million (prior year: about  $\notin$  38 million).

Various lawsuits are pending in both Brazil and Germany in connection with the dam collapse in Brumadinho, Brazil. Investigative and criminal proceedings are underway against individual employees of TÜV SÜD entities. Please refer to the comments on compliance and other risks.

The largest ten risks affecting net income, excluding Brazil, together amount to approximately  $\notin$  30 million weighted net risk, a manageable risk position for equity and earnings in relation to the size of the company.

The largest risks affecting net income relate to the CERTIFICATION Segment, in which four top 10 risks result in a weighted net risk of  $\notin$  9 million, and INDUSTRY with four top 10 risks and a weighted net risk of  $\notin$  10 million. There are two top 10 risks with a weighted net risk of  $\notin$  11 million in the Group.

## INDUSTRY AND SYSTEMIC RISKS

#### **Risks from changes to regulations**

Largly, these are risks from changes to the regulatory environment that could negatively impact revenue and earnings. These risks include sales risks from liberalization, deregulation, but also protectionist measures in our core markets. We successfully mitigate these risks by continuously optimizing our business processes and models, developing and implementing sales and marketing concepts and diversifying the portfolio of products and services.

Changing statutory and regulatory conditions also influence the performance of our segments' business. We therefore monitor the markets closely and take an active role in the public debate on relevant topics. In this way, we seek to identify risks at an early stage and counteract their effects. This also enables us to leverage the opportunities arising as a result of changes in the business environment for our company.

We identify the following industry and systemic risks among the top 10 risks:

Our customers are establishing new industry standards and demand that their business partners provide prompt documentation of the implementation of and compliance with these standards in the form of new accreditations. A delay in obtaining new accreditation or not having the requisite accreditation could lead to being excluded from invitations to tender or contract award processes. 33 Corporate governance38 Economic report

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In the CERTIFICATION Segment, an unfavorable business performance by an investment, particularly as the result of a delayed market launch or low acceptance among customers of the key products it has developed, could impact the ongoing contribution to earnings and the future recoverability of the participation.

In the CERTIFICATION Segment, an invitation to tender from a major client for testing services could lead to the reduction of the planned contract volume and existing price framework.

### **OPERATING RISKS**

#### Technological risks and risks from digitization

As a technical service provider, TÜV SÜD has a global presence with various business models. Changes in the technology used, shorter innovation cycles along with digitization and global connectivity and its manifestations have a direct impact on our customers' needs and the way we work. We meet these challenges by developing innovative services, also in the framework of strategic partnerships, with research institutes or our customers.

Development projects can experience delays, estimated budgets can be overrun or the project may not be completed. Therefore, these projects are subject to regular evaluation and reoriented if necessary, also to ensure the efficient allocation of resources.

#### IT risks

Information processing plays a key role in our business activities. All major strategic and operational functions and processes are supported to a large extent by information technology (IT) at TÜV SÜD. The IT security measures implemented serve to protect the systems against risks and threats, as well as to avoid damage and reduce risks to an acceptable level. Even in an intact IT environment, it is not possible to preclude risks entirely.

Our internal IT security policies are based on national and international standards. We monitor the regulations and compliance on an ongoing basis in order to guarantee the target level of security. The central IT systems are monitored and regularly tested in such a way as to enable us to respond quickly to any disruption. Our corporate data are protected by adequate measures according to the level of protection required for the respective data. To protect our IT system against viruses and other malware, we maintain security mechanisms which we keep up to date at all times.

Extensive contingency measures are in place to ensure that we remain operative in the event of extensive damage to our IT infrastructure – for example, through fire, environmental influences or by force majeure. Comprehensive and regular backups of the central systems also ensure that we can resume operations within an acceptable time frame for the respective applications.

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#### **Recruitment risks**

With their commitment, motivation and skills, our employees are key success factors for TÜV SÜD. We see our employees' training and international orientation as well as their ability to translate innovations into customer benefits as personnel-related opportunities. However, risks arise if we are unable to recruit suitable staff or retain high performers. We also perceive there to be a risk of the loss of competency and experience stemming from the age structure of our employees in some business segments. We have implemented a large number of measures to ensure the appeal of TÜV SÜD as an employer and support the long-term retention of employees within the Group.

We identify the following operating risks among the top 10 risks:

The decommissioning or closure of the petrochemical business in the USA could lead to unplanned additional costs in the INDUSTRY Segment. A further postponement of investment plans could negatively impact a division in the UK to such an extent that restructuring measures already initiated would have to be extended.

In Spain, failure to observe the time limit for repeat inspections could result in the accreditor's considering the process non-compliant. This could in turn lead to temporary suspension or having to pay fines.

The development of IT applications may incur additional costs in the CERTIFICATION Segment that were not taken into account in the project planning.

Another top 10 risk arises from changes in the management of a division in the ASIA Region.

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### FINANCIAL RISKS

#### **Interest Rate and Price Risks**

Interest rate risks arise from interest-bearing items and items that are directly linked to interest rates. For securities, transaction risks arise from the market prices of the various interest-bearing investment instruments. In principle, a distinction is made between the risk from the pensions portfolio and the operations of the TÜV SÜD Group.

With regard to operating activities, we use financial derivatives exclusively to hedge underlying transactions. Forward exchange transactions are the main currency hedging instrument.

The risk strategy in the pensions portfolio is designed to limit some of the market risk from pension obligations by means of structured, dedicated financial assets. The objective is to compensate for the interest cost of the hedged pension obligations by means of a corresponding asset allocation wherever possible and to increase coverage over time. This is to be achieved by means of a net return on assets, new additions or recontributions with the trustors waiving their pension reimbursements.

Three quarters of the pension obligations are covered by financial assets that are mostly segregated from operating assets as a result of the contractual trust agreement (CTA) in order to reduce risks associated with pension liabilities and allow an investment policy that reflects the obligations. A very high percentage of the German segregated pension assets is managed in trust by TÜV SÜD Pension Trust e.V. These assets are invested by external investment companies in accordance with specific investment principles. Interest rate risks, currency risks and price risks relating to special non-current capital investment funds are partly hedged by derivative financial instruments. The portfolio's market value is subject to fluctuations resulting from changes in interest, currency and credit spread levels as well as share prices.

A further reduction in the discount rate used to determine pension obligations could have a significant effect on the equity position of the Group. In addition, a change in the discount rate has an effect on income in connection with the measurement of the long-service bonus and medical benefits obligations.

Another negative effect on equity capital could arise from a potential reduction in the return on plan assets compared to planning.

TÜV SÜD Pension Trust e.V. continued its strategy of maintaining long-term investments in 2019. The aim of the sustainability strategy, which is rooted in the relevant TÜV SÜD guidelines, is primarily to minimize risk.

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## COMPLIANCE AND OTHER RISKS

#### **Risks from accreditations and designations**

In the regulated business, we carry out our activities based on accreditations and designations from authorities and other government bodies. Non-compliance, quality defects or infringements of regulatory requirements could lead to a restriction, temporary suspension or revocation of the accreditation or designation. This can give rise to significant costs, for example for training or process adjustments in quality management in order to regain the authorization. Alongside a drop in revenue and earnings, the revocation of accreditations and designations can also lead to reputational damage. In order to mitigate risk, we carry out regular analyses of the legal environment in the regulated business, pay close attention to adherence to TÜV SÜD compliance requirements and systematically provide training to our employees in the relevant divisions.

#### Brexit

The exit of the UK from the European Union gives rise to moderate risks for our business activities on the ground. Alongside foreign currency exchange rate risks and a further downturn in the economy, these include delays in the awarding of public sector contracts or a reluctant propensity to invest, in particular in construction.

#### **Liability risks**

Potential damage events and liability risks could lead to significant entitlement to damages, loss of reputation and costs for defense against damages. A contractual limitation of liability is generally agreed with the customer in order to mitigate the risk. In addition, TÜV SÜD has also taken out insurance policies to the extent that is customary in the industry. However, the possibility cannot be ruled out that the available insurance coverage is not sufficient for individual cases.

#### **Risks from legal proceedings**

As of the end of the reporting period, several legal proceedings were still pending in connection with services rendered by TÜV SÜD which are not related to the dam collapse in Brazil. Due to the existing global insurance coverage, no material financial risks arise from these proceedings. Sufficient provisions were recognized to cover these residual risks.

Stemming from the appeal of a former employee against the pension assessment made under the "Versorgungsstatut Bayern" (articles of association concerning the welfare fund in Bavaria), there is a risk of subsequent payments and increased future pension obligations.

On January 25, 2019, the tailings dam of a retention basin for an iron ore mine belonging to mining company Vale S.A. close to the village of Brumadinho, Brazil, collapsed. The dam had been inspected by TÜV SÜD Brasil Engenharia e Consultoria Ltda., São Paulo, Brazil (TÜV SÜD BRASIL; formerly TÜV SÜD Bureau de Projetos e Consultoria Ltda.) in summer 2018. This has resulted in various legal risks based on the pending and threatened proceedings in Brazil and Germany. Alongside bases for claims under civil law, especially relating to the assertion of indemnification claims, there are also claims under Brazilian environmental law and aspects relating to criminal law. Economic report

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If these legal risks materialize, the financial implications for TÜV SÜD BRASIL, TÜV SÜD SFDK Laboratório de Análise de Produtos EIRELI (TÜV SÜD SFDK), São Paulo, Brazil, and possibly TÜV SÜD AG may be substantial and have a significant impact on our financial performance and position for the fiscal year 2020 and future fiscal years. The risks mainly stem from various possible liability claims and technical advisory and legal costs and are largely attributable to the INDUSTRY Segment. There may also be risks from loss of reputation. It is currently not possible to conclusively quantify these risks. Further disclosures have not been made in order to not undermine the findings of the investigations and the interests of the TÜV SÜD Group.

Within the top 10 risks, there is a risk at group level in the "Compliance and other risks" category stemming from an increase in insurance premiums following a reassessment of the industry by insurers.

## OVERALL STATEMENT ON THE RISKS FACED BY THE GROUP

From a Group perspective, we are paying particularly close attention not only to the discount rate risk from the measurement of the pension obligations and the provisions for long-service bonus and medical benefits, which has an effect on equity, but also to the strategic risks.

The risks in connection with the dam collapse in Brazil have remained unchanged over the prior year. Based on the current estimate, there may be further negative effects on current business activities in Brazil and significant negative financial implications for TÜV SÜD, in particular from legal risks. Should the outcome of the expected legal proceedings associated with the dam collapse in Brazil find to the detriment of TÜV SÜD, this may result in substantial damages or other payments that could have a significant negative impact upon the Group's financial performance and position for the fiscal year 2020 and future fiscal years and its reputation.

The ability of the Brazilian subsidiary TÜV SÜD BRASIL and its direct shareholder TÜV SÜD SFDK to continue as a going concern is under threat in the event that these companies are deemed to be liable for the dam collapse and no further financial support were to be provided by the shareholders. Please also refer to our explanations in the notes to the consolidated financial statements under pending and imminent legal proceedings.

Looking ahead at the next two years and based on the information available to us in accordance with the risk management system that is in place, there are no apparent risks that could jeopardize the continuing existence of other TÜV SÜD entities. All organizational preconditions necessary to recognize developing risks at an early stage have been met.

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## **Opportunity report**

Thanks to our global presence, global economic growth generally provides positive impetus for business in our segments, while an increase in global economic risks can have a negative impact on our business activities.

Significant opportunities for the favorable business development of TÜV SÜD result from the implementation of strategic planning, the business outlook and the individual opportunities of the divisions and segments. In the following, the main opportunities are presented in accordance with the risk categories mentioned above.

## INDUSTRY AND SYSTEMIC OPPORTUNITIES

We expect a gain on the disposal of our planning business for railway systems and small units in Germany.

The continuation of a favorable business trend for Signon Austria, which was sold during the fiscal year, may lead to an additional purchase price payment in our favor.

We will be able to expand our network of technical service centers if the decision is made to liberalize the market in one Spanish province.

## **OPERATING OPPORTUNITIES**

We expect additional opportunities in the INDUSTRY Segment as a result of the expansion of our service portfolio for the Turkish market.

We also take part regularly in invitations to tender in this segment, and with our expertise, especially internationally, we can meet the qualification requirements, thus increasing the possibility of being awarded contracts for large-scale projects.

## FINANCIAL OPPORTUNITIES

An increase in the discount rate used to determine pension obligations as well as for provisions for long-service bonuses and medical benefits could have a significant positive effect on the position of the Group's equity or income. Positive development of the key risk factors of nominal interest and credit spread results in a decrease in pension obligations, thereby reducing the shortfall in cover. After taxes, this change in the shortfall would have a positive effect on equity.

Subsidies can be applied for and collected for individual research and development projects, which are also being conducted in partnership with universities or authorities.

## COMPLIANCE OPPORTUNITIES AND OTHER OPPORTUNITIES

We expect the outcome of ongoing legal proceedings in Spain to be in our favor and that we will be awarded damages.

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## **Risk report of TÜV SÜD AG**

TÜV SÜD AG is an investment and management holding company. As such, its risk situation is primarily determined by the economic situation of the subsidiaries.

There are financial risks in the form of interest rate risks, currency risks and price risks. Interest rate risks arise in connection with the disposition of liquidity and refinancing. To hedge these risks, derivative financial instruments in the form of interest rate swaps are also used, if required. Foreign currency risks can arise from every existing or forecast receivable or liability denominated in foreign currency. They are mainly hedged using forward exchange contracts. Currency risks arise from changes in the market price of held securities.

Industry and systemic risks arising from changes in the market conditions in the segments and regions are recorded using market and competitive analyses. Possible measures are discussed in strategy meetings.

Please refer to the explanations on group risks in respect of the dam collapse in Brazil.

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# OUTLOOK

## Future development of the TÜV SÜD Group

Please note that actual events in the course of the coming fiscal years could differ from our expectations presented below. The following statements on the outlook for the development of TÜV SÜD in the next fiscal year are based on the planning for 2020. This was prepared by the Board of Management and approved by the Supervisory Board in December 2019.

The strategic planning, which covers the period until the year 2025, was used to determine interim goals that were incorporated into the outlook for 2020. The impact of economic development and the achievement of defined interim goals is assessed and evaluated in regular scenario analyses.

Possible further financial and non-financial burdens, extending beyond the provisions already recognized for the accident in Brazil, have not been taken into account in planning. These include a possible future negative impact on our business development and our brand value in particular. It is not currently possible to make any additional disclosures, which extend beyond the statements made on the provisions already recognized, regarding the amount of future budget deviations in particular as well as estimates and assumptions about the probability of certain scenarios occurring.

We continue to focus on our core competencies and want to grow organically. We take futureoriented trends into account, in particular digitization and new technologies, and are looking in particular to areas where we deem there to be promise of sustainable growth. The focus of our global activities is on markets that exhibit stable economic growth and reliable framework conditions. For 2020, we anticipate a slight upturn in global economic development. The Kiel Institute for the World Economy (ifw) expects economic growth of 3.1% for the forecast period and growth of 3.4% for 2021.  $\equiv 10$ 

Development of the global economy: Forecast for 2020		
Global	- Slight growth	
Germany	Slowed growth	
Euro zone	Slowed growth	
USA	Slowed growth	
Emerging markets	Slight growth	

The economic downturn in Germany should tail off somewhat in the forecast year 2020. The domestic economy is driven by the continued strong levels of consumer demand from private households and the construction industry. The lowering of taxes and social security contributions, favorable financing conditions and increasing public consumption and capital expenditure will also have a positive impact. However, the propensity of export-oriented German industry to invest will be curbed somewhat by political factors, such as the uncertainty regarding the form that Brexit will take or the looming trade dispute between the US and Europe.

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Economic development in the euro zone remains varied; a recovery is not expected, despite continued favorable financing conditions. The downturn in manufacturing and the automotive sector in particular is set to continue. Uncertainty regarding the form that Brexit will take continues to subdue economic development in the UK. Political risks could also have further negative effects for the outlook in the euro zone.

US economic growth will slow in 2020. Private consumption will further increase on account of the favorable situation on the employment market, however exports and corporate investment are likely to soften on account of uncertainty regarding trade policy and fiscal policy measures that will cease to take effect.

Sustained growth continues to be expected in the large emerging markets. However, on account of the ongoing trade dispute with the US, managed credit growth and the general structural change to a service society, slowed economic momentum is anticipated for the Chinese economy.

The impact of the coronavirus (SARS-CoV-2) on economic development in China and on a global level still cannot yet be conclusively assessed at the current point in time. However, a slow-down in global economic growth is to be expected.

Revenue growth: Forecast for 2020 ≡ 11				
Ū		Development in forecast year 2019	Development in fiscal year 2019	Development in forecast year 2020
Group	2%–4% up to € 2.7 billion	א	$\rightarrow$	<u>ہ</u>
INDUSTRY Segment	Low single-digit growth	$\rightarrow$	$\rightarrow$	$\rightarrow$
MOBILITY Segment	Low single-digit growth	$\rightarrow$	$\rightarrow$	$\rightarrow$
CERTIFICATION Segment	Low double-digit percentage range	א	$\rightarrow$	π

For TÜV SÜD we anticipate organic revenue growth of 2% to 4% in the forecast period. The Group's revenue from its existing entities is therefore expected to range between  $\notin$  2,600 million and  $\notin$  2,700 million. The expectations for revenue are an expression of the trust that our customers have placed in TÜV SÜD as a technical service provider. The non-German entities already contribute, depending on the customer's place of business, 41% to consolidated revenue. This share of revenue will also remain stable over the coming years.

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## INDUSTRY

In 2020, we expect revenue growth in the lower single-digit percentage range for the INDUSTRY Segment. Almost 60% of revenue in the segment will continue to be generated by the Industry Service division, while the Real Estate & Infrastructure Division will account for approx. 40% of revenue in the segment.

We currently generated approx. 40% of revenue in the segment outside of Germany, with the majority of this being attributable to the Industry Service Division, which conducts almost 50% outside of Germany. The share from other countries will increase slightly in the year ahead.

Our facility safety services will make the biggest contribution to revenue in the **Industry Service Division**. The US market is developing particularly positively in this regard. We expect revenue in the fields of technical construction monitoring, energy production and quality management to increase slightly, in particular, from the international project business.

With the establishment of a competency center for offshore wind farms in South Korea, we are expanding our presence in a promising market of the future. We want to build on our leading position in the global market for independent technical risk calculation and analysis with international customers. We expect additional revenue growth from the new, innovative sound emission inspection (SEI). This product will be expanded in Germany in the forecast year and launched on the market in Italy, Spain and China.

By contrast, we expect a slight decline in revenue from services for the chemical and petrochemical industry. While our competency center for underwater pipelines in the UK will generate growth, we see further challenges for our business activities in the USA. Therefore, we will continue the restructuring of our activities in this market. In ASIA, we will see a rise in demand over the medium-term if the investments planned by our large customers enter the implementation phase.

Demand in the conventional energy sector will continue to fall. Services for decommissioning and testing projects can only compensate in part for the phased decommissioning of conventional power plants. By contrast, the increasing share of regenerative energy carriers used in power generation will lead to greater demand for storage technology. In addition, demand will also be significantly boosted by pilot projects in the hydrogen economy in Germany. The trend towards using hydrogen as a storage medium for regenerative energy can also be seen at an international level, which is why business potential is being identified in a cross-divisional project focusing on Germany, the UK and North Asia, and a hydrogen strategy is being developed.

The **Real Estate & Infrastructure Division** has a global presence and a strong market position on many markets. We continue to anticipate that there will be continuous growth in the division, which we will drive in strategic partnerships and targeted digital projects. 33 Corporate governance report38 Economic report

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Germany and the UK are our core markets for building-related technical services, from consulting and engineering services, testing and certification to simulations, for example to improve energyefficiency. Expected growth remains positive despite the impact of Brexit. In Germany, we are expanding our position as a leading and award-winning property manager. Our digital services for predictive maintenance, including by using digital building information modeling, will provide further stimulus to growth in this area.

In Germany, we are the market leader for safety-related services for lifts, and we want to further expand our market position in this area. We also enjoy a strong position on the market in the Middle East, which we are securing for the long term. Activities in China are still in the process of being established and continue to offer good opportunities for growth in areas such as the certification of safety components, amongst others. We also have high expectations for our expanded range of certification services for lift manufacturers, which will facilitate their licensing on various international markets.

The railway sector will experience a slight drop in revenue on account of the sale of Signon Austria in fiscal year 2019 and the sale of the planning business for railway systems scheduled for the forecast year. However, we expect further growth in the remaining core business. The series of investments announced by Deutsche Bahn, in particular, will provide additional stimulus over the medium term.

The sector is characterized by internationalization and ongoing digitization. Our unique selling point in comparison to our competitors is and remains the comprehensive portfolio of services.

Alongside building up our business activities in Asia, we are also building up our competence in the execution of complex large railway projects.

## MOBILITY

The automotive industry is still undergoing a process of transformation, which has dampened the economic outlook for the industry. Therefore, as a partner of the automotive industry the MOBILITY Segment is also faced with challenges.

Nevertheless, in the forecast period we expect continued growth in the lower single-digit percentage range. The international business will contribute approximately 10% of revenue in 2020.

We offer private and business customers in Germany, Turkey and Spain roadworthiness tests and exhaust gas analyses along with damage and valuation reports, and driver's license tests. For roadworthiness tests and exhaust gas analyses, we expect an increase in the number of vehicles inspected in Germany, in Slovakia we are expanding our business as part of our internationalization strategy. The business with damage and valuation reports remains the driver of growth in this regulated market.

Homologation shows steady growth across all regions. We expect the completion of the mobility testing center in Heimsheim and the associated expansion of capacity to deliver a boost to revenue in the lower single-digit percentage range in the emissions testing segment. The increased marketing of our activities in relation to highly-automated driving will yield positive effects for revenue development in the segment.

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The sale of the fleet management business in 2019 will lead to a corresponding drop in our revenue. The remaining activities will be continued until they are finally spun-off.

However, there is a steady demand for our services for car dealers, manufacturers, suppliers and lease companies as well as insurance companies. Long-term business relationships with these customers will yield moderate growth.

The medical/psychological examination business will also make a modest contribution to the growth of revenue in the forecast period.

We will exploit the potential offered by digitization in the automotive sector and focus on innovations and strategic cooperation with customers and research institutes. Our activities aim to achieve greater proximity to the customers, both online and on the ground in the technical service centers. Aided by the use of artificial intelligence, we also want to further increase the quality and scope of our services. In this way, we will further develop our traditional damage assessment reports using artificial intelligence, thus positioning ourselves as an attractive proposition for new customers, which in turn will have a positive impact on the development of our revenue.

## CERTIFICATION

Revenue growth in the CERTIFICATION Segment should be just within the double-digit percentage range in the forecast year. Two thirds of revenue in the segment is generated by the Product Service Division and one third comes from the Business Assurance Division.

The segment is internationally oriented. In the forecast period, slightly less than 60% of revenue will be generated outside of Germany, primarily in the Product Service Division.

The **Product Service Division** is a key growth driver within the segment and in the TÜV SÜD Group. The focus of our activities will be on targeted market exploitation and building up innovative digital services for our customers. The largest share of revenue in absolute terms at more than 45% will continue to be provided by the ASIA region, while Germany will be the market with the largest revenue growth in percentage terms.

Services relating to food and cosmetic products will be integrated into the consumer goods business in the forecast year 2020. We expect higher levels of competitive pressure on account of the smoldering trade dispute between the USA and China and market activities will be transferred to the European market. Therefore, we are specifically intensifying our business with large and key customers. Our priority is on standardized inspection and certification services for retail trade with a focus on the electromagnetic compatibility of products and chemical analyses. In China, we will invest in our existing testing facilities and expand our internet-based range of services for customers. This is on top of customers-specific solutions for food and cosmetic products.

Our range of services relating to industrial goods will see profitable growth in Germany and China. The largest revenue driver will remain testing and certification services for automotive and industrial components and machines, which we are constantly enhancing with innovative services. Digitization and the increasing interoperability of systems is opening up new potential for us in this area. 33 Corporate governance report 38 Economic report

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We are leading the way in terms of technology on the market for battery testing and are systematically expanding our capacity around the world. At the same time, we are developing new services for innovative manufacturing, such as networked factories, and are driving modular certification together with partners from industry in our competency centers in Germany and Singapore. We are investing globally in services relating to 5G technology and connectivity electronic products.

We will further consolidate our global market leadership in the medical products segment from our core markets of Germany, the US and Western Europe. The introduction of the European Medical Devices Regulation (MDR) and Brexit have led to a further shortage of licensed certifiers for medical products on the market and thus also further opportunities for growth, including for our premium services. The implementation of the EU Regulation on In-Vitro Diagnostic Devices (IVDR) is also generating further growth.

The business development focus remains on innovative product segments, such as cardiovascular and orthopedic products as well as software as a medical devices and areas that are subject to advanced scrutiny under the new regulation, such as reusable products and in-vitro diagnostics devices. In this regard, we want to increase investment in medical device testing using our own testing facilities and expand capacity globally.

Our management system certification, training and cyber security services are pooled in the Business Assurance Division. With this range of offerings we help our customers to assess and reduce risks, reliably manage and improve business processes and train their staff. Approx. 35% of revenue is generated outside Germany. Demand for integrated certification services, training and cyber security solutions for the product and industrial sector is on the rise across the globe.

The certification business for traditional quality, environmental and energy management is growing steadily. Ancillary certification services, known as audit services, are generating additional growth. In this area, we expect positive effects in particular from supplier audits, process audits or the Industry 4.0 Readiness Index that was co-developed by TÜV SÜD.

We also see potential for further growth in IT-related certifications such as ISO 27001 (IT baseline protection) or TISAX (information security in the automotive industry). We are defending our market leadership in Germany with an extensive range of services. At the same time, we are taking targeted steps to expand our business with international customers as we can use our global presence to offer the certification of integrated management systems from a single source to customers around the world.

The positive revenue development in the training business will continue in 2020. Growth drivers are the public seminar business and the Digital Academy. We are focusing our Digital Academy activities on Singapore, India, Spain, Italy and Austria in particular. We expect internationalization to boost revenue generated outside Germany.

Upheaval in the automotive industry could lead to in-house training courses in Germany being postponed or canceled. At the same time, with international invitations to tender in the certification and cyber security business along with invitations to tender in other Divisions, we are seeing increasing demand for an additional range of online training courses. We will rigorously exploit this cross-selling potential.

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We expect a significant increase in revenue for our cyber security services in the forecast period. Small and medium-sized enterprises are increasingly becoming the victim of cyber attacks. In order to prevent this we offer risk analyses, employee training sessions and data protection services especially for this market segment, for example providing a data protection officer or a data protection portal. Across all sectors – ranging from the trades to retail through to industry – the networking of components is leading to an increased demand for security testing, application testing and uniform standards, which our cyber security experts cover with a range of innovative services. To provide integrated product, plant and process security, cyber security is also becoming a necessary element of TIC services offered across all divisions. In view of this, we complement services offered by the TÜV SÜD Group, for example in the area of medical products, vehicle safety and supply chain management, with cyber security services.

We expect further growth and an increase in customer satisfaction from the establishment of the cross-divisional platform business. In doing so, we want to improve communication with our customers, offer our customers data-based value-added services, exploit cross-selling potential and internally drive the harmonization and automation of processes.

## MODERATE DEVELOPMENT OF EARNINGS

For the success of our company it is crucial that our services and innovations precisely meet our customers' needs and expectations and that we further develop our portfolio efficiently and innovatively in collaboration with our customers to their satisfaction. All in all, we strive to fulfill our mission of protecting people, the environment, and property from technology-related risks and thereby enabling technical progress.

When developing our business activities our focus is on markets and cutting-edge sectors in which stable and profitable growth is anticipated, with targeted returns of between 8% and 12%.

In order to optimize internal processes, we regularly analyze our business processes and derive measures to increase quality and efficiency. In this way, we are supporting the development of operating business using transparent, agile and harmonized cost and process structures. After all, our goal is to achieve sustainable earnings and profit development. **= 12** 

EBIT development: Forecast for 2020				
		Development in forecast year 2019	Development in fiscal year 2019	Development in forecast year 2020
Group	Increase up to € 235 million		$\rightarrow$	
INDUSTRY Segment	Stable development		א	$\rightarrow$
MOBILITY Segment	Stable development	$\rightarrow$	$\rightarrow$	$\rightarrow$
CERTIFICATION Segment	Slight increase	$\rightarrow$	K	

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The development of earnings at TÜV SÜD's in the forecast year 2020 is characterized by the forward-looking move towards innovative services for digitization and new technologies, intensive cooperation with international key customers and competency in our traditional core markets.

We therefore expect EBIT to develop positively in all segments. In 2020, EBIT is expected to increase by up to 15%. However, the increase may be lower should currently unforeseeable events, such as the spread of the coronavirus (SARS-CoV-2) or additional negative effects in connection with the dam collapse in Brazil materialize, for which provisions could not be recognized as of December 31, 2019. The EBIT margin will remain largely constant in the upper single-digit percentage range.

In the planning year 2020, for the INDUSTRY Segment we anticipated an EBIT increase in the upper single-digit percentage range, the EBIT margin is also expected to be in this range. The development may be negatively impacted by the aforementioned additional negative effects from Brazil and the continuation of the suspension in Spain. The growth of the MOBILITY Segment's earnings should be in the mid-single-digit range with an EBIT margin in the mid-single-digit percentage range. The CERTIFICATION Segment will achieve an increase in EBIT in the upper single-digit percentage range. The EBIT margin is expected to just about reach double-digits.

We expect the sale of our planning business for railway systems and further small units in Germany to make a small positive contribution to business development.

The economic development of our markets together with regulatory and political decisions will set the underlying trend for the success of our business. However, what is ultimately decisive for the development of our earnings is the global presence on site at our customers and our competency in technical services. Therefore, we are constantly investing in innovation and further growth. For innovative future-oriented projects, the expansion of our testing facility capacity and the modernization of existing facilities and buildings, we have earmarked a total investment framework of  $\in$  100 million to  $\in$  135 million for the planning year 2020. In addition, we want to spend  $\notin$  20 million on training our employees.

Economic Value Added (EVA) is a key indicator used to measure the business performance of TÜV SÜD. On the basis of the expected EBIT development described above and assuming that the average capital employed remains constant, we expect EVA in a range of  $\in$  70 million to  $\in$  85 million for the forecast year 2020.

We want to expand our staff base each year by up to 3%. Depending on the needs at the individual location and expected growth, we want to recruit well qualified and committed people for our company. The focus of our recruitment activities in the forecast period will be on Germany and China. We do not expect to see any significant change in the other non-financial indicators compared to the prior year.