INDEX FOR MANAGEMENT REPORT

FUNDAMENTAL FEATURES OF THE GROUP

BUSINESS MODEL AND SEGMENTS

DEUTZ is one of the world's leading manufacturers of drive systems for **off-highway** applications. The Company was founded in 1864 and employed around 4,750 people worldwide at the end of 2021. Its core competencies are the development, production, and distribution of drive solutions in the power range up to 620 kW for off-highway applications. The current portfolio extends from diesel and gas engines to hybrid, all-electric, and hydrogen drives. DEUTZ drives are used in a wide range of applications including construction equipment, agricultural machinery, material handling equipment such as forklift trucks and lifting platforms, commercial vehicles, rail vehicles, and boats used for private or commercial purposes. DEUTZ also offers a comprehensive range of digital and analog services through more than 800 sales and service partners in over 130 countries.

In the year under review, the Company's operating activities were divided into three segments: DEUTZ Compact Engines (DCE), DEUTZ Customized Solutions (DCS), and Other. See also 'Strategy and objectives', p. 22 onward. The DCE segment, which generated around 70 percent of consolidated revenue in 2021, comprises liquid-cooled engines with capacities of up to 8 liters and the equity-accounted joint venture with Chinese construction equipment manufacturer SANY. The DCS segment comprises liquid-cooled engines with capacities of over 8 liters, air-cooled drives, reconditioned exchange engines and parts produced under the name Xchange, and engine series that are soon to be discontinued. The DCS segment's share of revenue in 2021 was around 20 percent. The DEUTZ subsidiary Torqeedo, which develops and sells electric boat drives, is included in the Other segment alongside development services provider Futavis, which focuses on high-voltage battery management systems and safety engineering.

MARKET AND COMPETITIVE ENVIRONMENT

Sales of engines based on efficient diesel technology, which is the current core business of the DEUTZ Group, are focused on the Europe, North America and Asia regions, and in the case of the latter particularly China. The Group faces competition from rival engine suppliers, mainly in western Europe, North America, and Asia.

DEUTZ's main competitors by application[1,2]

Application segments	Applications	Main competitors[3]
Construction Equipment	Excavators Wheel loaders Pavers Mining equipment	Cummins, USA Isuzu, Japan Weichai, China Yanmar, Japan
Material Handling	Forklift trucks Telehandlers Lifting platforms Ground support equipment	Cummins, USA Isuzu, Japan Volkswagen, Germany Yanmar, Japan
Agricultural Machinery	Tractors Harvesters	Fiat Powertrain, Italy John Deere, USA Perkins, UK Yanmar, Japan
Stationary Equipment	Gensets Pumps Compressors	Cummins, USA Kubota, Japan Perkins, UK Yanmar, Japan
Miscellaneous	Rolling stock Special vehicles Marine engines	Cummins, USA General Motors, USA Kubota, Japan Tohatsu, Japan

[1] Power Systems Research, October 2021, power output from 19 to 620 kW.
[2] With the exception of Weichai, Chinese competitors are not listed here as main competitors due to the lack of comparable quality standards and the significantly lower cost structures.
[3] In alphabetical order.

STRATEGY AND OBJECTIVES

The DEUTZ Group's primary objective is to become the world's leading manufacturer of innovative drive systems and a trailblazer of off-highway technology for a carbon-neutral future. At the same time, the Company wants to achieve profitable and sustainable growth and has set itself clear medium-term targets for 2023/2024: revenue in excess of €2 billion and an EBIT margin before exceptional items of between 7 percent and 8 percent. See also 'Outlook for 2023/2024', p. 89.

DEUTZ aims to achieve its financial objectives while fulfilling its social, corporate, and environmental responsibilities. This ambition is reflected in the name of the new sustainability strategy, Taking Responsibility. In line with this strategy, DEUTZ has defined various non-financial targets, for example reducing emissions and the volume of waste at its production sites, reviewing the sustainability performance of its suppliers, and increasing the proportion of women in the workforce. See also the non-financial report, p. 90 onward.

Further development of the product portfolio DEUTZ has a broad product portfolio that is geared to its customers' different needs and is thus being continually refined as requirements and the environment in which it operates change. As different applications require different drive solutions, the Company takes a technology-neutral approach. This means that DEUTZ focuses on offering a combination of diesel technology, petroleum, gas, hybrid, electric, and hydrogen drives, and solutions based on alternative fuels.

Keeping in mind its primary objective of becoming a trailblazer for a zero-carbon future, DEUTZ is particularly proactive in promoting the use of drive solutions that offer a more climate-friendly alternative to the classic internal combustion engine. The Company strongly believes that, among other factors, electrification will play a key role in this, which is why it initiated the E-DEUTZ strategy in 2017. The strategy aims to build a scalable product offering of hybrid and all-electric drive systems for specific customer requirements. The Company's role is to act as both systems engineering partner and systems integrator. In other words, DEUTZ supplies a harmonized system consisting of an electric motor, battery, power electronics, and reduction gear for traction and work unit, along with control software for battery management, functional safety, and actuator logic. Furthermore, the Company believes that hydrogen drives, the use of e-fuels, and fuel cell technology are key elements of the drive-system mix that helps to create green off-highway applications. See also 'Research and development', p. 28 onward, and the non-financial report, p. 110 onward.

New segment reporting structure With effect from January 1, 2022, DEUTZ is putting in place a new reporting structure and introducing the Classic and Green segments. All activities connected with the development and production of non-diesel drives will be assigned to the Green segment. This includes electric drives, the subsidiary Torqeedo, the battery management service provider Futavis, hydrogen-powered drives, and fuel cell technology. Strategic investments will also be included in the Green segment, for example the investment in Blue World Technologies, a leading manufacturer of fuel cells. Activities related to the development, production, distribution, and maintenance of diesel engines will be combined in the Classic segment. The Company hopes the new segmentation of its business activities will provide a more transparent picture of its work on off-highway technology for a carbon-neutral future.

DEUTZ had set itself the target of raising the proportion of consolidated revenue generated by E-DEUTZ to between 5 and 10 percent by 2023/2024, but this has been revised due to the introduction of the new segment reporting structure. The new target is for the proportion of consolidated revenue generated by the Green segment to reach between 5 and 10 percent over the same period.

Regional growth initiatives The strategic focus of DEUTZ's regional growth initiatives mainly lies in realizing growth potential in Asia, primarily in China, strengthening the Company's market position in the USA, and expanding its global network of dealers and service outlets.

China is the world's largest individual market for construction equipment, with a share of around 57 percent[1] of the global engine market. At the end of 2019, as part of its updated China strategy, the Company had established a joint venture with SANY, China's largest construction equipment manufacturer. In this joint venture, DEUTZ has taken over the manufacture of both construction equipment engines and heavy truck engines for SANY, which means the Company has expanded from the off-highway into the on-highway segment. DEUTZ has also entered into other strategic alliances in the Chinese market. One of these is with diesel engine manufacturer BEINEI, which provides assembly services. In cooperation with its Chinese partners, DEUTZ is continually increasing local production capacity to ensure that it is best placed to meet demand from local customers. See also 'Production and logistics', p. 30 onward.

Expansion and digitalization of the service business The expansion of the high-margin service business is another mainstay of the Company's growth strategy, and DEUTZ is forging ahead with this by broadening its service network and continually adding to its product portfolio. DEUTZ positions itself as a full-service provider, offering its customers a range of services covering the entire product lifecycle. The Company has marketed its fully integrated service components under the S-DEUTZ label since 2021.

The expansion of its service portfolio is focusing not only on building up the **Xchange** business, in which the Company offers reconditioned engines and spare parts, but also on the digitalization of its service concepts. For example, 2021 saw the launch of S-DEUTZ Telematics, which allows the customer to view detailed engine and service information based on real-time monitoring. At the same time, predictive alerts provide recommendations for action and parts to replace, which can significantly reduce downtime and costs. In terms of new analog services, DEUTZ has added a Lifetime Parts Warranty for parts installed by an authorized DEUTZ partner and the DEUTZ Lifecycle Solutions to its service portfolio. This means that the Company offers suitable repair solutions for every stage of the engine lifecycle.

[1] PSR download in January 2022. Based on the OEM production volume (units) in 2021; power output from 19 to 620 kW, **non-captive**.

DEUTZ is continuing to develop its service network, either by adding new sites or by expanding the man-in-van concept, whereby mobile service technicians travel to customers' sites in fully equipped vans. In addition to investment in its own service centers (e.g. the new DEUTZ Power Centers that opened near Dallas and in Las Vegas in the USA, and in Shanghai in China), DEUTZ aims to expand its service network by acquiring selected dealers and thereby achieve even better global coverage. Furthermore, the Company is exploring and expanding new sales channels for parts and the integration of external platforms into existing service concepts.

Process optimization In order to maintain the DEUTZ Group's long-term competitiveness, the restructuring measures it has initiated are aimed at progressively improving processes in all areas of the Company and thereby boosting efficiency. The main focus of the current measures is on optimizing distribution and the global production and procurement network, improving quality, automating and digitalizing operational and administrative processes, reducing complexity, and adjusting operating costs. In this context, DEUTZ launched a comprehensive efficiency program at the start of 2020 that is helping it to achieve these and other objectives. See also 'Transform for Growth', p. 25.

New strategic partnerships and alliances Strategic partnerships and alliances are a concept that DEUTZ had been pursuing long before the coronavirus crisis. The impact of the pandemic on the flow of goods around the world and on global supply chains has further increased the significance of these relationships. The Company has also identified an emerging trend within its customers' industries to increasingly rely on research and development partnerships, for example, or even to outsource related activities altogether. These developments present DEUTZ with an opportunity to gain market share. At the start of February 2021, for example, the Company signed a long-term supply agreement with agricultural equipment manufacturer SDF, Treviglio, Italy. As well as the supply of engines with a capacity of below and above 4 liters, the agreement includes expansion of the service business between the two companies and is expected to result in additional annual revenue in the low-double-digit millions of euros. In early July, a new strategic partnership was concluded with AGCO International, Neuhausen am Rheinfall, Germany. The long-term agreement covers the supply of 6.1 liter and 4.1 liter engines for Fendt tractors as well as a joint development project for alternative drives. DEUTZ also signed a long-term supply agreement with Turkish construction equipment and agricultural machinery manufacturer ASKO, Gaziantep, Turkey. The agreement covers a wide range of engines for the company's four major brands MST, Başak Traktör, Starken, and ELS Lift. Following the ramp-up phase, the number of engines that DEUTZ plans to deliver to ASKO each year is expected to reach at least five figures, completely replacing the existing suppliers. DEUTZ will also use ASKO's local presence to strengthen its service business in Turkey and Europe. In the field of hydrogen drives, DEUTZ has signed a cooperation agreement with the German Aerospace Center (DLR) regarding a joint project focused on making construction sites more environmentally friendly. The aim of the project is to develop solutions for running construction-site vehicles and agricultural machinery on hydrogen. DEUTZ is also working with a regional utility company on a pilot project for the TCG 7.8 H2 hydrogen engine, which has been market-ready since mid-2021. In this instance, the engine produces electricity in combination with a generator. See also 'Research and development', p. 28 onward.

'TRANSFORM FOR GROWTH' EFFICIENCY PROGRAM

At the start of 2020, DEUTZ launched its overarching Transform for Growth efficiency program. The aim is to increase the Company's profitability while ensuring its long-term competitiveness at a global level. The main areas of action are optimization of the global production network, automation and digitalization of operational and administrative processes, groupwide streamlining of the organizational structure, and reduction of complexity. See 'Purchasing and procurement' for further information on digitalization, p. 30 onward. Furthermore, efficiencies within the organization are to be leveraged, for example by combining certain functions, consolidating activities, and making more extensive use of data and IT tools. One example is the Global Service Center established at the DEUTZ Spain site in Zafra. Since 2021, the center has provided the DEUTZ branches around the world with support in the areas of finance, purchasing, and financial planning and reporting.

By implementing all defined restructuring, process improvement, and cost reduction measures, DEUTZ intends to achieve gross annual cost savings of around €100 million compared with the base year of 2019. In addition to an adjustment in operating costs, the savings are to be achieved through a reduction in staff costs. To this end, DEUTZ introduced a voluntary redundancy program in September 2020 for its sites in Germany, originally for 350 employees. By the time that the program ended on March 31, 2021, it had been taken up by a total of 361 employees, 133 of whom had left the Company by December 31, 2021.

The top priority was to minimize the social impact of the reduction for all employees. Agreement was therefore reached with the employee representatives on a key issues paper in the third quarter of 2020 that covered the voluntary redundancy program, the establishment of an interim employment company, and a social compensation plan. The interim employment company takes on employees who have left the Company under the program and supports them for a period of no longer than twelve months in finding a new job, for example through training. While at the interim employment company, each former employee receives a salary consisting of a short-time working allowance for interim employment. Participation in the voluntary redundancy program also required the approval of the Company. In imposing this requirement, DEUTZ wanted to make sure that it did not lose workers with the skills and knowledge that it needs.

After reaching agreement on the aforementioned key issues paper, the IG Metall labor union and the employers' association agreed on a supplementary collective pay agreement ('DEUTZ pact for innovation and the future') with a three-year term that covers three main points: As well as the protection of jobs and sites in Cologne, Herschbach, and Ulm, around €41 million is to be invested in the German sites, primarily to enhance productivity and innovation in production, assembly, and research and development. See also 'Production and logistics', p. 30 onward, and 'Research and development', p. 28 onward. As part of this agreement, employees made certain undertakings in order to secure the future of the sites, including unpaid increases in working hours during the term of the agreement.

In connection with its efficiency drive, DEUTZ recognized restructuring costs totaling €3.1 million in 2021 (2020: €31.9 million). These costs mainly encompass severance payments and other costs that are directly related to the restructuring.

MAIN SITES AND BASIS OF CONSOLIDATION

DEUTZ AG is the executive and operating parent company in the DEUTZ Group; it is headquartered in Cologne, Germany. It has various investments in Germany and abroad, including several companies that perform sales and service functions, plus production facilities in China, Germany, Morocco, Spain, and the USA.

The companies DEUTZ Japan GK, Tokyo, Japan, and DEUTZ Deutschland GmbH, Stockstadt am Rhein, Germany, were established in 2021. Also last year, DEUTZ Power Solution (Xuzhou) Co., Ltd., Xuzhou, China, was founded as a joint venture by DEUTZ with Beijing Fangda Diesel Engine Technology & Service Co., Ltd., Beijing, China, and SINOCHAIN Environment Protection Co., Ltd., Shanghai, China. The joint venture will develop, manufacture, and market diesel engines. Last year, Service Center Milan S.r.l, Milan, Italy, was merged with DEUTZ Italy S.r.l., Milan, Italy.

In addition to DEUTZ AG, ten German companies (December 31, 2020: nine) and 25 foreign companies (December 31, 2020: 24) were included in the consolidated financial statements as at December 31, 2021. A complete list of DEUTZ AG's shareholdings as at December 31, 2021 can be found in the annex to the notes to the consolidated financial statements. See also 'Shareholdings of DEUTZ AG', p. 198 onward.

INTERNAL CONTROL SYSTEM

The DEUTZ Group defines its budget targets and medium-term corporate targets using selected key performance indicators (KPIs). In order to increase profitability and achieve sustained growth, we manage the Group on the basis of the following financial performance indicators. These KPIs are alternative performance measures that are not defined in the International Financial Reporting Standards (IFRS). A reconciliation of these KPIs to the amounts recognized in the financial statements is provided below.

Key performance indicators[1]		2021	2020
Revenue growth	%	24.8	– 29.6
EBIT margin (before exceptional items)	%	2.3	– 5.8
Working capital ratio (average)	%	15.5	21.8
ROCE (before exceptional items)	%	4.1	–8.1
R&D ratio	%	5.1	6.3
Free cash flow	€ million	21.6	– 35.8

[1] Alternative performance measures.

Revenue growth DEUTZ strives to steadily increase revenue as the basis for the profitable growth of the Company. The level and growth of revenue are determined on a monthly basis, broken down by product group, application segment, and region. This data is provided to senior management promptly so that it can, if necessary, react quickly to changes as they materialize.

EBIT margin (before exceptional items) The main key performance indicator that we use to manage the Company's operating performance is the EBIT margin before exceptional items. It is based on the Group's earnings before interest and tax (EBIT). The EBIT figure is then adjusted for exceptional items and calculated as a percentage of revenue. We define exceptional items as significant income generated or expenses incurred outside the scope of the Company's ordinary business activities that are unlikely to recur. Adjusting for exceptional items enables a more accurate comparison of the Company's operating performance over time. The EBIT margin before exceptional items is, like revenue growth, calculated monthly and presented to senior management as part of internal reporting. In 2021, additional restructuring costs totaling €3.1 million were recognized as an exceptional item in connection with the Transform for Growth efficiency program, which was first launched in the third quarter of 2020.

Working capital ratio (average) We manage the Company's tied-up capital using the average working capital ratio. This is the ratio of average working capital over the past four quarters to revenue for the preceding twelve months. Working capital comprises inventories plus trade receivables less trade payables. Along with revenue growth and the EBIT margin (before exceptional items), this key figure is calculated monthly and used by senior management to control the business.

ROCE (before exceptional items) The return on the capital employed in the Group is measured and managed on an annual basis using the key figure ROCE (before exceptional items). This is calculated as follows:

ROCE[1]

€ million

	2021	2020
Total assets	1,290.1	1,180.5
Cash and cash equivalents	–36.1	– 64.7
Trade payables	–257.8	– 153.0
Other current and non-current liabilities	– 66.5	– 60.0
Capital employed	**929.7**	**902.8**
Capital employed (average for the year)[2]	**916.3**	**918.8**
EBIT before exceptional items (operating profit/loss)	**37.2**	**–74.7**
ROCE (before exceptional items, %)	**4.1**	**– 8.1**

[1] Return on capital employed.
[2] Average of the opening and closing balances.

R&D ratio As a technology-focused company, we consider the R&D ratio to be one of the most significant performance indicators in our internal management system. It is the ratio of research and development expenditure (after deducting grants) to revenue in the period in question. The R&D ratio is calculated monthly and reported to senior management.

Free cash flow The DEUTZ Group uses free cash flow as its main performance indicator for managing liquidity. It comprises net cash provided by, and used for, the operating activities and investing activities of the Group during the period in question less interest payments in connection with financing activities. We can thus show what cash flow generated in the relevant year is available to the Company, e.g. for repaying liabilities or paying a possible dividend to shareholders. Free cash flow is reported to senior management monthly.

Based on the performance indicators described here, DEUTZ has set up an early warning system in order to be proactive and respond promptly. At the same time, we operate a sound system of causal analysis to ensure that we minimize risks and make the most of opportunities. Three times a year, we produce an annual forecast for all key performance indicators, which ensures transparency with regard to our business performance.

In addition to the financial performance indicators that form part of the management system described above, we also employ other metrics to measure our economic performance. These include, but are not limited to, new orders received, revenue and unit sales on the income side, the working capital as at the reporting date with regard to tied-up capital, and earnings before interest, taxes, depreciation, and amortization (EBITDA). Moreover, the Group net income and the DEUTZ AG statutory income in accordance with the German Commercial Code are significant factors for us as regards dividend payments.

Continuous optimization of the control system Regardless of fluctuations in the economic cycle, one of the DEUTZ Group's overriding aims is the continuous optimization of its management systems. This essentially involves the annual planning of all performance indicators specified here, broken down by segment and taking account of internal estimates of future business as well as benchmark figures from competitors. Each organizational unit prepares detailed plans for its area of responsibility, which are then coordinated with management. Both the specific unit sales and revenue targets and the customer and product-related targets (EBIT margins) are aligned with the operating units each year, taking groupwide objectives into consideration. This means that they are available at the relevant hierarchical level for use in the operational management of the segments.

We specify working capital targets for the individual companies in the DEUTZ Group in order to optimize the capital tied up in the business. These overall figures are then broken down and specific targets for inventories, trade receivables, and trade payables are allocated to the relevant individual employees.

We are pursuing long-term growth objectives. In order to secure the financial basis for this, we have made the management of capital expenditure a central element in the management of tied-up capital: Clearly specified budget figures set out the framework for the level of capital expenditure and development expenditure; actual requirements are derived from the medium-term planning of unit sales and the resulting requirements in terms of capacity and technologies. Annual budget meetings are held to coordinate individual projects, development expenditure, and planned capital expenditure with the groupwide financial planning process and to record the outcomes. An additional detailed review is carried out before projects are actually approved. To this end, we use standard investment appraisal methods such as the internal rate of return, the amortization period, the net present value, the impact on the income statement, and cost comparisons. A project with an appropriate budget is only approved if there is a clear positive outcome from this investment appraisal.

RESEARCH AND DEVELOPMENT

Global emissions legislation requirements are not the only factors which shape the DEUTZ Group's research and development activities. Another major influence is the steady march of climate change together with the related debate about reducing harmful greenhouse gases. The 2015 **Paris Agreement** aims to limit global warming to 1.5 degrees. In contrast to cars and commercial vehicles, there are currently no legal proposals or limits aimed at reducing the CO_2 emissions of mobile machinery. However, in order to achieve the Paris climate goals, DEUTZ believes it is also essential for the **off-highway** sector to play its part by reducing, as far as possible, the amount of harmful CO_2 emissions that this sector produces. This is why DEUTZ is actively pursuing the development of carbon-neutral drive systems in both the off-highway segment and marine applications.

Open to new technologies Different applications with varying power requirements call for a range of drive solutions. Construction equipment and agricultural machinery, for example, need a great deal more power than forklift trucks or lifting platforms. This is why DEUTZ is taking an open-minded approach to technology as it continues to develop its engine portfolio, essentially pursuing a two-pronged technology route towards carbon-neutral off-highway drive solutions. In the years ahead, internal combustion engines will continue to play a dominant role in certain mobile machinery applications. As regards these applications, our R&D activities are directed towards developing engines which can be run on alternative or sustainable energy sources such as hydrogen or **e-fuels**, emitting no CO_2. The second part of our two-pronged approach is to employ electric technology more widely.

Electric drive solutions The E-DEUTZ strategy, initiated in 2017, is playing an important role in the transition to carbon-neutral, off-highway drive solutions. The strategy aims to create a scalable product portfolio of electric drives and hybrid variants for specific customer requirements in off-highway and marine applications. Electric drive systems are carbon-neutral, whereas hybrid systems reduce total carbon emissions by downsizing engine capacity while maintaining overall system performance.

The E-DEUTZ development team is based at a number of sites. Over the next few years, it will be focusing on commercializing four basic drive systems for customer applications in the low and medium power output range, for example for airport ground support equipment, construction equipment, and agricultural machinery. In 2021, in step one of this process, DEUTZ developed an electric 360-volt drive system as far as the preproduction stage. An integral element of this system is a 42 kWh lithium-ion battery developed by DEUTZ subsidiary Futavis; it meets the safety technology requirements for electric-powered road vehicles in accordance with the ECE R100 directive. Market launch of the 360-volt drive system is planned for 2022. The second step is to develop a 48-volt base drive system and a 360-volt split system to the point of production readiness by the end of 2023.

In 2020, DEUTZ employees had sketched out the idea of a mobile E-DEUTZ charging station for electric-powered construction vehicles. In 2021, DEUTZ assembled the initial prototypes of the 'DEUTZ Powertree' and delivered them to our first pilot customer. Electric drive systems have a limited range and take longer to 'refuel' (recharge) than conventional internal combustion engines. The Powertree's integrated battery storage system means that machines can be charged on site even when there is no access to mains power. Downtimes can be reduced to a minimum thanks to the rapid-charge function that is capable of delivering up to 150 kW.

As regards the electric-powered marine sector, in 2021 DEUTZ subsidiary Torqeedo completely revamped its Cruise range of products for private and commercial applications in the low-voltage range (less than 50 volts). At 3, 6 and 12 kW, the new Cruise engines boast significantly more power, a thoroughly re-worked electrical design, a more rugged aluminum shaft with an integral fin, a particularly quiet and durable transmission plus integration into the TorqLink bus system for all 6 and 12 kW models without tiller functionality. Possible applications for the outboard and pod engines are zero-emission water taxis, pontoon and sailing boats and unmanned surface vessels used for data collection for research purposes.

As regards high-voltage drive systems, Torqeedo has introduced a new 50 kW sail drive, developed in collaboration with ZF Friedrichshafen AG; one of the vessels into which it has been installed together with a Deep Blue hybrid system is a new Groupe Beneteau Excess catamaran. At the METS trade fair in November 2021, Torqeedo, Groupe Beneteau and ZF jointly received the Boatbuilder Award for this project.

In 2021, Torqeedo also entered into collaborative development arrangements with Poseidon and Italdraghe. Working together with Poseidon, an all-electric and 360° rotatable rudder propeller was integrated into Torqeedo's Deep Blue electric high-voltage drive system. This drive, which can develop up to 65 kW, is particularly suitable for maneuvering passenger ferries on inland waterways and, as part of an initial project, it has already been successfully brought into regular service. In contrast, the aim of the joint project with Italdraghe is to develop a maneuverable electric-drive system for commercial shipping operating in ecologically sensitive inland and urban waterways. The system has been designed to allow zero-emission drive and directional thrust. Initial field operation is planned for 2022.

As regards its battery business, in 2021 the DEUTZ subsidiary Futavis continued to expand its processes and services in the areas of battery testing and functional safety. In view of the growing complexity of electronic and, in particular, programmable systems and components, functional safety, including in the off-highway segment, is of increasing importance. The 'Modular Automated Testing Environment' (MATE), which Futavis has developed as a product quality enhancement, is a software environment that minimizes the risk of potentially hazardous battery and battery management system malfunctions. The MATE platform also helps development processes to meet the requirements set out in the ISO 26262 automotive standard. The 'Futavis Safety Box' (S-Box) is another new development; from now on, it will form an addition to the E-DEUTZ battery toolkit and will also be used for external customers' batteries. When developing the S-Box, the main focus was directed towards the requirements for electrified off-highway applications which, as regards vibration, load profiles and operating environments, are more demanding than the requirements for road vehicles. The S-Box ensures increased safety when using batteries; in the event, for example, of overheating, excess current or severe vibration, all of which could result in short-circuiting or the risk of explosion, the battery will automatically switch off.

Further internal combustion engine developments In addition to electric drives, DEUTZ is pushing ahead with the development of internal combustion engines that use sustainable energy sources and can therefore be run on a carbon-neutral basis. One of these sustainable energy sources is hydrogen. In the third quarter of 2021, DEUTZ began development work on its first series-production-ready hydrogen engine which meets the EU's prescribed CO_2 **Zero Emission** limit. Agreement has been reached with a regional utility company that for the initial pilot the TCG 7.8 H2 will be employed in stationary equipment for power generation. The hydrogen engine in this instance will produce electricity in combination with a generator. The plan is for the TCG 7.8 H2 to go into full production at the end of 2024. DEUTZ has also signed a cooperation agreement with the German Aerospace Center (DLR) for a joint project focused on making construction sites more environmentally friendly. The aim of the project is to develop solutions for running construction-site vehicles and agricultural machinery on hydrogen.

Because commercial vehicles, tractors, and construction equipment are used for heavy-duty applications and are employed for long hours, they need a fuel with a high energy density and short refueling times. **E-fuels** may provide the answer. These include synthetic fuels such as paraffinic diesel fuels, produced on a renewable basis using electricity, water, and carbon dioxide (CO_2). The combustion of e-fuels produces the same level of harmful emissions as with conventional fuels. However, if the electricity used to make them is produced entirely from renewable sources and the necessary CO_2 is taken from the atmosphere or from biomass, then internal combustion engines can actually run on a carbon-neutral basis. In August 2021, DEUTZ approved all its model series that meet the EU V emissions standard for use with paraffinic diesel fuels. At the same time, the Company approved the majority of its latest-generation engines for biodiesel blends (biodiesel mixed with petroleum diesel). Using these alternative fuels reduces the carbon footprint of DEUTZ's engines and raises the prospect of making its engines carbon-neutral in the future by running them on 100 percent biodiesel or on renewably produced e-fuels.

Looking ahead, DEUTZ plans to close the performance gap in its 4 to 8 liter portfolio by introducing the TCD 5.2. This new 5.2 liter, four-cylinder diesel engine, capable of producing 170 kW, is intended to replace larger six-cylinder engines. A particular feature of this engine is its efficient **NOx** aftertreatment system. This obviates the need for exhaust gas recirculation, thus achieving lower fuel consumption due to improved combustion efficiency compared to engines which employ exhaust gas recirculation. The TCD 5.2 can be run on alternative fuels such as biodiesel and is also primed for hybrid operation thanks to an integral 48V electric motor option. In 2021, DEUTZ supplied the first prototypes for a range of customer applications. Series production is planned for 2022. Because of the high level of synergy with our existing 7.8 liter six-cylinder engine, this new development can be realized while keeping project costs comparatively low.

In 2021, DEUTZ introduced the TCD 9.0 and TCD 18.0 engines into its 9 to 18 liter segment. These engines can be employed, for example, in quarries, mines or environmental engineering applications

Development partnership with John Deere At the end of 2020, DEUTZ entered into a development partnership with John Deere Power Systems with a view to expanding its engine portfolio in the power range up to 130 kW. In addition to technical development work, this collaborative arrangement will also involve joint sales activity. Full-scale joint development work began in 2021. The first prototypes have already been taken into use and are demonstrating excellent consumption figures.

R&D spending Expenditure on research and development in 2021 amounted to €88.0 million, compared with €84.3 million in the prior year. After the deduction of grants received from development partners and subsidies, expenditure rose from €81.4 million in 2020 to €82.3 million. R&D spending was thus above the forecast range of €65 million to €75 million as a result of the increase in activities to expand the portfolio. The proportion of capitalized development expenditure after deducting grants amounted to €6.8 million (2020: €12.6 million). The R&D ratio after deducting grants decreased from 6.3 percent in the prior year to 5.1 percent in 2021 due to the unusually sharp increase in revenue.

Research and development expenditure (after deducting grants)

€ million (R&D ratio, %)

2021	**82.3**	**(5.1)**
2020	81.4	(6.3)

R&D spending by the DEUTZ Compact Engines segment after deducting grants came to €65.2 million (2020: €60.8 million) and that of the DEUTZ Customized Solutions segment came to €8.3 million (2020: €11.8 million). The Other segment's R&D spending after deducting grants amounted to €8.8 million (2020: €8.8 million).

PRODUCTION AND LOGISTICS

The DEUTZ Group benefits from a global production network with plants in Germany, China, Spain, Morocco, and the USA.

Whereas the production volume in 2020 fell to a very low level due to coronavirus, demand rose rapidly and noticeably over the course of 2021. At the same time, the ongoing pandemic, worldwide bottlenecks in the availability of materials, and major delays in the supply chain presented huge challenges for the operational units and the internal and external supplier network. See also 'Purchasing and procurement', p. 33 onward, and 'Economic and industry-specific environment', p. 35 onward. Despite this, production output at all sites rose significantly from 115,520 in 2020 to 166,103 DEUTZ engines[1] in 2021.

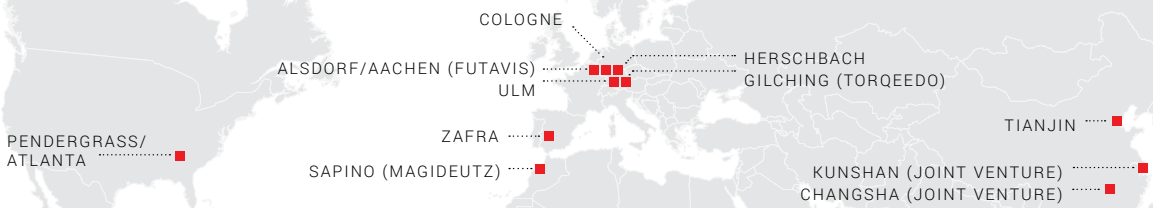
Undeterred by these operational challenges, DEUTZ continued to optimize its production processes and expand its global production network in 2021. In particular, the Company focused on developing a roadmap for optimizing global supply chain management, on initiating and implementing measures to improve efficiency, on digitalization applications and **Industry 4.0** applications, and on the expansion of the global production network in China.

DEUTZ improved overall efficiency at its German plants[2] by around 7 percent in 2021 by implementing measures to increase efficiency in various production units and maintaining tight control over staffing levels. A number of overhead structures were also adapted, making it easier to leverage synergies and to focus and combine responsibilities. This led to a significant improvement of the cost base.

Lean philosophy In 2021, DEUTZ added **gemba walks** to its established methods in order to further embed a **lean philosophy** within the Company. The aim of this approach is to continuously expand the network of managers and employees, make the most of existing expertise, and facilitate the transfer of knowledge in order to work together on optimizing the value streams in the various production areas. To strengthen the lean leadership culture at global level, various lean transformation training courses for internal specialists and managers took place again across the sites last year. In turn, managers provided basic lean training for their employees to prepare them for the path towards operational excellence.

[1] Excluding electric boat drives from DEUTZ subsidiary Torqeedo.
[2] Excluding DEUTZ subsidiary Torqeedo.

DEUTZ Group production sites



Germany

- **ALSDORF/AACHEN (FUTAVIS)**
  Battery management systems
- **GILCHING (TORQEEDO)**
  Electric boat drives, complete e-marine drive systems
- **HERSCHBACH**
  Components plant for manufacturing and pre-assembly of complex add-on components
- **COLOGNE-PORZ (DEUTZ AG HEADQUARTERS)**
  Assembly plant for production engines with capacities of less than 4 liters and between 4 and 8 liters, center of excellence for camshafts and crankshafts
- **COLOGNE-KALK**
  Center of excellence for crankcase manufacturing
- **ULM**
  Small production runs for engine series due to be discontinued, Xchange engine manufacturing, small production runs for crankcases, crankshafts, and gearwheels

China

- **KUNSHAN (SANY JOINT VENTURE)**
  Production of engines for trucks, construction equipment, and concrete pump applications
- **CHANGSHA (SANY JOINT VENTURE)**
  New high-performance-engine assembly plant for SANY trucks and construction equipment on a greenfield site; production of engines for trucks, construction equipment, and concrete pump applications on a brownfield site
- **TIANJIN**
  Assembly engines with capacities of less than 4 liters and with capacities of 6 liters for applications in lifting platforms, in forklift trucks, and in small construction equipment as part of the local contract manufacturing alliance with BEINEI

Spain

- **ZAFRA**
  Center of excellence for the processing and pre-assembly of cylinder heads, crankcases for engines with capacities of less than 4 liters, conrods, and gearwheels

Morocco

- **SAPINO (MAGIDEUTZ)**
  Gensets

USA

- **PENDERGRASS/ATLANTA**
  Value-added production, Xchange engine remanufacturing

Optimization of global supply chain management In order to respond flexibly to the changing global situation, DEUTZ launched a three-stage project in 2020 as part of the restructuring of its supply chain. The first step was to develop a vision for a value chain geared to the needs of the future, followed in 2021 by the setting out of a roadmap for implementation. This comprehensive restructuring of the value chain is aimed at creating robust processes while still maintaining flexible structures. The objective is to add value for the customer and further improve the cost base by creating new supply models with defined completion stages, simplified workflows, and faster reaction times. The first projects, such as inviting tenders for a global, digital logistics platform, were launched in the fourth quarter of 2021 in collaboration with Purchasing and the DEUTZ IT department. The purpose of the platform will be to make the movement of goods from suppliers into the DEUTZ production network and other functions more transparent, thus allowing for greater control.

In 2021, the focus at Cologne-Porz, the largest site in the DEUTZ production network, was the bringing on stream of the new ultra-modern assembly line for sub-4 liter engines. This succeeded in stabilizing processes and achieving the planned efficiency gains. As a result, DEUTZ saw an increase in efficiency of around 13 percent in 2021 compared to the prior year. It is now possible to achieve the same output in two shifts that would have taken three shifts before. At the same time, DEUTZ improved delivery quality. The new actuation and documentation of fastening tasks, the redesign of the fault rectification process, and the leak detection measures, for example, produced a noticeable and enduring increase in quality standards.

The site in Ulm, which focuses on small-scale production runs, was able to maintain the production program at a stable level while further increasing revenue and earnings from exchange engines. In a separate hall area on the site, DEUTZ began setting up production of the E-DEUTZ Powertree charging station and providing staff training on this.

Capital expenditure within the scope of the global efficiency program In 2020, DEUTZ launched its Transform for Growth program across all sites in order to maintain its long-term competitiveness. See also 'Transform for Growth', p. 25, The measures it defines are aimed, for example, at optimizing the manufacturing costs of our finished products, reducing overheads, and increasing the level of automation and digitalization in DEUTZ plants. A number of investment projects were delivered or initiated in 2021 to achieve this:

At the headquarters in Cologne, capital expenditure of around €15 million was approved for a new assembly line for engines with capacities between 4 and 8 liters. The most notable aspect of the new line is its flexibility. Currently, two lines are in operation, but in the future it will be possible to produce all newer engine families in the 4 to 8 liter range on a single line. It is set to come on stream in 2023.

DEUTZ has also approved around €8 million for the shaft center at the Cologne-Porz site. The capital expenditure covers three automation projects using robot chains to supply a number of processing machines, four new pieces of machinery, and a new cleaning system. The project aims to significantly increase efficiency in crankshaft and camshaft production. The new machines are scheduled to commence operation in the second half of 2022.

DEUTZ approved two significant capital expenditure projects totaling around €7 million for the site in Herschbach. Some of the money will go towards a new machine for processing rocker arms, an integral element of all engines. This highly automated machine will replace three old machines in total and offer additional reserve capacity. The rest of the money will be invested in a new logistics hall in Herschbach with the aim of improving the efficiency of goods inward, storage, picking, and the provision of outgoing material at the plant in line with the latest lean principles. The new hall is scheduled to commence operations in 2023.

Industry 4.0 Between 2018 and 2021, around €4 million was invested in a new, digitalized production line for the manufacture of connecting rods at the DEUTZ Spain site in Zafra. The new manufacturing cell will make it possible to digitalize previously paper-based processes and use IT to connect them. Advanced analytics and artificial intelligence will enable the cell to monitor itself in real time, improving the quality of the conrods produced while providing better traceability and predictive maintenance of the line. In addition, the introduction of new collaborative robots (cobots) in manual workplaces has reduced the production costs of all conrods for sub-4 liter engines.

The digitalization of processes also continues elsewhere in the network of DEUTZ production sites. Since 2021, for example, all machine maintenance tasks and fault reports in production and assembly in Cologne have been processed via an app, which any maintenance technician can access and edit on a smartphone. This has resulted in fast response times, lean and transparent processes, and greater efficiency when it comes to the key task of maintaining and optimizing the production facilities. Other machinery and equipment was connected to a system for capturing process data and monitoring the operating state via innovative, low-cost **LoRaWAN** and **IO-Link** solutions. They enable real-time monitoring and resource-efficient, cost-optimized management of key paintshop parameters at the assembly plant in Porz.

Expansion of production capacity in China As part of its joint venture with SANY, DEUTZ integrated an existing SANY engine factory in Kunshan, China, into the network of DEUTZ production sites. In 2021, DEUTZ brought another production site on stream in an existing SANY hall near the SANY headquarters in Changsha. Here, larger 12 and 13 liter diesel engines are built for SANY trucks and construction vehicles. A new assembly plant for high-performance engines is also currently being constructed on a greenfield site not far from SANY's new truck plant in Changsha. The building, which was almost complete at the end of 2021, is scheduled to open toward the end of 2022 with a medium-term production capacity of up to 200,000 engines a year.

With regard to the contract manufacturing agreement with diesel engine maker BEINEI, DEUTZ took over and approved all production processes in 2021. Two engine series for lifting platforms, forklift trucks, and smaller construction equipment are manufactured at this new factory, which serves as a production hub for the Asian market. More than 500 DEUTZ engines have been built for local Chinese OEMs already. As the new China 4 emissions legislation for off-highway engines will come into force in 2022, local engine production will be ramped up to high volume in the current financial year. A total of around 10,000 new engines are scheduled to be built in Tianjin in 2022.

Optimization of production in the USA DEUTZ carried out several analyses and lean manufacturing projects at the plant in Pendergrass, USA, in 2021 with the aim of optimizing the supply chain and meeting the challenges of the labor market. The action plan that has been drawn up is designed to increase efficiency and profitability at the plant. Furthermore, the focus was on expanding and implementing flexible Xchange and value-added production to meet the complex and rapidly changing demands of the market.

PURCHASING AND PROCUREMENT

Ongoing development of supplier risk management The DEUTZ Group maintains business relationships with around 4,500 suppliers in more than 40 countries. With a total of nearly €1.2 billion in direct materials purchased annually worldwide, the Company's supply chain makes a significant contribution to its value creation process.

The primary aim of the overarching supplier risk management system is to avoid disruptions to supply by minimizing and managing risks and supply shortages. In order to identify potential risks at an early stage, Purchasing uses a digital information tool to continuously monitor more than 1,000 production component suppliers and suppliers of non-production items. This enables Purchasing to proactively take risk-mitigating measures such as building up backup inventories and/or switching to alternative suppliers.

In 2021, DEUTZ continued to broadened the scope of its existing supplier risk management system with the objective of steadily increasing the level of transparency. Previously, monitoring was restricted primarily to the suppliers of DEUTZ AG, but the aforementioned information tool now also covers the suppliers of the subsidiaries. In addition, the Company has initiated a pilot project to also include certain sub-suppliers.

Global supply bottlenecks and substantial delays in the supply chain in 2021 were enormously challenging not just for the production units but also for Purchasing as well as the supply chain function and its processes. At the same time, the rising prices of commodities, energy, and transport, particularly in the final quarter of the reporting period, led to direct and indirect cost increases on the procurement side.

DEUTZ had already strengthened its existing risk management system in 2020, when the coronavirus pandemic first broke out, in order to counteract supply bottlenecks. Measures that have been put in place to secure supplies include the greater use of existing second-source suppliers, the procurement of stocks of finished parts from suppliers in high-risk regions, the creation of increased inventory ranges, and the organization of special shipments.

Development of the global purchasing organization and strategy As the Company's subsidiaries are mainly sales companies, overall responsibility for supplier management, including the approval of production component suppliers, lies predominantly with DEUTZ AG as the executive parent company. DEUTZ intends to progressively optimize Group purchasing to the point where, in the medium term, all subsidiaries will be subject to the same processes that apply at DEUTZ AG. To this end, the Company set up a groupwide organizational structure for purchasing in 2021, and also established a new Purchasing Excellence department that took on global responsibility for the purchasing function's strategy, governance, processes, methods, and tools. It also launched the Purchasing Evolution initiative, leading to the initiation of additional cost reduction measures in all purchased item groups, many of which have already been implemented.

In 2020, DEUTZ had already formulated various strategic initiatives as part of the ongoing development of its global purchasing strategy. These concerned not only the broadening of the risk management system and quality-related issues, but also areas such as digitalization, materials compliance, and sustainability. For more information see the non-financial report – Supplier Management, p. 107 onward. In terms of digitalization, in 2021 DEUTZ implemented an IT-based tool that is able to provide a transparent overview of the global supplier base across all sites, while also allowing it to structure spending across the Group in a standardized way.

Sustainable procurement DEUTZ systematically manages its suppliers using a 'supplier cockpit', which it uses to monitor the performance of key suppliers, primarily from the perspective of the quality of the supplied components, lead times, availability, and commercial conditions. With the implementation of the groupwide sustainability strategy, however, the selection of suppliers is also going to be increasingly based on sustainability criteria. In addition to the existing supplier cockpit, DEUTZ also introduced a web-based assessment platform for global supply chains and a business partner compliance tool in 2020 in order to be able to query and evaluate various aspects of sustainability. DEUTZ initiated a digitalization process in 2021 with the aim of combining these previously stand-alone assessment platforms into a single supplier cockpit in the medium term. The objective is to ensure that, from the outset, the assessment of suppliers takes particular account of aspects such as respect for human rights, measures to combat corruption and/or bribery, and compliance with environmental and social standards. For further information see the non-financial report – Supplier Management, p. 107 onward. Since 2021, the aforementioned risk information tool has also been used to monitor potential sustainability risks in the supply chain. Using predefined data sources, the tool identifies any reports that pertain to relevant risks, for example in connection with human rights issues or labor practices, selects them and automatically forwards them to the appropriate employees in the purchasing department. This information is also incorporated into the system-based assessment of the general risk of working with that supplier.

The topic of sustainable procurement has gained added significance with the adoption of the Supply Chain Due Diligence Act in 2021. This act will come into effect in Germany on January 1, 2023, and is intended to prevent, minimize, or eliminate risks relating to human rights and the environment within the supply chain. In the second half of 2021, DEUTZ, under the direction of Purchasing, established a cross-departmental task force that is working on implementing the resulting requirements. From 2023 onwards, DEUTZ will report annually on the aforementioned issues and any relevant actions and related developments in its non-financial report. For further information see also the non-financial report – Supplier Management, p. 107 onward.

EMPLOYEES

Overview of the DEUTZ Group's workforce[1]

Headcount

	Dec. 31, 2021	Dec. 31, 2020
DEUTZ Group	**4,751**	**4,586**
Thereof		
In Germany	3,273	3,302
Outside Germany	1,478	1,284
Thereof		
Non-salaried employees	2,576	2,455
Salaried employees	2,083	2,022
Trainees	92	109
Thereof		
DEUTZ Compact Engines	3,892	3,747
DEUTZ Customized Solutions	610	622
Other[2]	249	217

[1] Full time equivalents; including apprentices, excluding temporary workers.
[2] Including Torqeedo and Futavis.

DEUTZ employed 4,751[1] people worldwide as at December 31, 2021, which was 165 more than at the end of 2020.

The voluntary redundancy program launched on September 1, 2020 had been taken up by a total of 361 employees by the time that it finished on March 31, 2021. This led to 133 employees leaving the Company in the year under review. See also 'Transform for Growth', p. 25. Conversely, the noticeable increase in demand in 2021 led to a rise in employee numbers, particularly at the plants. New employees were also hired as part of regional growth initiatives, for example in China and the USA, and for the establishment of the Shared Service Center in Spain.

At around 69 percent, the bulk of the Group's workforce is based in Germany. Of the 3,273 employees in Germany, 2,473 work at the Company's headquarters in Cologne.

The number of temporary workers also increased from 70 to 401 because of the sharp year-on-year increase in production volume. They now make up around 8 percent of the total workforce.

[1] Number of employees expressed in FTEs (full-time equivalents) including apprentices, excluding temporary workers.

MACROECONOMIC AND INDUSTRY-SPECIFIC ENVIRONMENT

ECONOMIC ENVIRONMENT

Global growth surges – coronavirus effects now almost completely canceled out Whereas 2020 was dominated by the negative impact of the coronavirus pandemic, the global economy noticeably recovered in 2021. The latest estimate from the International Monetary Fund (IMF)[2] shows a rise in global value creation of 5.9 percent. The last time the growth rate was that high was in 1973. Supply issues and new waves of coronavirus infections, particularly in the second half of the year, prevented an even stronger recovery. Thanks to various economic stimulus measures by individual governments and central banks, global trade recovered by 9.3 percent, compared to a drop of 8.2 percent in 2020.

GDP growth[1]

YoY change (%)

	2021	2020
Global	5.9	–3.1
Industrialized countries	5.0	–4.5
Eurozone	5.2	–6.4
Germany	2.7	–4.6
USA	5.6	–3.4
Emerging markets	6.5	–2.0
China	8.1	2.3

[1] IWF: World Economic Outlook Update, January 2022.

Whereas GDP in the industrialized countries increased by a total of 5.0 percent, the emerging markets experienced even stronger growth of 6.5 percent. And China, which is a key emerging market for DEUTZ and the only major national economy to see its GDP increase in 2020, saw an above-average growth rate of 8.1 percent.

[2] IWF: World Economic Outlook Update, January 2022.

PROCUREMENT MARKET

The procurement of components and commodities proved to be particularly challenging for participants in the global economy in 2021. This was primarily due to worldwide bottlenecks in the availability of materials, particularly electronics, plastic, and steel, which resulted in significant supply shortages in international markets. The catastrophic floods that hit Germany in July 2021 exacerbated what was already a challenging supply situation. At the same time, the recovery of the global economy and the resulting growth in demand for international freight and transport capacity led to significant delays in the supply chain.

Commodity prices The aforementioned shortages in supply led to surges in commodity prices in 2021. Compared with 2020, the prices of cast iron scrap and foundry scrap, for example, went up by over 60 percent and 112 percent respectively, while the 198 percent increase in the price of precious metals such as rhodium meant they were almost three times as expensive as in the prior year. Energy and transport prices also rose sharply.

INDUSTRY-SPECIFIC ENVIRONMENT

Diesel engine market Based on currently available market data, the majority of the individual markets in the off-highway segment relevant to DEUTZ grew in 2021 despite ongoing bottlenecks in the supply industry around the world and the impact of the coronavirus pandemic.

There was a sharp increase in unit sales in the construction equipment segment in 2021 relative to the low figure for the prior year. This was primarily driven by persistently strong economic growth and comprehensive government stimulus packages in North America and Europe.[1] Sales in the Chinese market for construction equipment returned to the high pre-lockdown levels over the course of 2020, and continued to grow in 2021, albeit at a significantly lower level than in previous years.[2]

Demand for material handling applications followed the trend in the construction industry. Unit sales of forklift trucks in North America and Europe were very encouraging in 2021 due to the strong economy. In China, sales of forklift trucks also increased significantly compared to the prior year,[2] while the rest of Asia saw similar growth in demand to that in Europe and North America too.[3] For lifting platforms and telehandlers, the strong economic situation and a sharp increase in fleet investment by the equipment leasing companies led to a substantial rise in unit sales.

Growth in the European agricultural machinery market in 2021 was slightly dampened by the impact of the coronavirus pandemic, but was positive overall. In North America, the persistently high demand for tractors, in particular, contributed to renewed market growth. In China, the structural and technological adjustments appear to have been mostly completed, leading to a lower, but still positive, rise in unit sales.[4]

The Chinese market for heavy duty trucks contracted overall in 2021, although unit sales remained high. The main reasons for this are the cuts in electricity and energy ordered by central government, local pandemic-related lockdowns, and the introduction of the CN6 emissions standard for heavy duty trucks in July 2021, which had prompted capital investment to be brought forward in 2020 and in the first half of 2021, in particular.[5]

[1] VDMA 'Construction equipment and building material machinery', January 2022.
[2] Chinese Construction Machinery Association 'CCMA Sales YTD 11-2021', January 2022.
[3] FEM 'World Industrial Truck Statistics Q4-2021', February 2022.
[4] VDMA 'Geschäftsklima und Marktentwicklung weltweit', January 2022.
[5] China Automotive Industry Association, January 2022.

BUSINESS PERFORMANCE IN THE DEUTZ GROUP

Following a successful first six months of the year, DEUTZ continued to benefit from the sustained market recovery in relevant customer industries in the second half of 2021. In contrast with the prior-year figure, which was exceptionally low due to coronavirus, the ongoing pandemic had hardly any negative impact on demand in 2021. However, the rate of growth was slowed down by global supply bottlenecks. See also 'Procurement market', p. 36.

In mid-September, DEUTZ again raised its full-year guidance as its business performance was better than expected overall.[1] See also 'Overall assessment for 2021', p. 48.

NEW ORDERS

DEUTZ Group: New orders

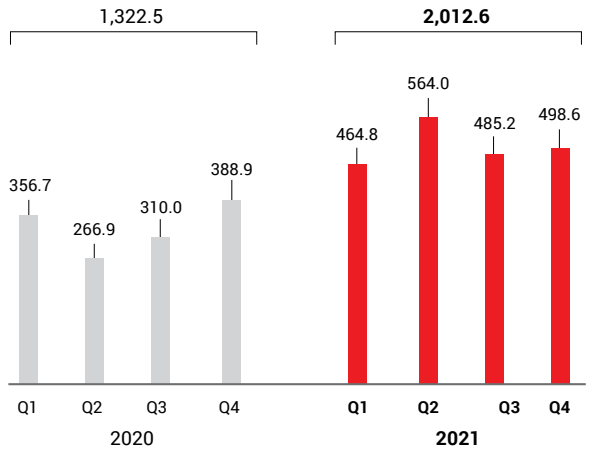
€ million

In 2021, new orders received by DEUTZ increased by 52.2 percent year on year to €2,012.6 million. This growth can be explained by the fact that customers were very willing to invest, reflected in double-digit percentage increases across all application segments and regions. The exceptionally strong rise was also attributable to one-off effects of spending brought forward in June and September, which amounted to more than €100 million. This situation came about mainly because of customer orders being brought forward in response both to price adjustments and to longer lead times.

In the service business, which is a key pillar of DEUTZ's growth strategy, new orders rose by 16.9 percent year on year to reach €412.1 million. Major contributors to this were parts sales and the business with DEUTZ Xchange engines in the Asia-Pacific and Americas regions.

DEUTZ Group: New orders by quarter

€ million



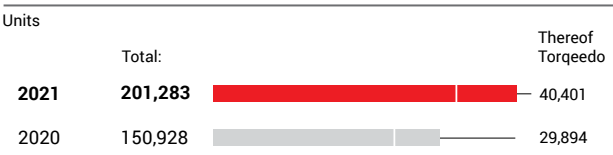
The volume of new orders in the fourth quarter jumped by 28.2 percent year on year to €498.6 million. All the main application segments contributed to this growth. In terms of regions, this increase was mainly attributable to the EMEA region. The Asia-Pacific region saw a fall, mainly as a result of the current weakness in the Chinese market. See also 'Industry-specific environment', p. 36.

As at December 31, 2021, orders on hand stood at €676.7 million (December 31, 2020: €269.0 million), which indicates continued growth. The proportion of orders on hand attributable to the service business stood at €35.7 million (December 31, 2020: €24.4 million).

UNIT SALES

DEUTZ Group: Unit sales

Units



With a total of 201,283 engines sold, the DEUTZ Group registered an increase in unit sales of 33.4 percent in the reporting period. The number of DEUTZ engines[2] sold rose by 32.9 percent to 160,882. Unit sales are thus within the most recent forecasts of between 155,000 and 170,000 DEUTZ engines.

[1] See the ad hoc disclosure dated September 13, 2021.

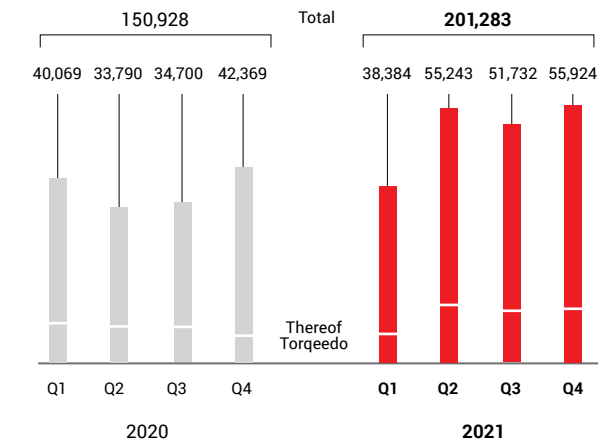
[2] Excluding electric boat drives from DEUTZ subsidiary Torqeedo.

Almost all application segments saw strong double-digit increases in unit sales with the exception of Stationary Equipment, which fell slightly short of the level in the prior-year period due to the discontinuation of older engine series. The EMEA region, which is currently DEUTZ's largest sales market, saw the sharpest rise in absolute terms. Unit sales in this region climbed by 35.8 percent, while unit sales in the Americas and Asia-Pacific regions grew by 41.0 percent and 22.4 percent respectively year on year.

DEUTZ subsidiary Torqeedo sold 40,401 electric boat drives in 2021. All regions contributed to a rise in unit sales of 35.1 percent compared to 2020, largely driven by higher demand in the OEM business.

DEUTZ Group: Unit sales by quarter

units



In the fourth quarter of 2021, unit sales across the Group were up 32.0 percent compared with the equivalent quarter of the prior year. All regions and application segments contributed to this increase with double-digit percentage growth. Unit sales of DEUTZ engines[1] rose by 22.1 percent to reach 44,609 engines sold. Over the same period, unit sales at Torqeedo almost doubled with an increase of 93.8 percent to reach 11,315 boat drives.

REVENUE

DEUTZ Group: Revenue

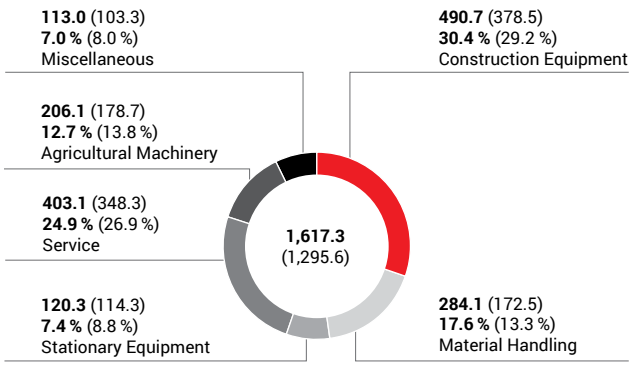
€ million

[1] Excluding electric boat drives from DEUTZ subsidiary Torqeedo.

Reflecting the growth in unit sales, consolidated revenue increased by 24.8 percent to €1,617.3 million in 2021, reaching the lower end of the forecast range of €1.6 to €1.7 billion.[2] The lower rise in revenue, relative to the rise in unit sales, was the result of the disproportionately sharp increase in demand for engines with a capacity of less than 4 liters and the significantly higher proportion of electric boat drives.

DEUTZ Group: Revenue and proportion of revenue by application segment

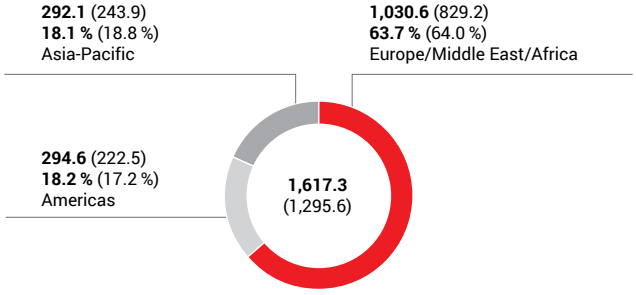
€ million (2020 figures)



All application segments registered growth compared to 2020, with Material Handling leading the way with a sharp rise of 64.7 percent. Service revenue swelled by 15.7 percent to €403.1 million, primarily due to the substantial growth of business from parts sales. This means that DEUTZ reached its revenue target of around €400 million for the service business in 2021.

DEUTZ Group: Revenue and proportion of revenue by region

€ million (2020 figures)

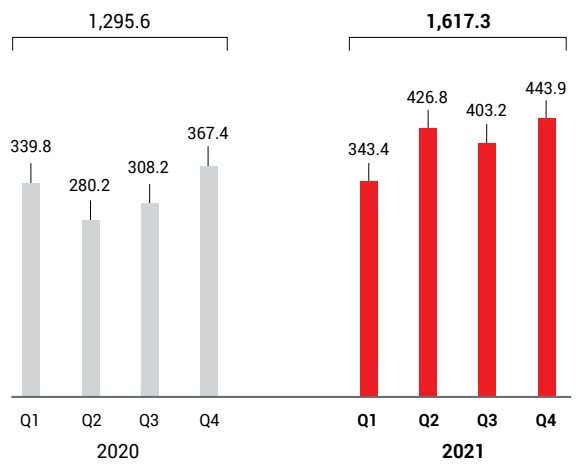


All regions contributed to the increase in revenue with double-digit growth rates. In absolute terms, the EMEA region, and particularly Germany and the rest of Europe, saw the highest rises. In China, the most important sales market for the regional growth strategy, DEUTZ advanced its revenue by 16.8 percent to €151.9 million[3] despite the current weakness in the market.

[2] See the ad hoc disclosure dated September 13, 2021.
[3] Excluding revenue from the joint venture with SANY.

DEUTZ Group: Revenue by quarter

€ million



Consolidated revenue amounted to €443.9 million in the fourth quarter of 2021, which was 20.8 percent more than in the corresponding period of 2020. All regions and all application segments contributed to the increase.

EARNINGS

Overview of the DEUTZ Group's results of operations

€ million

	1–12/2021	1–12/2020	Change
Revenue	**1,617.3**	**1,295.6**	**24.8%**
Cost of sales	–1,331.7	–1,105.9	20.4%
Research and development costs	–90.9	–97.7	–7.0%
Selling and administrative expenses	–164.8	–146.5	12.5%
Other operating income	27.0	15.0	80.0%
Other operating expenses	–22.4	–68.3	–67.2%
Write-down of financial assets	–0.2	–1.3	84.6%
Profit/loss on equity-accounted investments	–0.8	1.4	–
Other net investment income	0.6	1.1	–45.5%
EBIT	**34.1**	**–106.6**	**–**
thereof exceptional items	–3.1	–31.9	90.3%
Operating profit/loss (EBIT before exceptional items)	**37.2**	**–74.7**	**–**
Interest income	0.2	0.7	–71.4%
Interest expense	–5.2	–4.3	20.9%
Other finance costs	0.0	–0.4	–
Financial income, net	**–5.0**	**–4.0**	**–25.0%**
Income taxes	9.1	3.0	203.3%
Net income	**38.2**	**–107.6**	**–**

DEUTZ Group: Operating profit and EBIT margin (before exceptional items)

€ million (EBIT margin, %)

Operating profit DEUTZ generated an operating profit (EBIT before exceptional items) of €37.2 million in 2021, having reported an operating loss of €74.7 million in the previous year. The significant improvement compared with 2020 was primarily due to the sharp rise in revenue, the related economies of scale, and cost savings stemming from the restructuring and cost-cutting measures initiated. In 2020, the macroeconomic fallout from the coronavirus pandemic had led to a sharp fall in revenue, resulting in substantial diseconomies of scale. In the previous year, there had also been a heavy drag on operating profit from payments of €8.8 million made under continuation agreements with suppliers that were going through insolvency proceedings and from demand-related impairment losses of €17.2 million recognized on capitalized development projects and sales licenses. By contrast, operating profit in 2021 was boosted by reversals of impairment losses on a capitalized development project in a total amount of €4.4 million. However, the Group's operating profit was once again squeezed by the loss reported by DEUTZ subsidiary Torqeedo, which has not yet managed to break even.

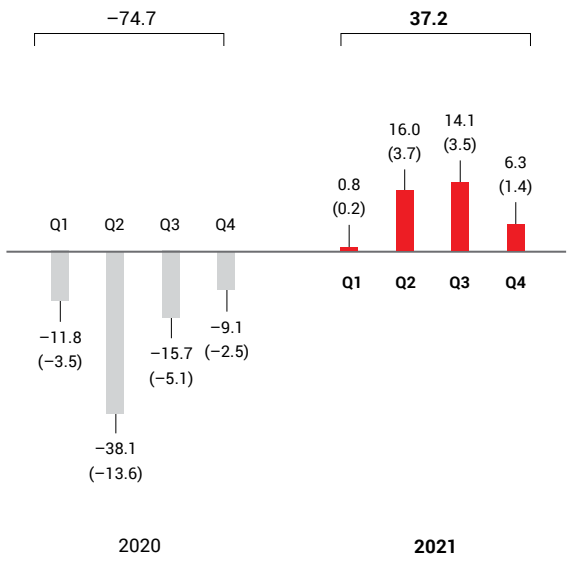
The EBIT margin before exceptional items rose from minus 5.8 percent in 2020 to 2.3 percent in the reporting year and was thus within the expected range of 2 percent to 3 percent.[1] Return on capital employed (ROCE before exceptional items),[2] which is one of our internal key performance indicators, improved from minus 8.1 percent to 4.0 percent in the same period.

The rising cost of commodities and materials had an adverse impact in 2021, especially in the final quarter of the year. These increases could not be passed on to customers in full due to the high level of orders on hand. Nonetheless, the trend was positive compared with the prior-year quarter, with an improvement from an operating loss of €9.1 million in the fourth quarter of 2020 to an operating profit of €6.3 million in the corresponding quarter of 2021, primarily as a result of the growth in the volume of business.

[1] See ad hoc disclosure dated September 13, 2021.
[2] Return on capital employed (ROCE): ratio of EBIT to average capital employed. Capital employed: total assets less cash and cash equivalents, trade payables, and other current and non-current liabilities, based on average values from two balance sheet dates.

DEUTZ Group: Operating profit (EBIT before exceptional items) by quarter

€ million (EBIT margin, %)



In 2021, there were exceptional items of €3.1 million. These related to the Transform for Growth efficiency program and were the result of the adjustment of the provision for restructuring, which had been recognized for the first time in the previous year. In 2020, restructuring costs of €31.9 million had been recognized as an exceptional item in connection with the efficiency program. After taking exceptional items into account, EBIT for the year under review stood at €34.1 million (2020: minus €106.6 million).

Cost of sales The cost of sales rose to €1,331.7 million in 2021 as a result of the significant growth in the volume of business. This year-on-year increase of 20.4 percent was mainly attributable to the rise in the cost of materials. There were also increases in staff costs and expenses for temporary workers. The gross margin[1] advanced from 14.6 percent in 2020 to 17.7 percent in 2021.

Research and development costs In the year under review, research and development costs amounted to €90.9 million. They largely comprised staff costs, the cost of materials, and amortization on completed development projects, from which investment grants received and capitalized development expenditure were deducted. The year-on-year decline of €6.8 million can largely be explained by the very high level of R&D costs in the previous year. The prior-year figure had included impairment losses on capitalized development expenditure totaling €10.8 million, whereas the figure for 2021 included the reversal of impairment losses in an amount of €4.4 million on a development project against which impairment losses had been recognized in previous years. The impairment losses were reversed due to more positive market expectations. Adjusted for the aforementioned impairment losses and reversals thereof, research and development costs went up by €8.4 million compared with 2020. This rise was mainly attributable to a reduction in capitalized development expenditure.

Other operating income Other operating income totaled €27.0 million in the reporting year. The year-on-year increase of €12.0 million was attributable, in particular, to higher foreign currency gains and the settlement reached with Torqeedo's former owners regarding compensation for losses incurred due to a product recall in 2019.

Other operating expenses Other operating expenses amounted to €22.4 million in 2021. The sharp fall of €45.9 million compared with 2020 largely related to restructuring costs in connection with the efficiency program. While the recognition of new provisions for these costs had reduced operating profit in 2020 by €31.9 million, in the reporting year there were expenses of just €3.1 million that arose as a result of adjusting the provision for restructuring. In addition, foreign currency losses arising on the translation of foreign currency positions were lower, as were provisions recognized for onerous contracts in relation to orders on hand.

Share of profit (loss) of equity-accounted investments Owing to the loss attributable to our Chinese joint venture Hunan DEUTZ Power Co., Ltd., the share of profit (loss) of equity-accounted investments declined by €2.2 million to a loss of €0.8 million.

Financial income, net Net finance costs deteriorated by €1.0 million to €5.0 million, primarily due to higher lease liabilities.

Income taxes Tax income totaling €9.1 million was recognized in 2021. The current tax expense rose by €4.6 million to €6.5 million in line with earnings. There was also deferred tax income of €15.6 million, mainly due to higher **deferred tax assets** in respect of tax loss carryforwards. This was primarily due to an upgraded earnings expectation for the upcoming five-year period in view of the economic situation.

Earnings per share Net income amounted to €38.2 million in 2021, following a net loss of €107.6 million reported in 2020. Earnings per share increased from minus €0.89 in 2020 to €0.32 in the reporting year. Adjusted for exceptional items, net income improved to €41.3 million (2020: net loss of €75.7 million) and adjusted earnings per share improved to €0.34 (2020: minus €0.63).

[1] Gross margin: ratio of revenue less cost of sales to revenue (excluding amortization relating to capitalized development expenditure).

BUSINESS PERFORMANCE IN THE SEGMENTS

DEUTZ Group: Segments

€ million

	2021	2020
New orders		
DEUTZ Compact Engines	1,585.5	954.3
DEUTZ Customized Solutions	362.6	324.5
Other	67.5	46.4
Consolidation	–3.0	–2.7
Total	**2,012.6**	**1,322.5**
Unit sales (units)		
DEUTZ Compact Engines	143,622	102,054
DEUTZ Customized Solutions	17,260	18,980
Other	40,401	29,894
Consolidation	0	0
Total	**201,283**	**150,928**
Revenue		
DEUTZ Compact Engines	1,243.4	943.8
DEUTZ Customized Solutions	320.2	310.1
Other	56.7	44.4
Consolidation	–3.0	–2.7
Total	**1,617.3**	**1,295.6**
EBIT		
DEUTZ Compact Engines	12.4	–80.5
DEUTZ Customized Solutions	31.3	18.7
Other	–6.5	–12.9
Consolidation	0.0	0.0
Total	**37.2**	**–74.7**

DEUTZ COMPACT ENGINES (DCE)

DEUTZ Compact Engines

	2021	2020	Change
New orders (€ million)	1,585.5	954.3	66.1%
Unit sales (units)	143,622	102,054	40.7%
Revenue (€ million)	1,243.4	943.8	31.7%
EBIT (€ million)[1]	12.4	–80.5	–
EBIT margin (%)[1]	1.0	–8.5	+9.5 PP

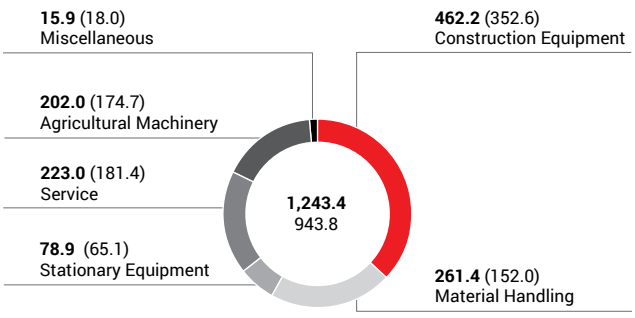
[1] before exceptional items.

New orders in the DEUTZ Compact Engines (DCE) segment jumped by 66.1 percent to €1,585.5 million in 2021. All application segments contributed to this increase with double-digit or triple-digit growth rates, with Construction Equipment and Material Handling making the strongest contributions. Orders on hand in the DCE segment more than doubled to €533.7 million, a rise of 191.5 percent in comparison with the end of 2020.

The segment's unit sales rose by 40.7 percent, with 143,622 engines sold. All regions and all of the main application segments recorded increases in unit sales.

DEUTZ Compact Engines: Revenue by application segment

€ million (2020 figures)



The DCE segment's revenue advanced by 31.7 percent to €1,243.4 million in the reporting year. All regions and, similarly to unit sales, all of the main application segments contributed to this increase, generating double-digit growth. The lower percentage rise in revenue compared with the increase in unit sales was predominantly due a shift in the product mix toward engines with a capacity of less than 4 liters.

In the fourth quarter of 2021, new orders climbed by 33.9 percent compared with the fourth quarter of 2020 to reach €393.4 million. Unit sales rose by 28.2 percent to 40,029 engines. As a result, revenue increased by 26.0 percent to €346.7 million.

Operating profit for the segment The operating profit for the segment (EBIT before exceptional items) improved by €92.9 million year on year to €12.4 million. This was due not only to the much higher volume of business and the associated economies of scale but also to cost savings resulting from the restructuring measures. In 2020, there had also been a drag on operating profit from payments made under continuation agreements with suppliers that were going through insolvency proceedings and, in particular, demand-related impairment losses recognized on capitalized development projects. By contrast, operating profit in 2021 was boosted by reversals of impairment losses on a capitalized development project in a total amount of €4.4 million. The EBIT margin before exceptional items stood at 1.0 percent in 2021, compared with minus 8.5 percent in 2020.

In the fourth quarter of 2021, operating profit improved by €18.9 million compared with the prior-year period to reach €6.0 million (Q4 2020: operating loss of €12.9 million) reflecting the increase in the volume of business. The EBIT margin also improved, from minus 4.7 percent in the fourth quarter of 2020 to 1.7 percent in the fourth quarter of 2021.

DEUTZ CUSTOMIZED SOLUTIONS (DCS)

DEUTZ Customized Solutions

	2021	2020	Change
New orders (€ million)	362.6	324.5	11.7 %
Unit sales (units)	17,260	18,980	–9.1 %
Revenue (€ million)	320.2	310.1	3.3 %
EBIT (€ million)[1]	31.3	18.7	67.4 %
EBIT margin (%)[1]	9.8	6.0	+3.8 pp

[1] before exceptional items.

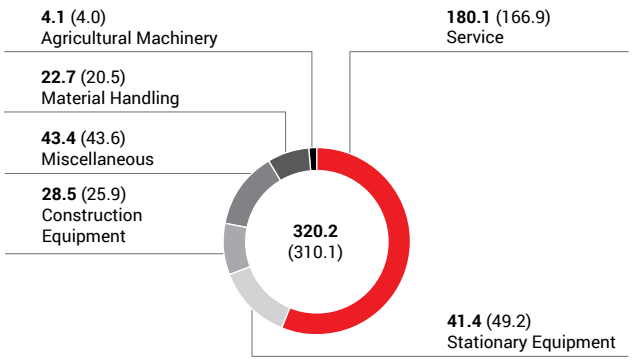
New orders in the DCS segment rose by 11.7 percent year on year to €362.6 million. With the exception of the Miscellaneous application segment, all of the main application segments recorded an increase in new orders. In absolute terms, the service business made the biggest contribution to the rise in new orders.

Orders on hand as at December 31, 2021 stood at €120.5 million, a significant increase of 60.2 percent compared with the same date a year earlier.

Contrary to the rise in new orders, the DCS segment's unit sales declined by 9.1 percent to 17,260 engines in the reporting year. The regional picture was mixed, with a rise in unit sales in the Americas but substantial year-on-year decreases in the EMEA and Asia-Pacific regions. The decline in EMEA, which was particularly pronounced in Europe, was largely due to the switch to newer Stage V engines in this region. In the Asia-Pacific region, however, the reduction in unit sales was attributable to the discontinuation of older engine series, which resulted in marked falls in unit sales compared with 2020, especially in the Stationary Equipment application segment. Material Handling was the only application segment to generate an increase in unit sales, and this was thanks to higher unit sales of older engine series in the Asia-Pacific and Americas regions.

DEUTZ Customized Solutions: Revenue by application segment

€ million (2020 figures)



Despite the reduction in unit sales, segment revenue rose by 3.3 percent year on year to €320.2 million. This opposing trend was due to a significant increase in CKD[1] and service business, which has no impact on unit sales. Revenue from the service business rose by 7.9 percent to €180.1 million, which meant that this business accounted for around 56 percent of the DCS segment's revenue.

In the fourth quarter of 2021, new orders in the DCS segment rose by 11.2 percent compared with the prior-year quarter to reach €92.5 million. Unit sales fell by 13.7 percent to 4,580 engines. The expansion of CKD[1] and service business was unable to fully make up for this decrease, which was primarily attributable to the Stationary Equipment and Miscellaneous application segments. Segment revenue therefore declined slightly to stand at €84 million, a fall of 0.4 percent compared with the fourth quarter of 2020.

Operating profit for the segment At €31.3 million, operating profit for the segment improved by €12.6 million compared with 2020, which had been adversely affected by impairment losses recognized on sales licenses, as well as by other factors. This improvement was mainly attributable to cost savings resulting from the restructuring program and to the higher degree of vertical integration after crankcase processing had been insourced.

[1] Completely knocked down: The engines in this business are shipped as a set of unassembled components.

In the fourth quarter of 2021, operating profit declined to €3.5 million (Q4 2020: €7.8 million). This was mainly attributable to the effects of an unfavorable product mix that resulted, in particular, from the lack of availability of some materials due to supply chain disruptions and the recognition of an impairment loss on sales licenses.

OTHER

Other

	2021	2020	Change
New orders (€ million)	67.5	46.4	45.5 %
Unit sales (units)	40,401	29,894	35.1 %
Revenue (€ million)	56.7	44.4	27.7 %
EBIT (€ million)[1]	–6.5	–12.9	49.6 %
EBIT margin (%)[1]	–11.5	–29.1	+17.6 pp

[1] before exceptional items.

The Other segment, which includes both the electric boat drive business of DEUTZ subsidiary Torqeedo and the battery specialist Futavis, also performed well in 2021. However, Torqeedo has not yet managed to break even. Thanks to increased demand in all regions, new orders jumped by 45.5 percent to €67.5 million. The segment's unit sales rose by 35.1 percent year on year to 40,401 electric motors owing to the significant expansion of the OEM business. Revenue advanced by 27.7 percent to €56.7 million, with all regions notching up double-digit growth rates. Futavis's revenue contribution came to around €1.9 million in 2021.

In the fourth quarter of 2021, new orders rose by 7.3 percent compared with the corresponding quarter of 2020 to reach €13.3 million. Unit sales almost doubled in the same period, surging by 93.8 percent to 11,315 electric motors. As a result, revenue climbed by 62.4 percent to €13.8 million.

Operating profit for the segment The Other segment reported an operating loss of €6.5 million in 2021. This year-on-year improvement of €6.4 million was mainly attributable to the growth in the volume of business at the Torqeedo companies and a compensation payment posted in the first quarter in connection with an out-of-court settlement. Reflecting the increased volume of business, operating profit for the fourth quarter of 2021 improved by €0.8 million year on year.

FINANCIAL POSITION

BASIC PRINCIPLES AND OBJECTIVES OF FINANCIAL MANAGEMENT

The purpose of financial management is to ensure the solvency of the DEUTZ Group at all times by obtaining the necessary funds, to hedge and contain interest-rate risk, currency risk, and commodities risk throughout the Group, and to optimize the cost of capital. Responsibility for groupwide financial management, including managing funds within the Group, lies with DEUTZ AG as the parent company of the Group.

FUNDING

Sufficient liquidity ensured In order to ensure sufficient liquidity, DEUTZ has at its disposal a syndicated working capital facility amounting to €160 million that has been provided to the Company by a consortium of banks. As a safeguard against the impact of the coronavirus pandemic, DEUTZ had also been granted a €150 million credit line with the assistance of Germany's KfW development bank. DEUTZ repaid this 'COVID-19 tranche' in full and ahead of schedule at the beginning of September because of its improved business situation. The term of the credit line, which did not need to be used at any time, had originally been due to end in November 2021 and could have been extended for a further six months.

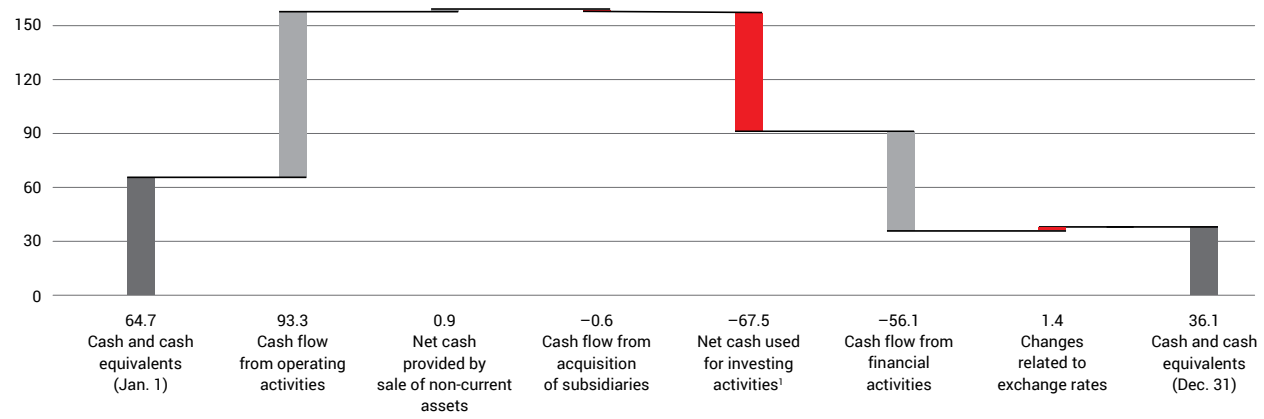
The remaining loan facility is an unsecured, floating-rate credit line that runs until June 2024. DEUTZ also has access to three bilateral credit lines, each in an amount of €25 million, which run until February 2023 and are also unsecured and floating-rate facilities. As at 31 December 2021, DEUTZ AG therefore had unused lines of credit totaling around €200 million at its disposal.

As part of its contractual agreements, DEUTZ has undertaken to comply with certain financial covenants. However, these do not place any restrictions on its ability to pursue growth projects. If, however, there is a dramatic deterioration in the general economic situation – for example because of the fallout from the coronavirus pandemic – there is a risk of the covenants being breached in the short term. Should such a risk materialize, DEUTZ would approach its funding partners in advance in order to negotiate the necessary **waiver** and to enable further amounts to be drawn down under the syndicated loan. See also 'Financial risk management', note 26, p. 177.

DEUTZ also continues to have access to short-term credit lines and makes use of loans with subsidized interest rates.

DEUTZ Group: Change in cash and cash equivalents

€ million



[1] Capital expenditure on intangible assets, investments, property, plant and equipment.

The aforementioned funding instruments ensure that the Company has sufficient funds for its operations and for ongoing and planned projects in the context of its growth strategy.

Receivables management optimized by means of factoring and systematic improvement of payment terms The sale of receivables, known as **factoring**, is an important way of optimizing receivables management. It enables DEUTZ to not only ensure sufficient liquidity but also improve its working capital, which tends to be affected by large amounts of capital being tied up in the preliminary financing of engine production and in the payment terms that it has granted.

The volume of sales of receivables totaled €134 million as at the balance sheet date, which was above the level a year earlier (December 31, 2020: €107 million) due to the improved business performance.

CASH FLOW

Overview of the DEUTZ Group's financial position

€ million

	2021	2020	Change
Cash flow from operating activities	93.3	44.9	107.8 %
Cash flow from investing activities	–67.2	–76.2	11.8 %
Cash flow from financing activities	–56.1	41.5	–
Change in cash and cash equivalents	**–30.0**	**10.2**	**–**
Free cash flow[1] from continuing operations	**21.6**	**–35.8**	**–**
Cash and cash equivalents at Dec. 31	36.1	64.7	–44.2 %
Current and non-current interest-bearing financial debt at Dec. 31	115.8	148.5	–22.0 %
thereof lease liabilities	61.3	58.0	5.7 %
Net financial position[2] at Dec. 31	–79.7	–83.8	4.9 %

[1] Cash flow from operating activities and from investing activities less interest expense.
[2] Cash and cash equivalents less current and non-current interest-bearing financial debt.

The sharp rise in the volume of business and in operating profit led to a very encouraging level of cash flow from operating activities, which amounted to a net cash inflow of €93.3 million. As a result of careful monitoring, working capital was kept virtually unchanged, despite the very sharp rise in the volume of business.

Net cash used for investing activities stood at €67.2 million in the reporting year. This year-on-year decline of €9.0 million was mainly due to reduced capital expenditure on property, plant and equipment and on intangible assets. Investing activities in respect of investments came to €5.8 million and related to the investment in Blue World Technologies, Aalborg, Denmark, of €3.8 million, a capital increase of €1.1 million at subsidiary DEUTZ Global Service Center, and the first tranche of the capital contribution to the joint venture DEUTZ Power Solution (Xuzhou) Co., Ltd., Xuzhou, China, of €1.0 million. DEUTZ established this joint venture with Beijing Fangda Diesel Engine Technology & Service Co., Ltd., Beijing, China, and SINOCHAIN Environment Protection Co., Ltd., Shanghai, China. The total investment in the new company is €2.0 million. The second tranche is to be paid within the next five years. DEUTZ holds 40 percent of the shares in the joint venture, which is accounted for using the equity method.

The main factors affecting cash flow from financing activities, which amounted to a net cash outflow of €56.1 million, were the repayment of a loan of our subsidiary DEUTZ Spain and the repayment of short-term lines of credit. In 2020, cash flow from financing activities had amounted to a net cash inflow of €41.5 million, primarily due to loans being taken out. DEUTZ AG currently has lines of credit totaling €235.0 million at its disposal. In 2021, DEUTZ AG repaid the KfW loan facility of €150.0 million ahead of schedule. It also agreed three further lines of credit, each in an amount of €25.0 million. Cash flow from financing activities included payments of interest and principal in connection with leases amounting to €1.4 million and €15.6 million respectively (2020: €1.1 million and €14.6 million respectively).

Thanks to the very good level of net cash provided by operating activities, free cash flow improved by €57.4 million to €21.6 million (2020: – €35.8 million). We therefore comfortably exceeded the neutral level of cash flow stated in our guidance, even though this had factored in a positive exceptional item in connection with payment of the final installment of the purchase consideration for the sale of land at our former Cologne-Deutz site, which was then postponed. The main reason for exceeding the guidance was the change in working capital, which increased only modestly after adjustment for currency effects, despite the significant increase in the volume of business.

Free cash flow in the fourth quarter of 2021 came to €6.4 million. The sharp fall compared with the fourth quarter of 2020 was due to the change in working capital in 2021, which was heavily affected by the pandemic.

These changes in cash flow during the reporting period caused cash and cash equivalents to decrease to €36.1 million. The net financial position improved slightly to –€79.7 million. As at December 31, 2021, the net financial position included lease liabilities totaling €61.3 million (December 31, 2020: €58.0 million).

CAPITAL EXPENDITURE

Capital expenditure (after deducting investment grants)

€ million

	2021	2020	Change
Property, plant and equipment	61.8	80.4	–18.6
of which right-of-use assets for leases under IFRS 16	17.7	32.4	–14.7
Property, plant and equipment (excluding right-of-use assets under IFRS 16)	44.1	48.0	–3.9
Intangible assets	10.7	23.9	–13.2
	72.5	104.3	–31.8

Total capital expenditure in 2021 on property, plant and equipment and on intangible assets after deducting investment grants, and including capitalization of research and development expenditures, was significantly below the prior-year level.

Additions to property, plant and equipment were mainly in connection with replacement investment in tools, equipment, and machinery. DEUTZ also invested in testing equipment for new drive systems and in IT equipment.

The much lower level of capital expenditure on right-of-use assets was primarily attributable to the very high level of capital expenditure in the previous year, which had been influenced by an agreement entered into with Chinese manufacturer BEINEI to make DEUTZ diesel engines for the local market and by a number of extensions of property leases. The additions in 2021 mainly related to property leases and to furniture and fixtures.

Capital expenditure on intangible assets was mainly in connection with the development of the new 5.2 engine series.

The bulk of the total capital expenditure after deducting investment grants – €61.6 million – was invested in the DEUTZ Compact Engines segment (2020: €87.0 million). Capital expenditure in the DEUTZ Customized Solutions segment stood at €7.1 million (2020: €13.8 million). Capital expenditure in the Other segment amounted to €3.8 million (2020: €3.6 million). This related to capital expenditure by Torqeedo companies and by Futavis GmbH.

NET ASSETS

DEUTZ Group: overview of net assets

€ million

	Dec. 31, 2021	Dec. 31, 2020	Change
Non-current assets	696.8	687.8	1.3 %
thereof right-of-use assets in connection with leases	57.4	57.3	0.2 %
Current assets	593.3	492.7	20.4 %
Total assets	**1,290.1**	**1,180.5**	**9.3 %**
Equity	588.4	535.2	9.9 %
Non-current liabilities	214.7	250.8	–14.4 %
thereof lease liabilities	45.4	44.0	3.2 %
Current liabilities	487.0	394.5	23.4 %
thereof lease liabilities	15.9	14.0	13.6 %
Total equity and liabilities	**1,290.1**	**1,180.5**	**9.3 %**
Working capital[1] (€ million)	253.2	235.0	7.7 %
Working capital ratio[2] (Dec. 31, %)	15.7	18.1	–2.4 pp
Working capital ratio[3] (average, %)	15.5	21.8	–6.3 pp
Equity ratio[4] (%)	**45.6**	**45.3**	**+0.3 pp**

[1] Inventories plus trade receivables less trade payables.
[2] Working capital (inventories plus trade receivables less trade payables) as at the balance sheet date divided by revenue for the previous twelve months.
[3] Average working capital at the four quarterly reporting dates divided by revenue for the previous twelve months.
[4] Equity/total equity and liabilities.

Assets Non-current assets stood at €696.8 million as at December 31, 2021, a year-on-year rise of €9.0 million. This was largely attributable to the €14.4 million increase in deferred tax assets, which was driven by better opportunities to utilize tax loss carryforwards in the upcoming five-year period. Other financial assets went up too, mainly due to the investment of €3.8 million in Blue World Technologies, Aalborg, Denmark. There was also a rise in equity-accounted investments, primarily because of the currency-related rise in the value of the equity investment in the joint venture Hunan DEUTZ Power Co., Ltd. and the joint venture DEUTZ Power Solution (Xuzhou) Co., Ltd., Xuzhou, China, which was founded by DEUTZ with Beijing Fangda Diesel Engine Technology & Service Co., Ltd., Beijing, China, and SINOCHAIN Environment Protection Co., Ltd., Shanghai, China. DEUTZ holds 40 percent of the shares in this new company. By contrast, intangible assets decreased. This was because capitalized development expenditure was significantly lower than amortization in the period.

The increase in current assets was, due, in particular, to higher inventories and trade receivables.

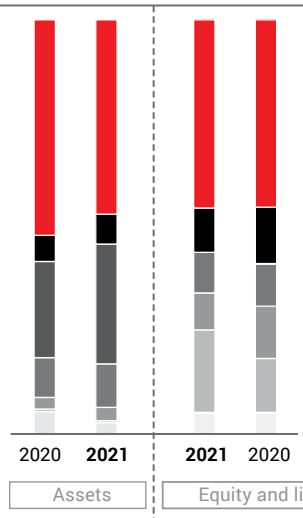
Working Capital Inventories, trade receivables, and trade payables rose sharply due to the significant growth in the volume of business and the resulting adjustment to production and procurement activities. Working capital increased by €18.2 million overall. The average working capital ratio fell from 21.8 percent to 15.5 percent owing to the increase in revenue and careful management of working capital.

Equity As at December 31, 2021, equity had risen to €588.4 million because of the net income generated in the reporting year. The equity ratio increased slightly to 45.6 percent (December 31, 2020: 45.3 percent) and thus remains well above our long-term target of more than 40 percent.

Liabilities The fall in non-current liabilities was primarily due to the reduction in provisions for pensions and other post-retirement benefits. This can be explained by scheduled pension payments and by actuarial gains (recognized in other comprehensive income) resulting from higher pension discount rates. Furthermore, scheduled repayments led to a drop in liabilities to banks at our subsidiary DEUTZ Spain. The rise in current liabilities was mainly attributable to the increase in trade payables on the back of the growth in the volume of business. By contrast, liabilities to banks declined due to the reduced drawdown of short-term lines of credit.

DEUTZ Group: Balance sheet structure

% (2020 figures)



Assets

47.1	(52.0)	Non-current assets
6.9	(6.3)	Deferred tax assets
29.1	(23.2)	Inventories
10.5	(9.6)	Trade receivables
3.1	(2.8)	Other receivables and assets
0.5	(0.6)	Receivables in respect of tax refunds
2.8	(5.5)	Cash and cash equivalents

Equity and liabilities

45.6	(45.2)	Equity
10.7	(13.6)	Pension provisions
0.1	(0.1)	Deferred tax liabilities
9.2	(10.2)	Other provisions
9.0	(12.6)	Financial liabilities
20.0	(13.0)	Trade payables
0.2	(0.2)	Liabilities arising from income taxes
5.2	(5.1)	Other liabilities

OVERALL ASSESSMENT FOR 2021

Target/actual comparison for 2021

	Actual 2020	Original guidance in March 2021[1]	Adjustment of the guidance in April 2021[2]	Adjustment of the guidance in September 2021[3]	**Actual 2021**
Unit sales of DEUTZ engines[4]	121,034	At least 130,000	140,000 to 155,000	155,000 to 170,000	160,882
Revenue	€1.3 billion	At least €1.4 billion	€1.5 billion to €1.6 billion	€1.6 billion to €1.7 billion	€1.63 billion
EBIT margin before exceptional items	–5.8 %	At least break even	1.0 % to 2.0 %	2.0 % to 3.0 %	2.3 %
R&D expenditure (after deducting grants)[5]	€81.4 million	€65 million to €75 million	–	–	€82.3 million
Capital expenditure[6] (after deducting grants)[5]	€91.7 million	€75 million to €85 million	–	–	€65.7 million
Free cash flow[7]	–€35.8 million	Negative low– to mid–double–digit million euro amount	–	Neutral	€21.6 million
Average working capital ratio[8]	21.8 %	20 % to 21 %	–	–	15.5 %
Equity ratio[9]	45.3 %	Well above 40 percent	–	–	45.6 %

[1] Published in the 2020 annual report on March 18, 2021.
[2] See the ad hoc disclosure dated April 19, 2021.
[3] See the ad hoc disclosure dated September 13, 2021.
[4] Excluding electric boat drives from DEUTZ subsidiary Torqeedo.
[5] After deducting grants from development partners and subsidies.
[6] Capital expenditure on property, plant and equipment (including right-of-use assets in connection with leases) and intangible assets, excluding capitalization of research and development expenditure.
[7] Cash flow from operating activities and from investing activities less interest expense.
[8] Average working capital at the four quarterly reporting dates divided by revenue for the previous twelve months.
[9] Equity divided by total equity and liabilities.

DEUTZ made a better start to 2021 than originally expected. In mid-April 2021, it therefore initially raised the guidance for unit sales, revenue, and the EBIT margin before exceptional items that it had originally published in the 2020 annual report. Over the course of the year, demand continued to pick up strongly across all application segments and the Company's earnings performance improved significantly. This prompted DEUTZ to raise its guidance again in mid-September.

The unit sales, revenue, and EBIT margin before exceptional items achieved in 2021 were within the target ranges set out in the most recent guidance, although the picture was mixed. An increase in activities aimed at expanding the portfolio meant that R&D expenditure at €82.3 million was above the expected range of €65 million to €75 million. By contrast, capital expenditure (after deducting grants) amounted to €65.7 million, which was significantly lower than the anticipated range of €75 million to €85 million. This was due to the postponement of capital expenditure projects, particularly in the areas of production and logistics. Free cash flow in 2021 was substantially better than predicted. A neutral level had been expected, but it ended up in positive territory at €21.6 million. The main reason for this was the change in working capital, which held steady at the prior-year level despite the significant increase in the volume of business. Consequently, the average working capital ratio stood at 15.5 percent thanks to rigorous management of working capital, compared with an anticipated ratio in the range of 20 percent to 21 percent. The equity ratio of 45.6 percent was at the expected level of well above 40 percent.

The forecast for 2021 as a whole that was published in March was revised upwards on two occasions due to the better-than-expected business performance over the course of the year. The DEUTZ Board of Management is therefore very satisfied with how the business performed, not least because of the challenging supply chain situation it faced.

DEUTZ AG

The following remarks refer to the annual financial statements of DEUTZ AG. The annual financial statements of DEUTZ AG are prepared in accordance with the requirements of the German Commercial Code (HGB).

BASIC PRINCIPLES AND BUSINESS PERFORMANCE OF DEUTZ AG

DEUTZ AG is the parent company of the DEUTZ Group. In Germany and abroad, DEUTZ AG has a direct or indirect stake in 42 companies (2020: 39 companies). DEUTZ AG is also by far the largest production company of the DEUTZ Group and provides the head-office functions for the Group. See 'Shareholdings of DEUTZ AG', p. 189 onward, for further information on DEUTZ AG's equity investments.

Because the business performance and financial situation of DEUTZ AG are essentially the same as for the DEUTZ Group, we make reference here to the 'Business performance in the DEUTZ Group' section of this combined management report. See also 'Business performance in the DEUTZ Group', p. 37 onward.

Because of the significance of DEUTZ AG within the Group, and its heavy interdependencies with other Group companies, the Group is managed at the level of DEUTZ AG. In addition to the key performance indicators used for management at Group level, the net income of DEUTZ AG, as the relevant variable in the payment of dividends, is also an element of the management system of the Company. The internal control system for the DEUTZ Group is described in this combined management report. See also 'Internal control system', p. 26 onward.

The DEUTZ Group's net income in accordance with IFRS is reconciled to DEUTZ AG's net income in accordance with the HGB:

RESULTS OF OPERATIONS

DEUTZ AG: Reconciliation

€ million	
DEUTZ Group net income (IFRS)	**38.2**
Consolidation of equity investments	2.5
DEUTZ AG income (IFRS)	**40.7**
Material differences due to different financial reporting standards	
Recognition of development expenditure	6.3
Measurement of provisions for pensions and other post-retirement benefits	–5.8
Subsequent adjustment of the acquisition cost for the investments	–1.3
Measurement of provisions for pre-retirement part-time employment	–0.8
Measurement of inventories	0.8
Recognition of deferred taxes	–0.3
Other differences relating to the financial reporting standards	0.4
DEUTZ AG net income (HGB)	**40.0**

Overview of DEUTZ AG's results of operations

€ million	2021	2020	Change
Revenue	**1,405.2**	**1,085.2**	**320.0**
Cost of sales	–1,219.3	–997.8	–221.5
Research and development costs	–76.4	–72.3	–4.1
Selling and administrative expenses	–84.6	–79.0	–5.6
Other operating income	32.4	31.6	0.8
Other operating expenses	–20.4	–67.3	46.9
Net investment income	–0.6	4.6	–5.2
Write-downs of investments	0.0	–19.6	19.6
Operating profit (EBIT)	**36.3**	**–114.6**	**150.9**
Interest expenses, net	–4.0	–3.6	–0.4
Income taxes	8.2	1.1	7.1
Other taxes	–0.5	–0.5	0.0
Net income	**40.0**	**–117.6**	**157.6**

Revenue DEUTZ AG generated revenue of €1,405.2 million in 2021. The significant year-on-year increase of 29.5 percent was mainly due to the very low prior-year figure of €1,085.2 million, which had been impacted by the coronavirus pandemic. All application segments contributed to this growth, with the most notable increases registered for Material Handling (up by 79.6 percent to €247.1 million), Construction Equipment (up by 33.0 percent to €473.9 million), Stationary Equipment (up by 22.2 percent to €109.6 million), and Agricultural Machinery (up by 16.4 percent to €205.6 million). The high-margin service business generated

revenue of €309.8 million, representing growth of 20.5 percent that was also very healthy and that was achieved despite a comparatively small decline of 3.5 percent in 2020. In the regional breakdown, the most pronounced increases in revenue were recorded in the Americas (up by 70.5 percent to €218.8 million) and in the EMEA region (up by 24.5 percent to €930.9 million). In the Asia-Pacific region, revenue went up by 22.3 percent to €255.5 million.

Earnings performance DEUTZ AG reported an operating profit (EBIT) of €36.3 million in 2021. This marked year-on-year improvement was mainly attributable to the significant growth in the volume of business and the associated economies of scale. Moreover, the prior-year figure had been weighed down by a €3.1 million adjustment to the provision for restructuring. In 2020, there had also been a heavy drag on operating profit from coronavirus-related diseconomies of scale and from restructuring costs of €31.9 million in connection with the Transform for Growth efficiency program, See also 'Transform for Growth', p 25, write-downs on investments of €19.6 million, impairment losses on capitalized development projects and sales licenses of €13.3 million, and payments of €8.8 million made under continuation agreements with suppliers going through insolvency proceedings.

Cost of sales DEUTZ AG's cost of sales came to €1,219.3 million in 2021. The year-on-year increase was mainly attributable to the volume-related rise in the cost of materials and staff costs. The gross margin[1] improved sharply from 8.1 percent to 13.2 percent thanks to economies of scale.

Other operating expenses Other operating expenses declined by €46.9 million year on year to €20.4 million. This sharp fall predominantly related to restructuring costs in connection with the efficiency program. While the recognition of new provisions for these costs had reduced operating profit by €31.9 million in 2020, there were expenses of €3.1 million in 2021 that arose as a result of adjusting the provision for restructuring. Furthermore, the addition to provisions for onerous contracts in respect of orders on hand and foreign currency losses on the translation of foreign currency positions were both lower than in 2020.

Income taxes Tax income totaling €8.2 million was recognized in 2021. The current tax expense rose by €1.6 million to €2.4 million. There was also deferred tax income of €10.6 million owing to higher tax assets recognized on loss carryforwards. This was primarily due to an upgraded earnings expectation for the upcoming five-year period in view of the economic situation.

Net income As a result of the business performance described above, net income for 2021 amounted to €40.0 million, which was in line with our forecast for an amount in the mid-double-digit millions of euros.

FINANCIAL POSITION

Financial management in the DEUTZ Group is one of the core functions of the Group, and DEUTZ AG holds responsibility for this function. The basic principles and objectives of financial management at DEUTZ AG are therefore largely the same as those of the Group, as is the funding of DEUTZ AG. In this regard, please refer to the relevant sections of this combined management report.

See also 'Financial position of the DEUTZ Group', p. 43 onward.

Overview of DEUTZ AG's financial position

€ million

	2021	2020	Change
Cash flow from operating activities	64.0	24.5	39.5
Cash flow from investing activities	–45.2	–58.0	12.8
Cash flow from financing activities	–32.1	45.0	–77.1
Change in cash and cash equivalents	–13.3	11.5	–24.8
Free cash flow[1]	17.3	–34.3	51.6
Cash and cash equivalents at Dec. 31	15.4	28.7	–13.3

[1] Free cash flow: cash flow from operating and investing activities less net interest expense.

[1] Ratio of revenue less cost of sales to revenue (excluding amortization relating to development expenditure).

Liquidity The sharp rise in operating profit on the back of the growth in business resulted in a significant year-on-year improvement of €39.5 million in cash flow from operating activities. Net cash used for investing activities was €12.8 million lower than in 2020. This decrease was primarily attributable to reduced capital expenditure on property, plant and equipment and on intangible assets. Cash flow from investing activities also included the payment of €3.8 million for the first tranche of the investment in Blue World Technologies, Aalborg, Denmark. The total investment, for an 11.91 percent stake in this company will be €7.5 million. The second tranche is expected to be acquired in the first half of 2022 once official approval has been granted. In addition, a capital increase of €1.1 million was carried out at the subsidiary established last year, DEUTZ Global Service Center, Zafra, Spain. These payments were partly offset by the repayment, in an amount of €4.0 million, of a long-term loan to our subsidiary DEUTZ Spain. The main factor affecting cash flow from financing activities was the repayment of short-term lines of credit. DEUTZ AG currently has lines of credit totaling €235.0 million at its disposal. In 2021, DEUTZ AG repaid its KfW loan facility of €150.0 million, which was not used at any time, ahead of schedule. It also agreed three further lines of credit, each in an amount of €25.0 million. Thanks to the significantly better level of operating profit and lower level of capital expenditure, **free cash flow** improved by €51.6 million.

Capital expenditure After deducting investment grants, DEUTZ AG's capital expenditure in 2021 amounted to a total of €41.8 million (2020: €59.9 million). This was broken down into €28.1 million (2020: €35.4 million) on property, plant and equipment, €8.8 million (2020: €16.0 million) on intangible assets, and €4.9 million (2020: €8.5 million) on investments. Additions to property, plant and equipment were mainly in connection with replacement investment in tools, equipment, and machinery. DEUTZ also invested in testing equipment for new drive systems and in IT equipment. Capital expenditure on intangible assets was mainly in connection with the development of the new 5.2 engine series. Additions to investments primarily related to the investment in Blue World Technologies of €3.8 million and the capital increase of €1.1 million at the subsidiary DEUTZ Global Service Center.

NET ASSETS

Overview of DEUTZ AG's net assets

€ million

	Dec. 31, 2021	Dec. 31, 2020	Change
Non-current assets	629.0	646.3	–17.3
Current assets	442.7	351.2	91.5
Prepaid expenses	5.2	2.5	2.7
Deferred tax assets	82.5	71.9	10.6
Total assets	**1,159.4**	**1,071.9**	**87.5**
Equity	612.8	572.8	40.0
Provisions	280.9	275.6	5.3
Liabilities	264.5	222.3	42.2
Deferred income	1.2	1.2	0.0
Total equity and liabilities	**1,159.4**	**1,071.9**	**87.5**
Working capital[1] (€ million)	51.1	79.2	–28.1
Working capital ratio (Dec. 31, %)	3.6	7.3	–3.7
Equity ratio[2] (%)	52.9	53.4	–0.5

[1] Working capital: inventories plus trade receivables less trade payables.
[2] Equity ratio: equity/total equity and liabilities.

Non-current assets Compared with the end of 2020, non-current assets were down by €17.3 million. This was largely attributable to the fact that depreciation and amortization on property, plant and equipment and on intangible assets was higher than the corresponding capital expenditure. Disposals amounted to €10.8 million and mainly related to assets loaned to subsidiaries and software licenses.

Current assets The sharp rise in current assets primarily resulted from the growth in inventories and in receivables due from affiliated companies as a result of the significantly increased volume of business.

Working capital **Working capital** stood at €51.1 million as at December 31, 2021, which was €28.1 million lower than the level reported a year earlier. The decrease can mainly be explained by the rise in trade payables. Although inventories increased on the back of the larger volume of business, the increase was on a smaller scale. The working capital ratio as at the balance sheet date fell to 3.6 percent, partly due to the jump in revenue (December 31, 2020: 7.3 percent).

Equity ratio Owing to the net income generated in the reporting year, equity advanced to €612.8 million, an increase of €40.0 million. At 52.9 percent, the equity ratio was down slightly at the end of the year due to the rise in total assets.

Liabilities The main reason for the increase in liabilities of €42.2 million was the growth of trade payables on the back of the significant rise in the volume of business. By contrast, liabilities to banks declined due to the reduced drawdown of short-term lines of credit.

Provisions The increase in provisions was primarily attributable to the growth of personnel provisions in line with earnings and higher provisions for order-related losses that can essentially be explained by the rise in orders on hand. The increase was partly offset by utilization of the provision for restructuring as planned.

EMPLOYEES

DEUTZ AG employed 3,080 people as at December 31, 2021, which was 59 fewer than at the end of 2020. By contrast, the number of temporary workers rose by 245. In 2020, the number of temporary workers had fallen to 70 owing to the pandemic. See also 'Employees', p. 35.

From a segment perspective, DEUTZ Compact Engines employed 2,640 people as at December 31, 2021, 26 fewer than it had employed a year earlier. The number of employees at DEUTZ Customized Solutions was 440, which was down by 33 compared with the end of 2020.

DEUTZ AG: Employees

Headcount

	Dec. 31, 2021	Dec. 31, 2020
Cologne	2,473	2,509
Ulm	448	473
Other	159	157
Total	**3,080**	**3,139**

RISK AND OPPORTUNITY REPORT

DEUTZ AG is integrated into the risk management system of the DEUTZ Group. As a head-office function, risk management for the Group is performed by DEUTZ AG. Information about the structuring and mechanics of the risk management system and of risk management with regard to financial instruments can be found in the risk report of the DEUTZ Group, p. 78 onward.

Because DEUTZ AG is closely integrated with the other Group companies, its risk and opportunities situation is essentially the same as that of the Group. Risks arising from subsidiaries may have an effect on DEUTZ AG because of the carrying amount of an equity investment, reduced dividend payments, and the internal business relations. The risks and opportunities for the DEUTZ Group are described in this combined management report. See also 'Risk report of the DEUTZ Group', p. 78 onward.

Information about DEUTZ AG's internal accounting-related control system and about risk management with regard to the use of financial instruments at DEUTZ AG can be found in the combined management report. See also 'Internal control system', p. 26 onward.

OUTLOOK

DEUTZ AG performs the head-office functions of the DEUTZ Group and is the biggest production company within the Group by some margin. Because of DEUTZ AG's wide-ranging relationships with other Group companies and because of its size within the Group, the expectations presented in the Group outlook for 2022 are essentially the same as those for DEUTZ AG. We therefore anticipate that the revenue of DEUTZ AG will develop largely in line with the statements made for the DEUTZ Group. In 2022, we expect to achieve net income in the mid-double-digit millions of euros and therefore on a par with the net income achieved in 2021. This is in anticipation of a further improvement in market conditions and the impact of the cost-cutting measures under the efficiency program. See also 'Outlook for the DEUTZ Group', p. 85 onward.

For information about events after the reporting period, please see note 30 on page 190 of the notes to the consolidated financial statements.

NON-FINANCIAL REPORT PURSUANT TO SECTIONS 289b AND 315b HGB

DEUTZ AG publishes a separate combined non-financial report for the DEUTZ Group and DEUTZ AG. We refer here to our remarks on pages 90 onward of the annual report and to our website www.deutz.com/nfb2021/en.

CORPORATE GOVERNANCE DECLARATION PURSUANT TO SECTIONS 289F AND 315D HGB

The corporate governance declaration pursuant to section 289f HGB is an integral element of the combined management report. We refer here to our remarks on pages 212 onward of the annual report and to our website www.deutz.com/ezu2021/en.

DISCLOSURES PURSUANT TO SECTIONS 289A AND 315A HGB

Composition of the issued capital There were no changes to the issued capital (share capital) of DEUTZ AG in 2021. As at December 31, 2021, the issued capital amounted to €308,978,241.98 and was divided into 120,861,783 no-par-value bearer shares.

Restrictions affecting voting rights or the transfer of shares We are not aware of any restrictions affecting voting rights or the transfer of shares.

Direct or indirect shareholdings representing more than 10 percent of voting rights At the end of 2021, there were no direct or indirect shareholdings in DEUTZ AG representing more than 10 percent of the voting rights.

Legal provisions and Statute provisions regarding the appointment and removal of members of the Board of Management and regarding changes to the Statutes According to articles 7 (1) and 7 (2) of the Statutes of DEUTZ AG:

"(1) The Board of Management shall comprise at least two members.
(2) The Supervisory Board shall determine the number of members of the Board of Management and the allocation of responsibilities. It may draw up and issue rules of procedure."

As far as the appointment and removal of members of the Board of Management are concerned, sections 84 and 85 of the German Stock Corporation Act (AktG) and section 31 of the German Codetermination Act (MitbestG) also apply.

According to article 14 of the Statutes of DEUTZ AG: "The Supervisory Board may change the wording but not the spirit of the Statutes." Sections 179 and 133 AktG also apply in the case of changes to the Statutes.

Authority of the Board of Management, in particular with regard to share issue or buyback The Board of Management is authorized, subject to the consent of the Supervisory Board, to increase the issued capital of the Company on or before April 25, 2023 on one or more occasions in installments through the issue of up to 36,258,534 new no-par-value bearer shares for cash by up to a total amount of €92,693,470.30 (authorized capital I). Pre-emption rights must be granted to existing shareholders. Pursuant to section 203 (1) sentence 1 and section 186 (5) AktG, the new shares may be transferred to one or more banks or to a company operating under section 53 (1) sentence 1 or section 53b (1) sentence 1 or section 53b (7) of the German Banking Act (KWG) subject to an undertaking by the bank(s) or company to offer the shares to existing shareholders (indirect pre-emption right). However, the Board of Management is authorized, subject to the consent of the Supervisory Board, to disapply the pre-emption rights of shareholders for fractional amounts arising on the calculation of pre-emption rights. The Board of Management is further authorized, with the consent of the Supervisory Board, to specify the further content of the share rights and the terms of the share issue for implementing any capital increases under authorized capital I. The Board of Management is also authorized, subject to the consent of the Supervisory Board, to increase the issued capital of the Company on or before April 25, 2023 on one or more occasions in installments through the issue of up to 24,172,356 new no-par-value bearer shares for cash and/or non-cash contribution by up to a total amount of €61,795,646.86 (authorized capital II). Pre-emption rights must be granted to existing shareholders. Pursuant to section 203 (1) sentence 1 and section 186 (5) AktG, the new shares may be transferred to one or more banks or to a company operating under section 53 (1) sentence 1 or section 53b (1) sentence 1 or section 53b (7) KWG subject to an undertaking by the bank(s) or company to offer the shares to existing shareholders (indirect pre-emption right). However, the Board of Management is authorized, subject to the consent of the Supervisory Board, to disapply the pre-emption rights of the existing shareholders

a) for fractional amounts;
b) for capital increases against non-cash contributions, in particular
   (i) when issuing new shares for mergers or acquisitions of entities, parts of entities, or equity investments in entities, including increases in existing shareholdings or other assets eligible as capital contributions in connection with such acquisition plans, including receivables from the Company,

   (ii) when acquiring other assets or claims to the acquisition of assets, and

   (iii) when carrying out a so-called scrip dividend, where shareholders are offered the option of exchanging their rights to a dividend (wholly or in part) for new shares;

c) for cash contributions, if the issue price of the shares is not significantly below the market price of the existing publicly listed shares in the Company on the date the final issue price is fixed;

d) in order to grant holders or creditors of bonds with **option** or conversion rights to shares of the Company or with option or conversion obligations (where such bonds are issued or are to be issued in the future by the Company or by one of its direct or indirect majority shareholdings) a pre-emption right to the same amount of new shares in the Company that they would be entitled to as shareholders following the exercise of their option or conversion rights or after fulfilling option or conversion obligations.

The total shares issued subject to a disapplication of pre-emption rights against cash and/or non-cash contributions must not exceed 20 percent of the issued capital either at the time this authorization becomes effective or at the time this authorization is utilized, if the amount of issued capital is lower. The aforementioned 20 percent limit includes shares that are sold or issued during the term of this authorization on the basis of all other authorizations under disapplication of pre-emption rights ('disapplication limit'), with the exception of a disapplication of pre-emption rights for fractional amounts. An issue of shares in this sense also includes the issue or creation of option or conversion rights or obligations in respect of the Company's shares from bonds issued by the Company or by its direct or indirect majority shareholdings, if the bonds are issued on the basis of an appropriate authorization during the term of this authorization, disapplying pre-emption rights. If another authorization for a disapplication of shareholders' pre-emption rights that was exercised during the term of this authorization is renewed by the Annual General Meeting, however, the disapplication limit will not apply to the extent that the renewed authorization permits the issue of shares with disapplication of pre-emption rights.

The total of the shares issued for cash with the disapplication of pre-emption rights pursuant to c) must not exceed 10 percent of the issued capital at the time the issue becomes effective or – if lower – 10 percent of the issued capital existing at the time this authorization is exercised. The aforementioned 10 percent limit includes shares that are sold or issued during the term of this authorization on the basis of other authorizations in direct application or application with the necessary modifications of section 186 (3) sentence 4 AktG with the disapplication of pre-emption rights ('disapplication limit'). This restriction also includes shares that have been or will be issued in order to service bonds with conversion rights, option rights, or conversion or option obligations in so far as the bonds were issued by the Company or a direct or indirect majority shareholding during the term of this authorization with the disapplication of pre-emption rights in application of section 186 (3) sentence 4 AktG with any necessary modifications. If another authorization for a disapplication of shareholders' pre-emption rights that was exercised during the term of this authorization is renewed by the Annual General Meeting, the disapplication limit will cease to apply to the extent that the renewed authorization permits the issue of shares with the disapplication of pre-emption rights in direct application of section 186 (3) sentence 4 AktG or in application of section 186 (3) sentence 4 AktG with any necessary modifications. The Board of Management is further authorized, with the consent of the Supervisory Board, to specify the further content of the share rights and the terms of the share issue for implementing any capital increases under authorized capital II.

FURTHER DISCLOSURES

No bearers of shares have any special rights conferring authority to control the Company. Numerous employees have direct shareholdings in DEUTZ AG. There are no restrictions affecting the direct exercise of rights of control in connection with these shares.

A consortium of banks has provided DEUTZ AG with a syndicated cash credit line of €160 million. Under the terms of the loan agreements, the lenders can demand that the outstanding loan be repaid within a specified period in the event of a change of control, i.e. one or more people acting jointly acquire a direct or indirect shareholding of at least 50 percent of all shares and/or voting rights in DEUTZ AG. A further bilateral credit agreement covering a sum of €25 million stipulates that, in the event of a change of control, a mutually acceptable arrangement must be reached regarding the continuation of the credit agreement, if necessary under different terms. If DEUTZ AG needs to repay a considerable proportion of the loans prematurely in the event of a change of control, it needs to raise the necessary funds some other way in the short term.

The cooperation agreement concluded between DEUTZ AG and Liebherr gives Liebherr the right to terminate the agreement if there is a change of control at DEUTZ AG. A change of control for these purposes shall be deemed to have occurred if a competitor of Liebherr directly or indirectly acquires a shareholding representing at least 30 percent of the voting rights in DEUTZ AG or is able to exert direct or indirect influence by means of contracts. Similarly, under the agreement underlying the joint venture with SANY, a change of control at one of the joint venture partners gives the other joint venture partner the right to terminate the agreement. A change of control for these purposes shall be deemed to have occurred if a third party acquires more than 50 percent of the shares or voting rights in DEUTZ AG, otherwise obtains control over DEUTZ AG in accordance with German law, or is otherwise able to exert significant influence over the decisions of its shareholders or Board of Management. In the event of a change of control, the partners must first try to find a mutually acceptable solution. If they cannot, the partner entitled to terminate the agreement may purchase the other partner's shares at an agreed price ('call option'), sell its shares at an agreed price to the partner that gave rise to the termination right ('put option'), or demand that the joint venture be liquidated.

And under the cooperation agreement with Deere & Company, either party has the right to terminate the agreement in the event of a change of control or if a competitor of the other partner acquires an equity investment of more than 25 percent. A change of control for these purposes shall be deemed to have occurred if a third party acquires more than 50 percent of the shares in the other company or is able to exert a controlling influence within the meaning of section 17 AktG.

The service contracts of Board of Management members concluded in view of the new provisions in the German Act Implementing the Second Shareholder Rights' Directive (ARUG II) and in the German Corporate Governance Code (DCGK) do not, in accordance with the suggestion in article G.14 DCGK, provide for any termination benefits if the service contract is ended prematurely as the result of a change of control.

The previous long-term incentive plans (LTI), under which the highest level of senior management in the DEUTZ Group (executives and managing directors of major subsidiaries) have been granted virtual options that they can exercise after a vesting period and upon achievement of certain performance targets See 'Notes to the consolidated financial statements', p. 190, for more information contain the following provision in the event of an entity – either alone or acting jointly with an affiliated company – acquiring a minimum of 50 percent of the shares in DEUTZ AG: Provided one of the performance targets has been achieved, the LTI participants may exercise their options within a short time frame after the acquisition, even if the vesting period has not yet expired. Since 2021, a new LTI has been in use whose structure reflects that of the LTI used for the Board of Management and no longer contains such a provision. This LTI applies to new and existing members of the highest level of senior management. DEUTZ AG has no indemnification agreements with employees that would come into force in the event of a takeover bid.

EXPLANATORY STATEMENT BY THE BOARD OF MANAGEMENT IN CONNECTION WITH SECTIONS 289a AND 315a HGB

The disclosures contained in the combined management report and management report pursuant to sections 289a and 315a HGB relate to arrangements that may be significant in the success of any public takeover bid for DEUTZ AG. It is the opinion of the Board of Management that these arrangements are normal for publicly traded companies comparable with DEUTZ AG.

REMUNERATION REPORT

REMUNERATION REPORT OF DEUTZ AG PURSUANT TO SECTION 162 AKTG

REMUNERATION REPORT OF DEUTZ AG PURSUANT TO SECTION 162 AKTG

The remuneration report provides details of the remuneration granted and owed to former and current members of the Board of Management and Supervisory Board of DEUTZ AG in 2021. It meets the requirements of section 162 of the German Stock Corporation Act (AktG).

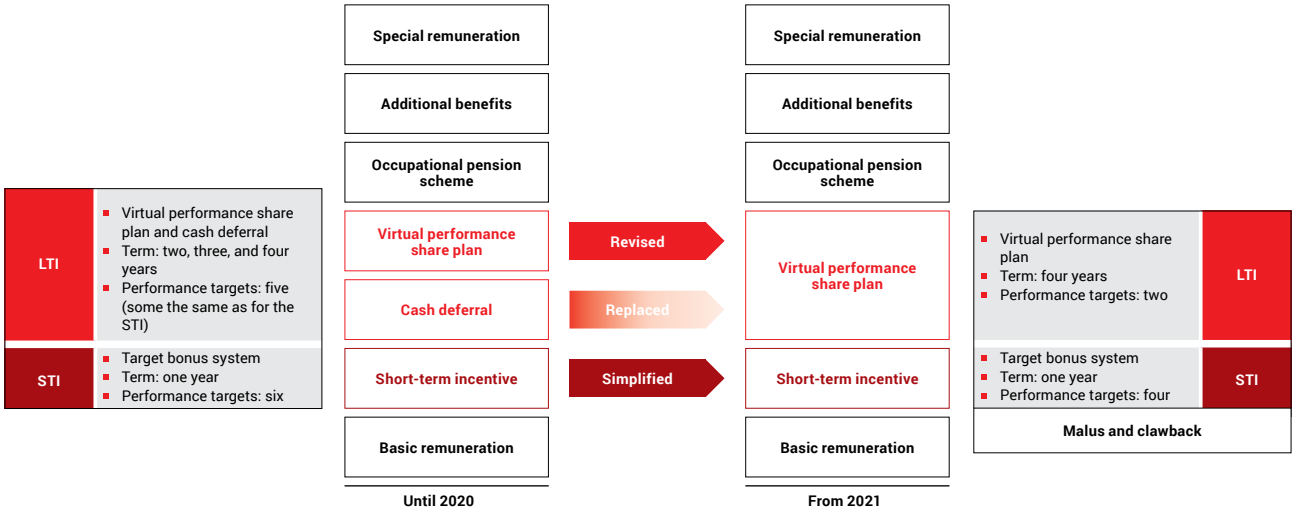
I. REVIEW OF 2021 FROM A REMUNERATION PERSPECTIVE

The Supervisory Board of DEUTZ AG revised the remuneration system for the members of the Board of Management in line with the German Act Implementing the Second Shareholder Rights' Directive (ARUG II). The revised system incorporates the statutory requirements and the recommendations in the version of the **German Corporate Governance Code (DCGK)** dated December 16, 2019 and supports DEUTZ AG's long-term, sustainable development. The new remuneration system for the members of the Board of Management was used for the first time in 2021.

Short-term variable remuneration **(short-term incentive, STI)** supports the aim of profitable growth and underpins the strategy for a future of carbon-neutral drive systems. It does so by setting out not only financial but also strategic and non-financial **(ESG)** performance criteria. Long-term variable remuneration (**long-term incentive, LTI**) is focused on DEUTZ AG's value-based development in terms of both capital employed and performance in the capital markets. The Board of Management members' ability to share in the Company's short-term and long-term success (the latter has a higher weighting) incentivizes them to develop the Company in a sustainable manner and ensure its long-term success. See also 'Remuneration for Board of Management members', p. 60 onward.

When the Board of Management remuneration system was revised, the underlying idea was to make the system understandable, bring the interests of investors and Board of Management members closer into line, and strengthen the long-term focus of remuneration. For example, the structure of the STI and LTI was simplified by reducing the number of performance targets. The cash deferral was removed completely. In return, the allocation value for the virtual performance share plan was increased, thereby lending it more importance. A share-based performance criterion was also added to the LTI. In addition, malus and clawback provisions were introduced for members of the Board of Management, reflecting the recommendation in the DCGK.

Comparison of the current and future remuneration systems



In accordance with section 120a (1) AktG, the new Board of Management remuneration system was presented to the shareholders of DEUTZ AG for approval at the virtual Annual General Meeting on April 29, 2021, at which it was approved with 72.01 percent of the votes. Although the vast majority of shareholders supported the system presented to them, a number of shareholders expressed criticism. This mainly related to the inclusion of sustainability targets (ESG targets) in the short-term incentive, the lack of share ownership guidelines, and the option for the Supervisory Board to grant a special bonus to the Board of Management members. The Supervisory Board of DEUTZ AG studied the main areas of criticism extensively and has issued the following statement explaining its position.

Sustainability targets in the short-term incentive The Supervisory Board of DEUTZ AG believes that the long-term strategies – such as the China strategy, the E-DEUTZ strategy, and the general Taking Responsibility sustainability strategy – are the right building blocks with which to achieve successful growth for DEUTZ AG in the medium and long term. The strategy targets and sustainability targets embedded in the remuneration system reflect the main elements of the long-term corporate strategy. The specific targets for the individual years are thus derived directly from the overarching long-term and forward-looking targets. See also 'Remuneration for Board of Management members', p. 60 onward.

When the remuneration system was developed in summer 2020, economic conditions were plagued by significant uncertainty created by the fallout from the coronavirus pandemic. The impact of the coronavirus crisis on DEUTZ meant that the medium-term targets that DEUTZ originally wanted to achieve in 2022 had to be postponed to 2023/2024. For example, the target set for 2022 as part of the E-DEUTZ strategy, whereby electric drive systems are to account for between 5 percent and 10 percent of consolidated revenue, was adjusted and is now not expected to be achieved until 2023/2024.

The actual macroeconomic conditions in which long-term strategic plans are being implemented are thus changing constantly, which means that the situation has to be reassessed regularly. The Supervisory Board therefore believes that, for the time being, embedding the sustainability targets in the short-term incentive is the right approach as it enables them to be incorporated into the incentive system for the Board of Management as effectively as possible and in line with the actual situation faced by the Company at any given time. This enables the Company to respond flexibly and appropriately to the rapid pace of change in the market.

Share ownership guidelines The bulk of the variable remuneration – and thus a significant proportion of the total remuneration – is granted to the Board of Management members in the form of share-based long-term variable remuneration. The share price affects the level of long-term variable remuneration in two ways because this remuneration component is based on virtual shares. Firstly, the value of the virtual shares changes as a result of changes in the DEUTZ AG share price. Secondly, the number of virtual shares is influenced by the share price. See also 'Remuneration for Board of Management members', p. 60 onward. In the opinion of the DEUTZ AG Supervisory Board, the interests of the Board of Management and those of shareholders are already sufficiently linked as a result of this mechanism. Nonetheless, the Supervisory Board will reconsider whether to introduce share ownership guidelines when the remuneration system is updated in the future.

Special remuneration The option of special remuneration reflects recommendation G.11 in the German Corporate Governance Code, according to which the Supervisory Board should have the option of taking extraordinary developments into account. This provision is the consequence of a ruling by the German Federal Court of Justice (BGH) relating to the takeover of Mannesmann by Vodafone and is thus in line with current best practice for executive pay. No special bonus was granted in the past ten years, and this was again the case in 2021.

There were changes to the membership of the Board of Management in 2021. Dr. Andreas Strecker left the Board of Management on February 28, 2021. Dr. Sebastian C. Schulte was appointed to the Board of Management on January 1, 2021 and Dr. Ing. Markus Müller was appointed on March 15, 2021. The new remuneration system also applies analogously to the two new Board of Management members.

The remuneration report was jointly prepared by the Board of Management and Supervisory Board and was audited by the auditor. See 'Auditor's report', p. 205 onward.

II. REMUNERATION FOR BOARD OF MANAGEMENT MEMBERS

A. GENERAL PRINCIPLES OF THE REMUNERATION SYSTEM

The aim of the remuneration system is to support the achievement of DEUTZ's strategic objectives and ensure that the members of the Board of Management are paid appropriately. In line with DEUTZ's corporate strategy, the remuneration system incentivizes the Board of Management members to achieve profitable growth and sustainable value creation. Long-term variable remuneration is higher than short-term variable remuneration in order to underscore the particular importance of DEUTZ AG's long-term development.

The Supervisory Board of DEUTZ AG is responsible for the remuneration system and for setting the remuneration of the individual members of the Board of Management. It is supported by the Human Resources Committee, which prepares recommendations on the Board of Management remuneration system and carries out the preparatory work for the decisions of the Supervisory Board and for the review of the appropriateness of the level of remuneration.

B. REMUNERATION SYSTEM IN 2021

In 2021, the remuneration of the members of DEUTZ's Board of Management consisted of non-performance-related and performance-related remuneration components. The individual components of the remuneration system in 2021 are summarized in the following table:

Remuneration components	Support for long-term development	Structure in 2021
Non-performance-related remuneration		
Basic remuneration	Forms the basis for attracting and retaining highly qualified Board of Management members who develop and implement the strategy	▪ Fixed remuneration paid in monthly installments
Additional benefits		▪ Company car and insurance policies
Retirement pension		▪ Annual contribution to a benevolent fund
Performance-related remuneration		
Short-term variable remuneration (bonus)	Rewards the degree to which the corporate strategy has been operationalized and specific forward–looking sustainability targets have been implemented during a year	▪ Plan type: target bonus ▪ Performance criteria: – 30 % revenue – 30 % EBIT – 25 % strategy target – 15 % sustainability target ▪ Payment cap: 150 % of target amount ▪ Term: one year
Long-term variable remuneration	Incentivizes Board of Management members to contribute to the sustainable growth of DEUTZ AG and increase its value over the long term; brings the interests of investors and Board of Management members into line	▪ Plan type: virtual performance share plan ▪ Performance criteria: – 50 % relative total shareholder return (TSR) compared with DAXsubsector All Industrial Machinery – 50 % return on capital employed (ROCE) ▪ Payment cap: 180 % of target amount ▪ Term: four years
Miscellaneous		
Malus/clawback	Safeguards responsible corporate governance for the benefit of DEUTZ AG	▪ Option to reduce or claw back some or all of the variable remuneration in the event of a serious compliance violation
Special remuneration	Rewards special achievements in connection with exceptional (structural) events that were not factored into the strategic planning or that have a particularly strong impact on the Group	▪ Option to grant special remuneration ▪ Limited to half of the annual basic remuneration and also limited by the maximum amount of remuneration
Maximum amount of remuneration	Limits remuneration to an amount that is high enough to motivate the members of the Board of Management but is not inappropriately high	▪ Limit on the total remuneration granted for a year in accordance with section 87a (1) sentence 2 no. 1 AktG: – Chairman of the Board of Management: €2,800,000 – Ordinary members of the Board of Management: €1,900,000 each
Cap on severance pay	Avoids excessive severance payments that are not in the interests of DEUTZ AG	▪ Severance payments are limited to twice the amount of annual remuneration and may not exceed the remuneration due for the remaining term of the contract

B.1. NON-PERFORMANCE-RELATED REMUNERATION

Non-performance-related remuneration is granted to the Board of Management members irrespective of their specific performance in relation to their targets and irrespective of the Company's performance. This remuneration comprises basic remuneration, additional benefits, and a retirement pension. The components of non-performance-related remuneration form the basis for attracting and retaining highly qualified Board of Management members who develop and implement the strategy.

Basic remuneration The basic remuneration is a fixed amount that is granted irrespective of the actual performance of DEUTZ AG.

Additional benefits Each Board of Management member receives additional benefits in the form of non-monetary remuneration and other benefits. In 2021, the additional benefits for the members of the Board of Management comprised the provision of a company car that can also be used privately, the option of a driver for the car, and payment of insurance premiums for accident and D&O insurance policies.

Retirement pension The retirement pension for Board of Management members is structured as a defined contribution plan. For each Board of Management member, DEUTZ AG paid an amount into a reinsured benevolent fund in 2021 (pension expense). When they retire, the Board of Management members are entitled to the capital promised to them; this payment is made by the benevolent fund.

Aspect	Details
Pension plan type	Defined contribution pension plan
Start of retirement	Standard retirement age is 65; earliest possible retirement age is 62 (provided that the statutory pension is also drawn)
Return	The return depends on the policyholder dividend arrangements of the insurer. There is no guaranteed return, i.e. there is no return over and above what is agreed in the policyholder dividend arrangements.
Payment options	An amount of capital is promised. In agreement with the Board of Management member, DEUTZ AG can agree a life-long annuity instead of a lump sum. This annuity is paid by the benevolent fund once there has been a pension trigger event.
Invalidity/death	Death before the start of retirement: the policy value is paid out. Benefits may also be paid in the form of a share of the valuation reserves. Death after the start of retirement (applies only if a life-long annuity has been arranged): payment of ten times the annual annuity guaranteed from the start of retirement. Guaranteed annuities that have already been paid are deducted from this amount.

Pension expense for Board of Management members The pension expenses in 2021 are shown in the following table:

	Pension expense in 2021 (€ thousand)
Dr. Ing. Frank Hiller	150
Dr. Ing. Markus Müller (since March 15, 2021)	50
Dr. Sebastian C. Schulte (since January 1, 2021)	50
Dr. Andreas Strecker (until February 28, 2021)	12.5
Michael Wellenzohn	80

B.2. PERFORMANCE-RELATED REMUNERATION

The following chapters describe the structure of the remuneration granted or owed in 2021. Remuneration granted is the remuneration for which the related (one-year or multiple-year) work has been performed in full, i.e. the performance period has ended and the performance criteria have been met. Remuneration owed is when DEUTZ has a legal obligation to the Board of Management member that is due but has not yet been fulfilled.

The structure of the LTI promised in 2021 (2021–2024) is also described. Remuneration promised is the remuneration that is promised to the Board of Management members for 2021, irrespective of the timing of payment (target remuneration).

2.1 SHORT-TERM VARIABLE REMUNERATION – BONUS (STI)

The bonus contributes to the Company's long-term development by specifying how the corporate strategy is to be implemented operationally during a year and rewarding its implementation. Success is assessed on the basis of financial, strategic, and sustainability performance criteria. The financial targets revenue and EBIT underpin DEUTZ AG's growth strategy and its regional growth initiatives because together they incentivize the Board of Management members to contribute to profitable growth. The strategy target is based on the achievement of specific strategic initiatives, such as implementation of the E-DEUTZ strategy. The sustainability target reflects DEUTZ AG's social and environmental responsibility and is derived from the groupwide Taking Responsibility sustainability strategy, which forms part of the overall strategy.

Short-term variable remuneration – bonus (STI)

The target amount is the starting point for the STI. The target amount is multiplied by the total target achievement rate to obtain the amount payable. Total target achievement for the STI is the weighted sum of the rates of target achievement for the four performance criteria revenue, EBIT, strategy target, and sustainability target. For 2021, the Supervisory Board specified a strategy target from the internationality category and a sustainability target from the alternative drives category.

The target values for the performance criteria are set by the Supervisory Board, and target achievement in respect of these values is determined by the Supervisory Board after the end of the performance period. If performance is below a threshold, target achievement for the relevant share of the STI is 0 percent. This may result in no STI being paid at all. Target achievement is limited to a maximum of 150 percent. Linear interpolation is applied between the aforementioned rates of target achievement.

Revenue Revenue is defined as the consolidated revenue calculated and audited in accordance with the accounting principles that apply to DEUTZ AG by law. Revenue has a weighting of 30 percent.

The minimum threshold, the target value corresponding to 100 percent target achievement, the cap, the actual value achieved in 2021, and the resulting rate of target achievement for the revenue performance criterion are shown in the following table:

STI 2021

	Revenue	Target achievement
Minimum threshold	€1,160.0 million	50 %
Target value	€1,432.0 million	100 %
Cap	€1,700.0 million	150 %
Actual value	€1,617.3 million	134.6 %

If a value is achieved between the minimum threshold and the target value, target achievement is interpolated on a linear basis between 50 percent and 100 percent. If a value is achieved between the target value and the cap, target achievement is interpolated on a linear basis between 100 percent and 150 percent.

EBIT EBIT is defined as the consolidated earnings before interest and tax (EBIT) calculated and audited in accordance with the accounting principles that apply to DEUTZ AG by law. EBIT has a weighting of 30 percent.

The minimum threshold, the target value corresponding to 100 percent target achievement, the cap, the actual value achieved in 2021, and the resulting rate of target achievement for the EBIT performance criterion are shown in the following table:

STI 2021

	EBIT	Target achievement
Minimum threshold	– €30.0 million	50 %
Target value	€0.1 million	100 %
Cap	€30.0 million	150 %
Actual value	€37.2 million	150 %

If a value is achieved between the minimum threshold and the target value, target achievement is interpolated on a linear basis between 50 percent and 100 percent. If a value is achieved between the target value and the cap, target achievement is interpolated on a linear basis between 100 percent and 150 percent.

Strategy target and sustainability target The strategy target for 2021 was selected from the internationality category and given a weighting of 25 percent. The sustainability target for 2021 was selected from the alternative drives category and given a weighting of 15 percent.

Within their categories, ten individual targets were set for the strategy target and for the sustainability target. Examples of these individual targets, which are grouped into clusters, are shown in the following table:

Strategy targets for 2021 in the internationality category, derived from the growth and internationalization strategy

Target cluster	Examples of individual targets
China	Establish a new factory; localize purchasing
USA	Establish a new diesel power center; design a US long block concept
Spain	Establish a shared service center
Europe	Expand DEUTZ Engineering

Sustainability targets for 2021 in the alternative drives category, derived from the sustainability strategy

Target cluster	Examples of individual targets
Hydrogen	Complete a development test bay; establish a mobile H2 genset as a demonstration model; secure a project eligible for support
E-DEUTZ	Complete customer applications; secure a volume production order

Target achievement for the strategy target and sustainability target is measured by the number of individual targets that were reached in the relevant category in 2021. The correlation between the number of targets reached and target achievement is shown in the following table along with the actual rate of target achievement in 2021:

STI 2021

	Number of individual targets reached in the relevant categories for the strategy target and sustainability target	Target achievement
Minimum threshold	3	50 %
Target value	5	100 %
Cap	7	150 %
Actual value: **strategy target**	7	150 %
Actual value: **sustainability target**	10	150 %

Ex post changes to the performance criteria and target values for the performance criteria are not permitted. In accordance with the recommendation in G.11 DCGK, the Supervisory Board also has the option of taking exceptional developments appropriately into account in the STI if such developments were not explicitly factored into the strategic planning and defined individual targets. The Supervisory Board did not exercise this option in 2021.

Determination of the STI The determined target achievement rates are multiplied by the relevant weightings for the performance criteria and then added up to give the total target achievement. This is multiplied by the target amount to obtain the amount payable, which is limited to 150 percent of the target amount.

The following table summarizes the target amount, total target achievement, and the resulting amount payable under the STI 2021 for each member of the Board of Management:

STI 2021

	Dr. Ing. Frank Hiller	Dr. Ing. Markus Müller	Dr. Sebastian C. Schulte	Dr. Andreas Strecker	Michael Wellenzohn
Target amount	€428 thousand	€238 thousand	€300 thousand	€50 thousand	€300 thousand
Total target achievement	145.4%	145.4%	145.4%	145.4%	145.4%
Amount payable	€622 thousand	€345 thousand	€436 thousand	€72 thousand	€436 thousand

2.2 LONG-TERM VARIABLE REMUNERATION (LTI)

Long-term variable remuneration contributes to the Company's long-term development by rewarding implementation of the Company's strategies, their focus on sustainability, and the long-term increase in the value of DEUTZ AG on the basis of the original remuneration system that applied until 2020 and the new remuneration system that has applied to the Board of Management since 2020. Success is assessed using financial and share-based performance criteria derived from DEUTZ AG's strategy.

2.2.1 2020–2021 DEFERRAL (2019 BONUS) AND 2021–2022 DEFERRAL (2020 BONUS) – GRANTED IN 2021

Of the bonus promised in the past, only 60 percent was paid following the determination of target achievement, while 20 percent was deferred for one year and another 20 percent for two years. These deferred amounts were then paid, provided that further performance targets (medium-term targets) were achieved. Consequently, the deferred portions of the 2019 bonus (deferred for two years) and of the 2020 bonus (deferred for one year) were paid in 2021.

The amounts payable under the 2019 and 2020 bonuses were determined on the basis of the total target achievement rate for the performance criteria. If total target achievement was below 75 percent, there was no entitlement to a bonus. If total target achievement was 75 percent (minimum threshold), the bonus was 50 percent. If total target achievement was 100 percent, the bonus was measured at 100 percent. And if total target achievement was 150 percent or higher (cap), the bonus was 150 percent. The bonus was interpolated on a linear basis between the minimum threshold and 100 percent target achievement and between 100 percent target achievement and the cap.

The total target achievement rate for the bonus in 2019 was based on the performance criteria EBIT margin before exceptional items (40 percent), average working capital (30 percent), and revenue (30 percent). In 2020, the total target achievement rate for the bonus was measured using the performance criteria EBIT margin before exceptional items (40 percent), average working capital (20 percent), revenue (20 percent), and strategic objectives (30 percent). In 2019, the target values were 4.9 percent for the EBIT margin before exceptional items, 16.5 percent for average working capital, and €1.9 million for revenue. And in 2020, they were 2.5 percent for the EBIT margin before exceptional items, 20.6 percent for average working capital, and approximately €1.6 million for revenue. The strategic objectives for 2020 related to E-DEUTZ, the China strategy, and external alliances with other companies; they consisted of three targets in each of these areas. Target achievement for 2019 was determined to be 86.4 percent for the EBIT margin before exceptional items, 77.5 percent for average working capital, and 90.2 percent for revenue. This gives a total target achievement of 84.9 percent and a bonus of 69.8 percent in 2019. Target achievement for 2020 was 0 percent for the EBIT margin before exceptional items, 0 percent for average working capital, 0 percent for revenue, and 139.0 percent for the strategic objectives. This gives a total target achievement of 41.7 percent for 2020. As total target achievement for 2020 was below the minimum threshold, there was no entitlement to a bonus for 2020. Consequently, no bonus amounts were deferred from 2020.

The amount payable for the deferral is determined by multiplying the deferred amount by the total target achievement rate for the deferral performance criteria. The deferral performance criteria (medium-term targets) for the deferred payment of the 2019 and 2020 bonus are revenue and the EBIT margin. These two financial performance criteria have an equal weighting.

Revenue Revenue is defined as the consolidated revenue calculated and audited in accordance with the accounting principles that apply to DEUTZ AG by law. The minimum threshold, the target value corresponding to 100 percent target achievement, the actual value achieved in 2021, and the resulting rate of target achievement for the revenue performance criterion are shown in the following table for the two deferred payments:

2020–2021 deferral (2019 bonus)

	Revenue	Target achievement
Minimum threshold	€0 billion	0 %
Target value	€2.07 billion	100 %
Actual value	€1.62 billion	78.1 %

2021–2022 deferral (2020 bonus)

	Revenue	Target achievement
Minimum threshold	€0 billion	0 %
Target value	€1.90 billion	100 %
Actual value	€1.62 billion	45.1 %

If a value is achieved between the minimum threshold and the target value, target achievement is interpolated on a linear basis between 0 percent and 100 percent. If revenue is higher than the target value, target achievement for revenue is extrapolated on a linear basis. Total target achievement for revenue and the EBIT margin is capped at 150 percent.

EBIT margin The EBIT margin is defined as EBIT divided by revenue. EBIT is defined as the consolidated earnings before interest and tax (EBIT) calculated and audited in accordance with the accounting principles that apply to DEUTZ AG by law. The minimum threshold, the target value corresponding to 100 percent target achievement, the actual value achieved in 2021, and the resulting rate of target achievement for the EBIT margin performance criterion are shown in the following table for the two deferred payments:

2020–2021 deferral (2019 bonus)

	EBIT margin	Target achievement
Minimum threshold	0 %	0 %
Target value	6.4 %	100 %
Actual value in 2021	2.3 %	35.9 %

2021–2022 deferral (2020 bonus)

	EBIT margin	Target achievement
Minimum threshold	0 %	0 %
Target value	5.0 %	100 %
Actual value in 2021	2.3 %	46.0 %

If a value is achieved between the minimum threshold and the target value, target achievement is interpolated on a linear basis between 0 percent and 100 percent. If the EBIT margin is higher than the target value, target achievement for the EBIT margin is extrapolated on a linear basis. Total target achievement for revenue and the EBIT margin is capped at 150 percent.

Determination of the deferral The target achievement rates determined in this way are multiplied by the relevant weightings for the performance criteria and then added up to give the total target achievement. This is multiplied by the deferred amount for the bonus to obtain the amount payable, which is limited to 150 percent of the target amount.

The following table summarizes the deferred amount for the bonus, total target achievement, and the resulting amount payable for the 2020–2021 deferral and 2021–2022 deferral for each member of the Board of Management to whom a deferral was granted:

2020–2021 deferral (2019 bonus)

	Dr. Ing. Frank Hiller	Dr. Andreas Strecker	Michael Wellenzohn
Deferred amount	€105 thousand	€63 thousand	€65 thousand
Total target achievement	57.1 %	57.1 %	57.1 %
Amount payable	€60 thousand	€36 thousand	€37 thousand

2021–2022 deferral (2020 bonus)

	Dr. Ing. Frank Hiller	Dr. Andreas Strecker	Michael Wellenzohn
Deferred amount	€0 thousand	€0 thousand	€0 thousand
Total target achievement	65.6%	65.6%	65.6%
Amount payable	€0 thousand	€0 thousand	€0 thousand

2.2.2 LTI (LTI 2018–2021)

In 2021, the Board of Management members were granted remuneration in connection with the LTI promised in 2018. The LTI promised in 2018 was promised in the form of virtual performance shares. The target amount is the starting point for the allocation.

Long-term Incentive (2018–2021)

At the start of the four-year term, the target amount was divided by the average DEUTZ AG share price (arithmetic mean of the XETRA closing price on the last 60 trading days prior to the start of the performance period) in order to determine a number of virtual shares that are promised conditionally (virtual performance shares, VPSs). The start of the term was January 1, 2018 for Dr. Ing. Hiller and Mr. Wellenzohn. For Dr. Strecker, it was the date of his appointment to the Board of Management, i.e. March 1, 2018. The average DEUTZ AG share price was €7.03 for Dr. Ing. Hiller and Mr. Wellenzohn. For Dr. Strecker, it was €7.58. The number of VPSs promised to the Board of Management members for 2018 is shown in the following table:

Number of virtual shares promised conditionally to each Board of Management member in 2018

Board of Management member	Number of virtual shares promised conditionally in 2018
Dr. Ing. Frank Hiller	28,455
Dr. Andreas Strecker (until February 2021)	19,789
Michael Wellenzohn	18,963

Entitlement to payment after expiry of the four-year performance period depends on whether one of the two performance criteria – share price increase or relative share price increase – has been met.

The LTI payment is limited to 150 percent of the target amount. Target achievement for the performance criteria is calculated as follows:

Share price increase To calculate the increase in the share price during the performance period, the price of DEUTZ shares on the stock exchange (average closing price of DEUTZ AG shares in Xetra trading on the Frankfurt Stock Exchange during the last 60 trading days prior to expiry of the performance period) is compared with the reference price (average closing price of DEUTZ AG shares in Xetra trading on the Frankfurt Stock Exchange during the 60 trading days prior to the allocation date). In this calculation of the share price increase, any gross dividends distributed up to the end of the vesting period are added to the market value of the DEUTZ shares.

The target value resulting in 100 percent target achievement and the actual value achieved in 2021 for the share price increase performance criterion are as follows:

LTI grant in 2021

	Share price increase in the period 2018 to 2021	Target achievement
Minimum threshold	< 30 %	0 %
Target value	>= 30 %	100 %
Actual value in 2021	–6.7 %	0 %

Relative share price increase To calculate the relative increase in the share price, the increase in the DEUTZ share price (see 'Share price increase performance criterion') is compared with the increase in share prices on the MDAX.

The target value resulting in 100 percent target achievement and the actual value achieved in 2021 for the relative share price increase performance criterion are as follows:

LTI grant in 2021

	Difference between the increase in the DEUTZ share price and the increase in share prices on the MDAX in the period 2018 to 2021	Target achievement
Minimum threshold	< 10 percentage points	0 %
Target value	>= 10 percentage points	100 %
Actual value in 2021	–41.1 %	0 %

Ex post changes to the performance criteria and target values for the performance criteria are not permitted.

Determination of the LTI After the end of the performance period, it is determined whether entitlement to payment arose during the performance period. To calculate the amount of the cash payment after the end of the performance period, the final number of VPSs in the event of entitlement to payment is multiplied by the average DEUTZ AG share price (arithmetic mean of the closing price on the last 60 trading days prior to expiry of the performance period). The amount payable is limited to 150 percent of the target amount.

The following table summarizes various items of information, including the target amount, total target achievement, and the resulting amount payable for the LTI 2018–2021 for each member of the Board of Management to whom the LTI 2018–2021 was granted:

LTI 2018-2021[1]

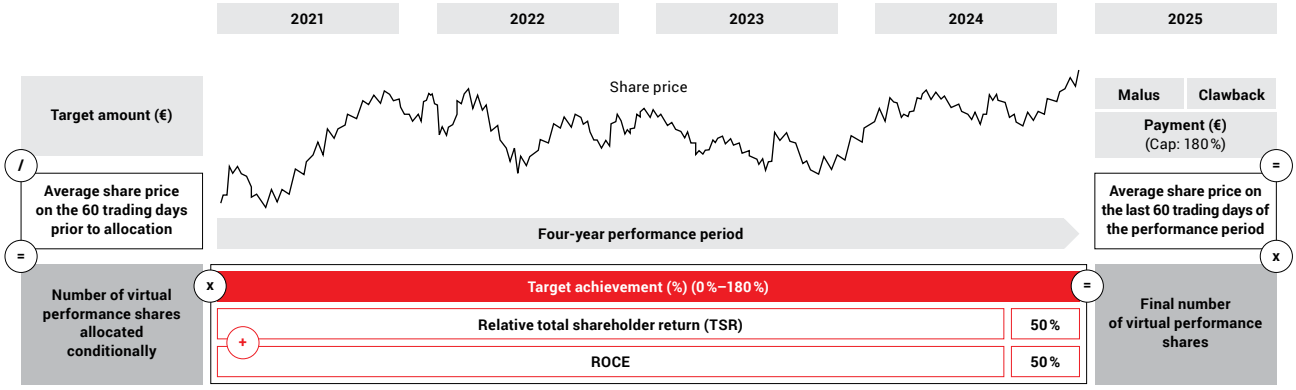
	Dr. Ing. Frank Hiller	Michael Wellenzohn
Target amount	€200 thousand	€133 thousand
Allocation price	€7.03	€7.03
Number of virtual shares	28,455	18,963
Total target achievement	0%	0%
Final number of virtual shares	0	0
Closing price	€6.82	€6.82
Amount payable	€0	€0

[1] For Dr. Andreas Strecker, the term of the LTI 2018–2021 began on March 1, 2018 and ends on February 28, 2022. Consequently, it will not be possible to disclose target achievement and the amount payable until the 2022 remuneration report.

2.2.3 LTI (ALLOCATION IN 2021)

The LTI promised in 2021 is promised as annual tranches of virtual shares (virtual performance shares, VPSs). The target amount is the starting point for the promised LTI and totals between 63 percent and 69 percent of the Board of Management members' basic remuneration.

Long-term Incentive (2021–2024)



At the start of the four-year term, the target amount is divided by the average DEUTZ AG share price (arithmetic mean of the XETRA closing price on the last 60 trading days prior to the start of the performance period) in order to determine a number of VPSs that are promised conditionally. For 2021, the average DEUTZ AG share price was €4.79. The number of VPSs promised to the Board of Management members for 2021 is shown in the following table:

Board of Management member	Promised LTI amount (target amount)	Number of virtual shares allocated conditionally in 2021
Dr. Ing. Frank Hiller	€522 thousand	108,977
Dr. Ing. Markus Müller (since March 15, 2021)	€294 thousand	61,372
Dr. Sebastian C. Schulte (since January 1, 2021)	€370 thousand	77,244
Dr. Andreas Strecker (until February 28, 2021)	€0 thousand	0
Michael Wellenzohn	€365 thousand	76,200

The final number of VPSs depends on the aggregated rates of target achievement for the performance criteria return on capital employed (ROCE) and relative total shareholder return (relative TSR).

Target achievement for relative TSR is determined after the end of the performance period on the basis of DEUTZ AG's **percentile ranking** within a TSR peer group. The target value for the ROCE performance criterion is set by the Supervisory Board. Target achievement for ROCE is determined once the relevant consolidated financial statements for the final year of the performance period have been approved by the Supervisory Board.

The LTI payment is limited to 180 percent of the target amount. Target achievement for the performance criteria is calculated as follows:

Relative total shareholder return Relative TSR compares DEUTZ's TSR performance against that of a specific peer group and has a weighting of 50 percent. TSR performance is calculated by comparing the share price (plus the dividend paid) at the end of the performance period with the value at the start of the performance period. The TSR peer group comprises companies in the DAXsubsector All Industrial Machinery.

Some of the companies in this peer group are therefore different from those in the peer group used to check whether the Board of Management's remuneration is typical in comparison with that in similar companies. The composition of the peer group for assessing how remuneration compares with that of other companies is based on stock-corporation law criteria, such as sector, size, and country. The composition of the TSR peer group has been given a greater sectoral focus, which means that companies

that are larger or smaller than DEUTZ are also included. Some companies in the TSR peer group would therefore not meet the stock-corporation law criteria regarding size that are applied in the comparison of Board of Management remuneration with that in similar companies. The Supervisory Board believes that a peer group with a greater sectoral focus is better suited to evaluating DEUTZ's performance relative to relevant competitors and the overall sector than the peer group used to compare Board of Management remuneration with that in similar companies.

As at December 2021, the TSR peer group comprised the following companies:

Aumann AG, Datron AG, DMG MORI AG, Dürr AG, Francotyp-Postalia Holding AG, Heidelberger Druckmaschinen AG, Jungheinrich AG, KHD Humboldt Wedag International AG, KHD Humboldt Wedag Vermögensverwaltungs-AG, KION GROUP AG, Knorr-Bremse AG, Koenig & Bauer AG, Krones AG, KSB SE & Co. KGaA, Kuka AG, Maschinenfabrik Berthold Hermle AG, Masterflex SE, NORMA Group SE, PITTLER Maschinenfabrik AG, SAF-Holland SE, Schaltbau Holding AG, SCHUMAG AG, Stabilus S.A., Wacker Neuson SE, WashTec AG.

TSR performance is determined for each company in the peer group and for DEUTZ after the end of the performance period. The individual values are then ranked and given a percentile ranking in which the 0th percentile ranking represents the lowest TSR performance and the 100th percentile ranking represents the highest TSR performance.

Target achievement for relative TSR is determined after the end of the performance period on the basis of DEUTZ AG's percentile ranking as follows:

LTI allocation in 2021

	DEUTZ's percentile ranking for TSR	Target achievement
Minimum threshold	25th	0 %
Target value	50th	100 %
Cap	75th	180 %

If a value is achieved between the minimum threshold and the target value, target achievement is interpolated on a linear basis between 50 percent and 100 percent. If a value is achieved between the target value and the cap, target achievement is interpolated on a linear basis between 100 percent and 180 percent.

Return on capital employed ROCE is the ratio of consolidated earnings before interest and tax (EBIT, based on the consolidated financial statements) to capital employed and has a weighting of 50 percent. The relevant figure for the assessment of target achievement for the 2021 tranche is ROCE for the final year of the performance period, i.e. ROCE in 2024.

The threshold for ROCE equates to DEUTZ AG's **weighted average cost of capital (WACC)**. If ROCE is below the WACC, target achievement is 0 percent. There is thus no entitlement to the payment of a bonus unless the return on capital employed exceeds the costs.

The minimum threshold, the target value corresponding to 100 percent target achievement, and the cap including the resulting target achievement for ROCE in 2024 are as follows:

LTI allocation in 2021

	ROCE	Target achievement
Minimum threshold	7.6 %	50 %
Target value	11.0 %	100 %
Cap	15.0 %	180 %

If a value is achieved between the minimum threshold and the target value, target achievement is interpolated on a linear basis between 50 percent and 100 percent. If a value is achieved between the target value and the cap, target achievement is interpolated on a linear basis between 100 percent and 180 percent.

Ex post changes to the performance criteria and target values for the performance criteria are not permitted. In accordance with the recommendation in G.11 DCGK, however, for the LTI, the Supervisory Board has the option of taking exceptional developments appropriately into account in respect of measurement variables, targets, and the determination of target achievement. The Supervisory Board did not exercise this option in 2021.

Determination of the LTI After the end of the performance period, the final number of VPSs is determined by multiplying the number of VPSs that are promised conditionally by the weighted total target achievement. To calculate the amount of the cash payment after the end of the performance period, the final number of VPSs is multiplied by the average DEUTZ AG share price (arithmetic mean of the closing price on the last 60 trading days prior to expiry of the performance period). The amount payable is limited to 180 percent of the target amount.

2.3 OVERVIEW OF THE VARIABLE REMUNERATION GRANTED AND OWED IN 2021

The following table summarizes the short-term and long-term variable remuneration resulting from the performance criteria that was granted or owed for 2021:

	Dr. Ing. Frank Hiller	Dr. Ing. Markus Müller	Dr. Sebastian C. Schulte	Dr. Andreas Strecker	Michael Wellenzohn
STI 2021					
Target amount	€428 thousand	€238 thousand	€300 thousand	€50 thousand	€300 thousand
Total target achievement	145.4 %	145.4 %	145.4 %	145.4 %	145.4 %
Amount payable	**€622 thousand**	**€345 thousand**	**€436 thousand**	**€72 thousand**	**€436 thousand**
LTI – deferral (2019 bonus)					
Deferred amount	€105 thousand	–	–	€63 thousand	€65 thousand
Total target achievement	57.1 %	–	–	57.1 %	57.1 %
Amount payable	**€60 thousand**	**–**	**–**	**€36 thousand**	**€37 thousand**
LTI – deferral (STI 2020)					
Deferred amount	€0 thousand	–	–	€0 thousand	€0 thousand
Total target achievement	65.6 %	–	–	65.6 %	65.6 %
Amount payable	**€0 thousand**	**–**	**–**	**€0 thousand**	**€0 thousand**
LTI 2018–2021					
Target amount	€200 thousand	–	–	€150 thousand	€133 thousand
Allocation price	€7.03	–	–	€7.58	€7.03
Number of virtual shares	28,455	–	–	19,789	18,963
Total target achievement	0 %	–	–	-[1]	0 %
Final number of virtual shares	0	–	–	–	0
Closing price	€6.82	–	–	–	€6.82
Amount payable	**€0**	**–**	**–**	-[1]	**€0**
Variable remuneration granted and owed (total)	**€682 thousand**	**€345 thousand**	**€436 thousand**	**€108 thousand**	**€473 thousand**

[1] For Dr. Andreas Strecker, the term of the LTI 2018–2021 began on March 1, 2018 and ends on February 28, 2022. Consequently, it will not be possible to disclose target achievement and the amount payable until the 2022 remuneration report.

2.4 MISCELLANEOUS

Malus and clawback The short-term variable remuneration and the virtual performance shares are subject to malus and claw-back conditions. This means that if, as proved by the Company, a Board of Management member is in serious violation of applicable law, his or her statutory obligations, or the obligations in his or her employment contract, the Supervisory Board is entitled to withhold some of the variable remuneration that has not yet been paid (malus) and to claw back variable remuneration that has already been paid. The Supervisory Board decides on this at its professional discretion. The Supervisory Board did not withhold or claw back any variable remuneration components in 2021.

Special remuneration In exceptional cases, the Supervisory Board can, at its professional discretion, grant a special bonus to Board of Management members in accordance with recommendation G.11 in the German Corporate Governance Code. The Supervisory Board must both identify and provide grounds for

such exceptions. The special bonus is limited in two ways. Firstly, it is limited in relative terms to half of the Board of Management member's annual basic remuneration. Secondly, it is limited by the maximum remuneration pursuant to section 87a (1) sentence 2 no. 1 AktG, which represents the absolute upper limit on total remuneration. No such special bonus has been granted in the past ten years, and this was again the case in 2021.

Adherence to the maximum remuneration limit As well as limiting the variable remuneration components, the Supervisory Board has specified a maximum amount of remuneration for each member of the Board of Management pursuant to section 87a (1) sentence 2 no. 1 AktG that limits the remuneration to be paid that was granted for a particular year. This maximum remuneration encompasses the basic remuneration, additional benefits, retirement pension, payments under the STI and LTI, and any special bonuses. The following maximum remuneration amounts for the members of the DEUTZ Board of Management are lower than the maximum remuneration amounts specified in the 2021 remuneration system and therefore meet the requirements of this system.

Maximum remuneration pursuant to section 87a (1) sentence 2 no. 1 AktG

Board of Management member	
Dr. Ing. Frank Hiller	€2,482 thousand
Dr. Ing. Markus Müller (since March 2021)	€1,746 thousand
Dr. Sebastian C. Schulte (since January 2021)	€1,746 thousand
Dr. Andreas Strecker (until February 2021)	€1,754 thousand
Michael Wellenzohn	€1,767 thousand

For 2021, the maximum remuneration limit was adhered to in respect of the basic remuneration, additional benefits, retirement pension, and payments under the STI without having to reduce any component. Because the amount payable for the multi-year variable remuneration will not be known until the third year after the end of the reporting year owing to the four-year performance period, it will not be possible to report conclusively on adherence to the maximum remuneration limit for 2021 until the remuneration report for 2024.

Benefits in the event of early termination of Board of Management membership If the employment contract or the appointment of a Board of Management member is terminated prematurely without good cause pursuant to section 626 of the German Civil Code (BGB), the Board of Management member receives a severance payment equivalent to the total remuneration that the Company is likely to owe him or her for the period until the original termination date of the contract of employment up to a maximum of two years (cap on severance pay).

In 2021, no member of the Board of Management was granted benefits due to the early termination of his or her Board of Management membership.

C. AMOUNT OF BOARD OF MANAGEMENT REMUNERATION IN 2021

C.1. REMUNERATION FOR BOARD OF MANAGEMENT MEMBERS WHO WERE CURRENT MEMBERS IN THE REPORTING YEAR

Remuneration promised and remuneration granted and owed in 2021 The remuneration that was promised to the members of the Board of Management and the remuneration that was granted and owed in 2021 pursuant to section 162 (1) sentence 1 AktG is shown in the following tables.

Promised remuneration: Remuneration promised is the remuneration that is promised to the Board of Management members for 2021, irrespective of the timing of payment (target remuneration).

In respect of the remuneration components in 2021, 'promised' specifically refers to the following:

Remuneration promised in 2021

Remuneration components
Basic remuneration
Additional benefits
Expenses for occupational pension scheme
STI 2021 (granted in 2021)
LTI 2021–2024 (to be granted in 2024)

Granted and owed: Remuneration granted is the remuneration for which the related (one-year or multiple-year) work has been performed in full. Remuneration owed is when DEUTZ has a legal obligation to the Board of Management member that is due but has not yet been fulfilled.

In respect of the remuneration components in 2021, 'granted and owed' specifically refers to the following:

Remuneration granted and owed in 2021 pursuant to section 162 (1) sentence 1 AktG[1]

Remuneration components	
Basic remuneration	
Additional benefits	
STI 2021 (promised in 2021)	
LTI	LTI 2018–2021 (promised in 2018)
	2020–2021 deferral (2019 bonus) (promised in 2019)
	2021–2022 deferral (2020 bonus) (promised in 2020)

[1] Pension expenses for a year are not deemed remuneration granted and owed pursuant to section 162 (1) no. 1 AktG because the work to which the remuneration is related has not yet been performed in full.

The following tables show the remuneration promised to the members of the Board of Management in 2021 (target remuneration):

Target remuneration

	Dr. Ing. Frank Hiller, Chairman of the Board of Management (until February 13, 2022)				Dr. Ing. Markus Müller, ordinary member of the Board of Management (since March 15, 2021)			
	2021		2020		**2021**		2020	
	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)
Basic remuneration	750	40.1	750	52.7	459	24.5	–	–
+ Additional benefits	22	1.2	22	1.5	19	1.8	–	–
= Total non-performance-related remuneration	**772**	**41.2**	**772**	**54.3**	**478**	**45.1**	**–**	**–**
+ One-year variable remuneration (total)	428	22.9	0	0.0	238	12.7	–	–
STI 2020[1]	–	–	0	0.0	–	–	–	–
STI 2021	428	22.9	–	–	238	22.4	–	–
+ Multi-year variable remuneration (total)	522	27.9	500	35.2	294	15.7	–	–
2021 – 2022 deferral (STI 2020)[2]	–	–	300	21.1	–	–	–	–
LTI 2020 – 2023	–	–	200	14.1	–	–	–	–
LTI 2021 – 2024	522	27.9	–	–	294	27.7	–	–
+ Expense for occupational pension scheme	150	8.0	150	10.5	50	4.7	–	–
= Total remuneration	**1,872**	**100.0**	**1,422**	**100.0**	**1,060**	**100.0**	**–**	**–**

	Dr. Sebastian C. Schulte, ordinary member of the Board of Management (since January 1, 2021)				Dr. Andreas Strecker, ordinary member of the Board of Management (until February 28, 2021)				Michael Wellenzohn, ordinary member of the Board of Management			
		2021		2020		**2021**		2020		**2021**		2020
	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)
Basic remuneration	580	43.9	–	–	97	59.8	580	55.0	580	42.8	580	54.3
+ Additional benefits	21	1.6	–	–	3	1.9	24	2.3	30	2.2	37	3.5
= Total non-performance-related remuneration	**601**	**45.5**	**–**	**–**	**100**	**61.6**	**604**	**57.3**	**610**	**45.0**	**617**	**57.8**
+ One-year variable remuneration (total)	300	22.7	–	–	50	30.6	0	0.0	300	22.1	0	0.0
STI 2020[1]	–	–	–	–	–	–	0	0.0	–	–	0	0.0
STI 2021	300	22.7	–	–	50	30.6	–	–	300	22.1	–	–
+ Multi-year variable remuneration (total)	370	19.8	–	–	–	–	330	31.3	365	26.9	351	32.9
2021 – 2022 deferral (STI 2020)[2]	–	–	–	–	–	–	180	17.1	–	–	186	17.4
LTI 2020 – 2023	–	–	–	–	–	–	150	14.2	–	–	165	15.4
LTI 2021 – 2024	370	28.0	–	–	–	–	–	–	365	26.9	–	–
+ Expense for occupational pension scheme	50	3.8	–	–	13	7.7	120	11.4	80	5.9	100	9.4
= Total remuneration	**1,321**	**100.0**	**–**	**–**	**162**	**100.0**	**1,054**	**100.0**	**1,355**	**100.0**	**1,068**	**100.0**

[1] In 2020, the Board of Management waived its one-year variable remuneration due to the pandemic.
[2] The deferral target amount comprises the target amount for a one-year deferral (2021 performance period) and the target amount for a two-year deferral (2021–2022 performance period).

The following tables show the remuneration granted and owed to the members of the Board of Management in 2021 pursuant to section 162 (1) sentence 1 AktG:

Remuneration granted and owed

	Dr. Ing. Frank Hiller, Chairman of the Board of Management (until February 13, 2022)				Dr. Ing. Markus Müller, ordinary member of the Board of Management (since March 15, 2021)			
	2021		2020		**2021**		2020	
	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)
Basic remuneration	750	51.6	750	97.2	459	55.8	–	–
+ Additional benefits	22	1.5	22	2.8	19	2.3	–	–
= Total non-performance-related remuneration	**772**	**53.1**	**772**	**100.0**	**478**	**58.1**	**–**	**–**
+ One-year variable remuneration (total)	622	42.8	–	–	345	41.9	–	–
STI 2020	–	–	–	–	–	–	–	–
STI 2021	622	42.8	–	–	345	41.9	–	–
+ Multi-year variable remuneration (total)	60	4.1	–	–	–	–	–	–
2019–2020 deferral (STI 2018)	–	–	–	–	–	–	–	–
2020–2021 deferral (STI 2019)	60	4.1	–	–	–	–	–	–
2021–2022 deferral (STI 2020)	0	0.0	–	–	–	–	–	–
LTI 2017–2020	–	–	–	–	–	–	–	–
LTI 2018–2021	0	0.0	–	–	–	–	–	–
+ Miscellaneous[1]	–	–	–	–	–	–	–	–
= Total remuneration	**1,454**	**100.0**	**772**	**100.0**	**823**	**100.0**	**–**	**–**

	Dr. Sebastian C. Schulte, ordinary member of the Board of Management (since January 1, 2021)				Dr. Andreas Strecker, ordinary member of the Board of Management (until February 28, 2021)				Michael Wellenzohn, ordinary member of the Board of Management			
	2021		2020		**2021**		2020		**2021**		2020	
	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)
Basic remuneration	580	55.9	–	–	97	46.6	580	96.0	580	53.5	580	94.0
+ Additional benefits	21	2.0	–	–	3	1.4	24	4.0	30	2.8	37	6.0
= Total non-performance related remuneration	**601**	**57.9**	**–**	**–**	**100**	**48.0**	**604**	**100.0**	**610**	**56.3**	**617**	**100.0**
+ One-year variable remuneration (total)	436	42.1	–	–	72	34.7	–	–	436	40.3	–	–
STI 2020	–	–	–	–	–	–	–	–	–	–	–	–
STI 2021	436	42.1	–	–	72	34.7	–	–	436	40.3	–	–
+ Multi-year variable remuneration (total)	–	–	–	–	36	17.3	–	–	37	3.4	–	–
2019–2020 deferral (STI 2018)	–	–	–	–	–	–	–	–	–	–	–	–
2020–2021 deferral (STI 2019)	–	–	–	–	36	17.3	–	–	37	3.4	–	–
2021–2022 deferral (STI 2020)	–	–	–	–	0	0.0	–	–	0	0.0	–	–
LTI 2017–2020	–	–	–	–	–	–	–	–	–	–	–	–
LTI 2018–2021	–	–	–	–	–	–	–	–	0	0.0	–	–
+ Miscellaneous[1]	–	–	–	–	–	–	–	–	–	–	–	–
= Total remuneration	**1,037**	**100.0**	**–**	**–**	**207**	**100.0**	**604**	**100.0**	**1,083**	**100.0**	**617**	**100.0**

[1] Miscellaneous remuneration comprises any remuneration not covered by the other remuneration components, e.g. severance payments or compensation for a non-compete period.

Remuneration of the Board of Management members in 2021 pursuant to section 314 (1) no. 6a HGB The total remuneration for the Board of Management of DEUTZ AG recognized in expenses for 2021 was €7,072 thousand (2020: €2,586 thousand). This consisted of short-term employee benefits of €5,268 thousand (2020: €2,362 thousand), other long-term benefits of €0 thousand (2020: minus €291 thousand), and share-based long-term benefits as part of the long-term incentive plans amounting to €1,804 thousand (2020: €515 thousand).

Remuneration for former members of the Board of Management or their surviving dependants pursuant to section 314 (1) no. 6a HGB amounted to €1,101 thousand (2020: €1,181 thousand) for DEUTZ AG and the Group. Provisions of €10,247 thousand (December 31, 2020: €10,657 thousand) have been recognized to cover pension obligations to former members of the Board of Management.

Review of whether Board of Management remuneration is typical The Supervisory Board reviews the level of the Board of Management's remuneration every two years in order to ensure that it is typical for the market and is competitive. This review involves checking and assessing factors such as whether the remuneration is typical in comparison with that of Board of Management members in similar companies and is typical in comparison with remuneration and employment conditions within DEUTZ. Companies are selected that are similar to DEUTZ, particularly in terms of the criteria country, sector, and size. Within DEUTZ, a comparison is made with the current situation and with the situation over time in respect of senior management and the workforce as a whole.

The remuneration of the Board of Management members was last reviewed in 2020 when the current remuneration system was being drawn up. It was found to be typical. Two peer groups were formed in order to assess whether the remuneration is typical in comparison with that in similar companies. The first peer group primarily consisted of German listed companies that were similar to DEUTZ in terms of sector, volume of revenue, and number of employees. The following companies were part of this peer group: Aumann AG, DMG MORI AG, ElringKlinger AG, Jungheinrich AG, KION GROUP AG, Knorr-Bremse AG, LEONI AG, Rolls-Royce Power Systems AG, Sulzer AG, VARTA AG, and Wacker Neuson SE. The SDAX was chosen as the second peer group because DEUTZ is listed on the SDAX.

C.2. REMUNERATION OF FORMER MEMBERS OF THE BOARD OF MANAGEMENT

The remuneration that was granted and owed to the former members of the DEUTZ AG Board of Management pursuant to section 162 (1) sentence 1 AktG amounted to €332 thousand in 2021. The remuneration granted and owed to Dr. Margarete Haase, who left in 2018, amounted to €55 thousand in 2021 and was entirely attributable to her fixed, non-performance-related retirement pension. Dr. Ing. Helmut Leube, who left in 2016, received a fixed, non-performance-related retirement pension of €78 thousand in 2021. The remuneration of the other former members, who stepped down from the DEUTZ AG Board of Management more than ten years ago, came to €199 thousand in 2021 and was entirely attributable to the granting of fixed, non-performance-related retirement pensions. The retirement pensions of former members of the Board of Management are granted entirely by the benevolent fund, not by DEUTZ AG.

C.3. DISCLOSURES ON THE RELATIVE CHANGE IN THE REMUNERATION OF THE BOARD OF MANAGEMENT, THE REMUNERATION OF THE REST OF THE WORKFORCE, AND THE COMPANY'S EARNINGS PERFORMANCE

The following table shows the year-on-year change in the remuneration granted and owed to the Board of Management members in the reporting year, the earnings performance of DEUTZ AG, and the remuneration of the workforce. The change in the remuneration granted and owed to the Board of Management members is based on the remuneration presented above (see section C. 'Amount of Board of Management remuneration in 2021', chapters 1 and 2, remuneration granted and owed). The earnings performance of the Company (DEUTZ AG) and of the Group (DEUTZ Group) is presented on the basis of EBIT, which is one of the main financial KPIs. The remuneration of the workforce shows the average remuneration of the Company's (DEUTZ AG's) salaried and non-salaried employees in Germany (excluding trainees, apprentices, and interns). To ensure comparability, the remuneration of part-time workers was extrapolated into remuneration for full-time equivalents.

The retirement pensions of the former members of the Board of Management Dr. Margarete Haase and Dr. Ing. Helmut Leube are paid by the benevolent fund, not by DEUTZ AG.

Year-on-year change (%)	2021 (absolute)	2021 vs. 2020	2020 vs. 2019	2019 vs. 2018	2018 vs. 2017
Board of Management remuneration					
Dr. Ing. Frank Hiller	€1,454 thousand	88.3 %	–47.2 %	–5.6 %	10.2 %
Dr. Ing. Markus Müller (since March 15, 2021)[1]	€823 thousand	–[1]	–	–	–
Dr. Sebastian C. Schulte (since January 1, 2021)[1]	€1,037 thousand	–[1]	–	–	–
Michael Wellenzohn	€1,083 thousand	75.6 %	–50.6 %	1.1 %	29.5 %
Dr. Andreas Strecker (March 1, 2018 to February 28, 2021)[2]	€207 thousand	–65.6[2]	–31.3 %	13.6 %	–[2]
Dr. Margarete Haase (until April 30, 2018)	€55 thousand	1.0 %	1.0 %	–95.9 %	25.8 %
Dr. Ing. Helmut Leube (until December 31, 2016)	€78 thousand	1.0 %	1.0 %	141.0 %	–90.0 %
Earnings performance of DEUTZ					
EBIT of DEUTZ AG	€36.6 million	131.9 %	–226.2 %	83.8 %	–68.1 %
EBIT of the DEUTZ Group	€37.2 million	134.9 %	–221.0 %	7.4 %	–43.0 %
Average remuneration of the DEUTZ AG workforce					
Workforce		–0.2 %	3.5 %	2.1 %	1.9 %

[1] As Dr. Ing. Markus Müller and Dr. Sebastian C. Schulte only joined the Board of Management in 2021, a comparison with their 2020 remuneration is not possible.
[2] As Dr. Andreas Strecker was a Board of Management member for the whole of 2020 but only part of 2021, the 2021 vs. 2020 comparison shows a sharp fall in the remuneration granted and owed to him. As he joined the Board of Management in 2018, there is no 2017 remuneration for comparison.

III. REMUNERATION FOR SUPERVISORY BOARD MEMBERS

A. REMUNERATION SYSTEM IN 2021

The remuneration system for the members of the Supervisory Board, which is governed by section 15 of the Company's Statutes, was adopted by the Annual General Meeting on April 26, 2018 and approved by the AGM with 99.65 percent of the votes on April 29, 2021. The remuneration of the Supervisory Board is structured so as to help to attract highly qualified people to the Supervisory Board and ensure that they remain with the Company. This means that the Supervisory Board can advise the Board of Management on the development of strategy and monitor the work of the Board of Management.

The annual remuneration of the Supervisory Board members consists of fixed basic remuneration, fixed remuneration for committee membership, and attendance fees for participating in meetings of the Supervisory Board and its committees. The basic remuneration and committee remuneration are paid annually after the end of the financial year, before the Annual General Meeting; the attendance fees are paid after each meeting attended.

Each ordinary member of the Supervisory Board is paid fixed basic remuneration of €40,000 each year. The chairperson of the Supervisory Board receives €80,000 and the deputy receives €60,000. Members of the Human Resources Committee and members of the Audit Committee receive an additional €12,000 per year, and members of the Nominations Committee and members of the Arbitration Committee receive an additional €8,000. The chairpersons of each committee receive double these amounts, and their deputies one-and-a-half times these amounts.

In addition, each member is paid an attendance fee of €1,500 for each Supervisory Board meeting and committee meeting attended. Furthermore, DEUTZ reimburses the members of the Supervisory Board for any VAT they incur in connection with the performance of their mandate and ensures that appropriate liability insurance is taken out (D&O insurance).

B. REMUNERATION GRANTED AND OWED IN 2021

The remuneration granted and owed to the members of the Supervisory Board in 2021 is shown below. Remuneration granted is the remuneration for which the related (one-year or multiple-year) work has been performed in full. Remuneration owed is when DEUTZ has a legal obligation to the Supervisory Board member that is due but has not yet been fulfilled.

In respect of the remuneration components in 2021, 'granted and owed' specifically refers to the following:

Remuneration granted and owed in 2021 (section 162 (1) sentence 2 no. 1 AktG)

Remuneration components
Fixed basic remuneration (promised for membership of the Supervisory Board in 2021)
Remuneration for committee membership (promised for membership of a committee in 2021)
Attendance fees (promised for attendance of meetings in 2021)

The remuneration granted and owed to all members of the Supervisory Board for 2021 totaled €897 thousand. The breakdown of the total remuneration by individual Supervisory Board member is shown in the following table:

	Fixed basic remuneration		Remuneration for committee membership		Attendance fees		Total remuneration
	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)	(%)	(€ thousand)
Dr. Ing. Bernd Bohr (chairman until February 12, 2022)	80.0	46.9	68.0	39.9	22.5	13.2	170.5
Corinna Töpfer-Hartung[1] (deputy chairwoman)	60.0	49.8	38.0	31.5	22.5	18.7	120.5
Sophie Albrecht[1]	40.0	60.2	16.0	24.1	10.5	15.8	66.5
Sabine Beutert[1]	40.0	53.7	18.0	24.2	16.5	22.1	74.5
Yavuz Büyükdag[1]	40.0	79.2	0.00	0.0	10.5	20.8	50.5
Dr. Fabian Dietrich[1]	40.0	79.2	0.00	0.0	10.5	20.8	50.5
Dr. Ing. Rudolf Maier	40.0	79.2	0.00	0.0	10.5	20.8	50.5
Hans-Peter Finken[1]	40.0	79.2	0.00	0.0	10.5	20.8	50.5
Patricia Geibel-Conrad	40.0	49.7	24.0	29.8	16.5	20.5	80.5
Alois Ludwig	40.0	55.6	20.0	27.8	12.0	16.7	72.0
Dr. Dietmar Voggenreiter (chairman since February 12, 2022)	40.0	79.2	0.00	0.0	10.5	20.8	50.5
Ali Yener[1]	40.0	66.7	8.0	13.3	12.0	20.0	60.0
Total remuneration	**540.0**		**192.0**		**165.0**		**897.0**

[1] Employee representative.

C. DISCLOSURES ON THE RELATIVE CHANGE IN THE REMUNERATION OF THE SUPERVISORY BOARD, THE REMUNERATION OF THE REST OF THE WORKFORCE, AND THE COMPANY'S EARNINGS PERFORMANCE

The following table shows the year-on-year change in the remuneration granted and owed to the Supervisory Board members in the reporting year, the earnings performance of DEUTZ AG, and the remuneration of the workforce. DEUTZ AG's earnings performance and the remuneration of its workforce are calculated in the same way as in the section on Board of Management remuneration.

Year-on-year change (%)	2021 (absolute)	2021 vs. 2020	2020 vs. 2019	2019 vs. 2018	2018 vs. 2017
Supervisory Board remuneration					
Dr. Ing. Bernd Bohr (since April 26, 2018; chairman from January 1, 2019 to February 12, 2022)	€170.5 thousand	4.6%	–2.7%	368.0%	–
Corinna Töpfer–Hartung[1] (deputy chairwoman since April 26, 2018)	€120.5 thousand	5.2%	–1.3%	43.0%	–
Sophie Albrecht (since April 26, 2018)	€66.5 thousand	4.7%	10.2%	45.0%	–
Sabine Beutert[1]	€74.5 thousand	6.4%	–4.1%	3.2%	48.9%
Yavuz Büyükdag[1] (since April 26, 2018)	€50.5 thousand	9.8%	–6.1%	36.9%	–
Dr. Fabian Dietrich[1] (since April 26, 2018)	€50.5 thousand	9.8%	–6.1%	36.9%	–
Hans–Peter Finken[1]	€50.5 thousand	9.8%	–6.1%	2.2%	27.8%
Patricia Geibel–Conrad (since April 26, 2018)	€80.5 thousand	5.9%	–3.8%	43.2%	–
Alois Ludwig	€72.0 thousand	–4.0%	2.0%	14.7%	70.9%
Dr. Ing. Rudolf Maier (since October 7, 2020)	€50.5 thousand	368.0%	–	–	–
Dr. Dietmar Voggenreiter (since April 30, 2019; chairman since February 12, 2022)	€50.5 thousand	9.8%	40.0%	–	–
Ali Yener[1] (since April 26, 2018)	€60.0 thousand	14.3%	–7.9%	38.2%	–
Earnings performance of DEUTZ					
EBIT of DEUTZ AG	€36.6 million	131.9%	–226.2%	83.8%	–68.1%
EBIT of the DEUTZ Group	€37.2 million	134.9%	–221.0%	7.4%	–43.0%
Average remuneration of the DEUTZ AG workforce					
Workforce		–0.2%	3.5%	2.1%	1.9%

[1] Employee representative.

RISK REPORT

RISK MANAGEMENT SYSTEM

To ensure their long-term survival, companies must act quickly – and react even faster – in a world in which economic conditions and the individual markets are constantly in a state of rapid change. In the face of increasingly complex corporate structures and growing internationalization, systematic risk management therefore forms an important basis for long-term business success.

DEUTZ operates in a variety of industries and regions worldwide and manages its business through various organizational units, namely the operating segments of the Group's parent company, the subsidiaries, the sales offices, and the authorized agents. This organizational structure presents the Company with both opportunities and business-specific risks.

Our objective is to generate profits on a sustained basis and to increase these profits significantly over the medium and long term in order to develop the Company and secure its future competitiveness. It is therefore critically important to identify and assess business risks at an early stage and to take corrective action where required. DEUTZ has an appropriate risk management system to ensure it can meet this requirement.

The risk management system heightens employees' sense of responsibility and raises their awareness of potential or existing risks. It is intended to help everyone involved to identify, analyze, and communicate risks in good time and to initiate effective corrective action.

The basic principles, monitoring standards, personnel responsibilities, functions, and procedures in the risk management system have been defined by the Board of Management of DEUTZ AG and summarized in a manual that is continually updated. A systematic reporting structure provides the basis for the work of the Risk Management Committee and ensures that all major risks are documented and communicated, and that appropriate corrective action is taken and documented at an early stage.

The DEUTZ Group conducts risk inventories four times a year. These risk inventories are carried out in all functions and areas of the Company and in the main affiliated companies to identify whether new risks or changes to existing risks have arisen compared with the Company's short-term and medium-term planning. The identified risks are categorized by importance, based on estimated probability of occurrence and potential impact. At the same time, a review is carried out to establish whether and how action that has been agreed and implemented has successfully minimized known risks or whether there is a need for further action. Since 2021, tail risks have been documented at least once a year as well. These are risks to the Company's survival as a going concern that have a very low probability of occurring. The Risk Management Committee analyzes the risks and the progress of the action that is being taken to minimize them and reports to the Board of Management on the results of the risk inventory. The Board of Management is presented with a risk aggregation at the same time. It is also shown, on an ad hoc basis, but at least once a year, a risk-bearing capacity statement focused on the Company's equity and liquidity.

To enable the Company to respond promptly at all times to any possible risks that may arise, the DEUTZ Group's risk officers and their staff are under an obligation to submit immediate reports to the risk coordinator detailing any new material risks or if there is an increase in the threat from risks that are already known. The risk coordinator would then notify the Board of Management accordingly.

The risk management system documents both risks and opportunities, and maintains a strict separation between the two.

The DEUTZ Group's system for the early identification of risks pursuant to section 91 (2) AktG is audited annually by the independent auditor and at regular intervals by Corporate Audit to assess whether the system is functioning efficiently.

RISK MANAGEMENT WITH REGARD TO FINANCIAL INSTRUMENTS

Basic principles Owing to its global business operations, the DEUTZ Group is exposed to various financial risks that can arise from adverse movements and trends in the international sales, procurement, interest-rate, and foreign-exchange markets. The overarching risk management strategy used is designed to mitigate potentially negative effects on the financial position. The management and early identification of financial risks is based on annual financial planning, together with updates and regular analyses of variances during the course of the year. Financial management in the Group is the responsibility of DEUTZ AG as the parent company.

The Treasury department identifies, measures, and hedges financial risk in close collaboration with the Group's operating segments. The Board of Management specifies principles for the Group's overarching risk management strategy as well as guidelines for certain aspects, such as how to manage currency risk, interest-rate risk, and credit risk and how to hedge them using derivative and non-derivative financial instruments. The Finance Committee, which meets every quarter, or on an ad hoc basis as required, provides a forum at which operational issues relating to risk management and other financially relevant decisions are discussed. The Finance Committee consists of the Chief Financial Officer plus the Head of Finance & Controlling and a further representative of the Treasury department.

The objective of risk management is to mitigate fluctuations in profits and cash flows caused by volatility in commodity prices, interest rates, and exchange rates. Derivative financial instruments are used only for hedging purposes, i.e. only in connection with corresponding underlying transactions arising from the Group's ordinary business activities or financial transactions that have a countervailing risk profile to that of the hedging transaction. The nature and scope of the hedged items are specified in a binding financing directive.

DEUTZ works exclusively with leading banks in order to minimize **counterparty risk**.

The Treasury department manages the lines of credit in accordance with the Group's financing principles. Subsidiaries are funded primarily by DEUTZ Group loans. DEUTZ manages the financial risk as follows:

Risk from bad debts We protect ourselves against the risk of bad debts by continually monitoring our situation through electronic and other means and by regularly analyzing receivables and their breakdown. The Company takes out credit insurance to cover a large proportion of its receivables where payment for goods has not been received in advance or is not covered by a letter of credit.

Currency risk arising from operating activities Currency risk, primarily in regard to US dollars, which arises as a result of transactions with third parties denominated in foreign currency, is monitored by means of a central currency management system and mitigated by the use of derivative financial instruments. The DEUTZ Group's net currency exposure is normally hedged by **forwards** equivalent to 50 to 80 percent of open items. DEUTZ is also taking specific action to increase the volume of purchasing in US dollars; this enables the Company to counteract exchange-rate risks from sales invoiced in US dollars by way of natural hedging.

Interest-rate risk arising from funding arrangements The DEUTZ Group is exposed to risk from interest-rate changes, above all in relation to floating-rate loans and other loans that it has taken up.

Liquidity risk The funding agreements concluded provide the Company with adequate liquidity for its further development. During the term of an agreement, DEUTZ AG must ensure that the DEUTZ Group complies with certain financial covenants (ratio of financial debt to equity and to EBITDA). These agreed financial covenants allow sufficient financial leeway in line with our medium-term balance sheet and profit planning. If, however, there is a dramatic deterioration in the general economic situation – for example, because of the coronavirus pandemic – there is a risk of the covenants being breached in the short term. Should such a risk materialize, we would approach our funding partners at an early stage in order to negotiate the necessary waiver and to enable further amounts to be drawn down under the syndicated loan.

See also 'Financial risk management', note 26, p. 177.

RISK ASSESSMENT

The assessment of risks in the DEUTZ Group is based on the estimated probability of occurrence in conjunction with the potential impact of the risk on the business objectives. Since 2021, a 'best case', 'mid case', and 'worst case' has been considered for the assessed risks. In the following risk report for the DEUTZ Group, the risks are categorized as either 'low', 'moderate', or 'high'. Risks that have been classified as 'low' would be expected to have a low impact of up to €10 million on financial position and financial performance. Risks classified as 'moderate', however, would have a significant impact, of between €10 million and €50 million, and risks classified as 'high' would have a major impact, of over €50 million, on financial position and financial performance. Risks to the Company's survival as a going concern are described as such.

DEUTZ Group: Risk assessment

Probability of occurrence (%)	minor	moderate	significant	critical	very critical
80–99	low	moderate	moderate	high	high
60–79	low	moderate	moderate	high	high
40–59	low	moderate	moderate	moderate	high
20–39	low	low	moderate	moderate	moderate
1–19	low	low	low	moderate	moderate

Impact

RISK

As with the internal risk report, the following presentation of the current risk situation is focused on the risk factors that are important for the DEUTZ Group. Consequently, risks that are referred to were categorized at least as 'low' before measures to counter the risk were taken into account. In contrast to the internal risk management, the risks in the following description are aggregated by risk category.

Unless otherwise stated, the risks refer to the relevant expected value for 2022, weighted by probability.

If not explicitly stated, the assessment of the risk is unchanged from the prior year.

The further course of the coronavirus pandemic and its consequences for the economy as a whole represent a major external risk for us. Further waves of infection, the lockdown measures that would result from this, and mutations of the virus could have a negative impact both on our unit sales and on our procurement and production. The effects of the coronavirus pandemic on financial position and financial performance are taken into account in market risk and operational risk.

In addition, the outbreak of war between Russia and Ukraine represents an external risk for us. The current sanctions and any further sanctions imposed in the future, along with their direct impact on the global economy and the flow of goods around the world, may adversely affect our earnings. As a relatively small amount of our revenue is generated in Russia and Ukraine, very few of our suppliers are based there, and little of the freight relevant to us transits in or across these regions, we currently categorize the level of risk posed by the war between Russia and Ukraine with regard to the attainment of our targets as 'low' for 2022. At the time this report was being prepared, however, there was a great deal of uncertainty about the effects of the war and it is currently impossible to predict exactly what these effects will be.

MARKET RISK

Geopolitical events, trade disputes, and pandemics can all influence the macroeconomic situation. Given that we operate in international sales markets, the aforementioned developments and events could have a negative impact on the financial position and financial performance of the DEUTZ Group. As well as having a direct effect on unit sales and revenue, this may also impact negatively on the value of the assets on our balance sheet. We operate in very cyclical markets in the Construction Equipment and Material Handling application segments, which are our strongest drivers of revenue, and in our principal sales regions of Germany, western Europe, China and North America.

Our objective is to mitigate this cyclicality from a regional and application segment perspective in order to reduce its negative impact on our business performance.

In the medium and long term, we seek to mitigate regional and application-related sales risks by aligning our development activities with our product strategy and by entering into long-term supply agreements. We therefore pursue a strategy of continually signing up new customers across all regions and progressively expanding our business with them. We are very well diversified and well positioned for the future in terms of the geographical and sectoral distribution of our customers. We supply the market-leading manufacturers in the various application segments. Active management of orders, inventories, and stock levels is used to respond to volatility in the markets.

Despite the countermeasures that are in place, it is impossible to completely control external risks. In view of the measures in place, we categorize the level of market risk with regard to the attainment of our targets as 'low' in 2022 (2021: moderate).

STRATEGIC RISK

Based on the objective of broadening our customer and product base, our strategy focuses on a technology-neutral approach to the development of our engine portfolio and on regional growth initiatives, primarily in China. See also 'Strategy and objectives', p. 22 onward.

In pursuit of our overarching objective of pioneering carbon-neutral drive systems for off-highway applications, we focus not only on electrification in the advancement of our portfolio but also, in particular, on the development of internal combustion engines that can run on a zero-carbon basis by using sustainable energy sources such as hydrogen and e-fuels. See also 'Research and development', p. 28 onward.

Our product strategy presents us with numerous opportunities but is, of course, also associated with risks. For example, new product developments may not be as well received by customers as predicted or may not be able to compete with rival products. There is also the risk that markets and prices may change in unexpected ways. Strategic product collaborations may also impact negatively on the value of the assets on our balance sheet.

We attempt to mitigate the aforementioned risks by precisely analyzing the trends in our markets and by taking into account external market research. In our target markets, we also enter into close alliances with major customers and into long-term supply agreements and partner with companies that are leaders in these markets, as we are doing, for example, in the implementation of our China strategy. As part of our activities in the field of alternative drive systems, we enter into strategic collaborations on development and also expand our inhouse capabilities by making targeted acquisitions and strategic investments. At the end of 2021, for example, we acquired a stake in Blue World Technologies. Blue World develops, manufactures, and sells fuel cell stacks and reformers, among other products. The collaboration is centered around an exclusive distribution and after-sales service agreement for stationary fuel cell gensets powered by methanol. In 2021, we reached agreement with a regional utility company that the hydrogen engine we are developing will be piloted in stationary equipment for power generation. We also signed a signed a cooperation agreement with the German Aerospace Center (DLR) regarding a joint project focused on making construction sites more environmentally friendly. See also 'Research and development', p. 28 onward.

There is also the risk that our strategic projects do not progress as anticipated or are delayed. We closely monitor the strategic projects so that we are able to respond immediately to changes.

In view of the measures in place, we continue to categorize the level of strategic risk with regard to the attainment of our financial targets as 'low' for 2022.

OPERATIONAL RISK

Procurement risk Supply shortages at our suppliers may lead to delays in our own deliveries or even production downtime if there are no alternative sources of supply. This would adversely affect our earnings.

In terms of the safeguarding of our supply chain, we see risks not only in the coronavirus pandemic but also in bottlenecks on the part of our suppliers, for example because of the current shortage of supply in the semiconductor sector. In addition, we see risks in the general economic and political situation and the associated paradigm shift within the automotive industry. Any resulting factory closures or discontinuation of products could also have a negative impact on our supply chain. Moreover, our earnings could be further dented if logistics and material costs are pushed up by longer replenishment lead times for bought-in parts, price increases at suppliers due to rising energy costs, and bottlenecks in freight and warehouse capacity. See also 'Procurement market', p. 36.

We seek to mitigate these risks by carrying out intensive supplier management, by continually negotiating with our suppliers, and by monitoring the market on an ongoing basis.

There are essentially three cornerstones to our procurement strategy for strategic and production-critical components: firstly, long-term supplier relationships and supply agreements; secondly, the increased use of second-source suppliers that are independent of each other; and, thirdly, where required, inhouse production and/or allocation of production to subcontractors. These measures minimize the procurement risks and secure the required capacity to the greatest extent possible.

In view of the measures in place, we continue to categorize the level of procurement risk with regard to the attainment of our financial targets as 'moderate' for 2022.

Production risk There is a risk that fluctuations in capacity utilization in production have a negative impact on our profitability. These could result not just from the level of dependency of our business model on the general economic situation or production delays due to material shortages but also from production downtime, for example because of the coronavirus pandemic, strikes, or machinery breaking down.

In 2020, DEUTZ drew up a comprehensive safety plan to prevent production from being disrupted by the coronavirus pandemic. This saw all workstations inspected as part of a special risk assessment and suitable safeguards, such as the installation of partitioning between individual workstations, introduced as a result. Working from home is still facilitated and even encouraged, especially for employees in administrative functions, and greater use is being made of virtual meetings as a means of reducing workplace contacts and thus minimizing the risk of infection. Since 2021, in addition to being able to carry out rapid tests at work, DEUTZ employees and their relatives have been given the option of being vaccinated at the Company's occupational healthcare center.

In order to avoid mistakes in planning and capital expenditure, the necessary production capacity is regularly reviewed and planned using different timescales: over a number of years as part of the medium-term planning process, which is revised each year, and for the following financial year as part of the budget planning process, which is then updated quarterly for the current year. Production program meetings and capacity planning meetings are held monthly to ensure that our capacity is adjusted in line with orders on hand. Where required, we are also increasingly making use of temporary employment contracts in order to ensure greater flexibility.

In view of the measures in place to avoid or minimize these risks, we continue to categorize the level of production risk with regard to our financial targets as 'low'.

Quality risk The DEUTZ Group is exposed to liability and warranty risks. Potential warranty claims and claims for compensation could have a negative impact on our financial position and financial performance. In addition, a change in supplier or a relocation of a supplier's operations presents a risk in terms of supplier quality.

We have set up local Quality departments to ensure quality in all plants and relevant areas of the Group. These departments systematically analyze sources of errors and defects, optimize production processes, and take action to minimize the risk in production start-ups, thereby reducing warranty risks. A central quality management organization ensures that standardized processes and methods are in place and carries out regular audits. In addition, DEUTZ has defined uniform standards for the selection of suppliers and, in close cooperation with the suppliers, continuously improves the quality of supplied parts.

Regular certification audits and additional quality initiatives also enable us to handle the significant technical complexity of engines and to satisfy the steadily increasing quality requirements of our customers.

Sufficient provisions are recognized on the balance sheet to account for warranty risks. In view of the precautionary measures that have been taken, we continue to categorize any further quality risks that could negatively impact on our financial targets as 'low' for 2022.

OTHER RISKS

Cyber risk We are a technology-driven company that is heavily focused on research and development. We regard the continuing development of our engine portfolio with a focus on sustainable drive solutions as a competitive advantage that will form the basis of our long-term success. However, there is a risk that strictly confidential information, particularly concerning new technological insights or partnerships in research and development, could find its way to our competitors through illegitimate means. As well as the loss of confidential information, it is conceivable that forged documents could be used to siphon off capital without authorization. In addition, technical defects or outages in our IT systems could have a negative impact on our market position and on our financial position and financial performance. This is also true of potential cyberattacks and the damage resulting from such attacks, which could harm our reputation.

We have put a series of measures in place to protect against cyber risks. As well as taking out insurance against cyber risks and providing regular security training for employees, these include security measures for computer hardware and IT security guidelines that have been laid down by management. In view of the precautions that have been taken, we continue to categorize cyber risks as 'low'.

Legal and compliance risk As a Group with multinational operations, DEUTZ is subject to a multitude of regulations under tax, competition, and patent law as well as to other legal and regulatory requirements. Existing and potential legal disputes, along with possible infringements of the law, are recorded and analyzed on an ongoing basis at DEUTZ; they are assessed in terms of their legal and financial impact and an appropriate amount is recognized in the risk provisions in the accounts. The outcome of legal disputes and proceedings is inherently uncertain, however. This means that there are further risks, not accounted for through provisions on the balance sheet, that could negatively impact on our financial targets.

Groupwide standards such as the general terms and conditions of business, sample contracts for various uses, and implementation provisions in the form of organizational guidelines are refined on an ongoing basis and reduce the level of new legal risks at DEUTZ. The Legal Affairs department and external lawyers are also regularly consulted about projects and the formation of contracts that fall outside the scope of the standards developed for day-to-day business.

Based on the current status of ongoing cases and in view of the measures that have been taken either to avoid or minimize risk, we continue to categorize the level of legal risk as 'low'.

OVERALL ASSESSMENT OF THE RISK SITUATION

We identify and evaluate material risks on an ongoing basis using our risk management system. Appropriate action is taken to manage these risks and, as far as possible, bring them under control. Changes in material risks are monitored regularly at Group level. Currently, the DEUTZ Group has not identified any risks that either individually or in their totality could jeopardize the continued existence of the enterprise as a going concern.

Because of the precautions that have been taken and our position in the market, we are confident in our ability to successfully manage the existing risks and overcome the resulting challenges. Overall, the Company's risk-bearing capacity in terms of equity and liquidity is assured.

ACCOUNTING-RELATED INTERNAL CONTROL SYSTEM

The risk management system forms part of, and is closely linked to, the internal control system. Whereas the risk management system focuses on the identification, analysis, assessment, communication, and management of risk, the internal control system (ICS) integrates monitoring mechanisms (organizational and technical safeguards and controls) into processes with the aim of avoiding or limiting risk.

The Board of Management is responsible for setting up, monitoring, refining, and ensuring the effectiveness of the ICS. However, even a properly structured ICS is unable to provide absolute security; it can only provide a relative amount of security in helping to achieve targets and/or avoid material misstatements.

The aim of the internal accounting-related control system is to ensure that accounting is carried out consistently and in accordance with statutory requirements, generally accepted accounting principles, and internal guidelines. The accounting process itself includes those parts of the operating processes that contain the financial reporting value flows, the process for preparing the consolidated financial statements, and all information sources and processes from which the significant disclosures in the consolidated financial statements are derived.

In order to ensure that the consolidated financial statements are properly and consistently prepared, the Group adheres to the fundamental principles of separation of functions, having work checked by a second member of staff, and IT access restrictions to prevent unauthorized access to relevant data. There are written procedural instructions, in particular the Group accounting manual, that are regularly updated at head office and communicated throughout the Group. Each reporting entity is responsible for compliance with the manual, and the data reported to DEUTZ's Group Accounting department is validated on an ongoing basis during the preparation of monthly financial statements. Data is reported to the Group head office using a standard reporting tool that has been implemented throughout the Group. Additional control mechanisms covering the risks in the main processes, thereby guaranteeing a reliable accounting and reporting system, are normally set up locally at departmental level. Where necessary, we also use external service providers, such as independent assessors of pension liabilities. The Group Accounting department ensures that these requirements are adhered to across the Group.

Information relevant to accounting is shared on an ongoing basis with the Head of Finance & Controlling and the Compliance Officer and passed on to the Chief Financial Officer in regular meetings.

Besides discussing the single-entity and consolidated financial statements, the Audit Committee set up by the Supervisory Board regularly discusses the quarterly financial reporting. The Audit Committee's monitoring function covers the effectiveness of the ICS set up by the Board of Management as well as the accounting process itself.

The ICS coordinator is responsible for continually refining the internal control system used by DEUTZ AG. This includes analyzing relevant business processes with regard to potential risks, ensuring that the ICS processes are documented, and verifying that the process control mechanisms in place are up to date and fit for purpose. The Board of Management and Audit Committee are routinely provided with reports on the status of the ICS.

Corporate Audit prepares a risk-based audit plan and verifies whether the statutory regulations and the DEUTZ Group's internal guidelines for its control and risk management system are being complied with. As part of its monitoring function, it also reviews whether the internal controls are functioning effectively. The findings of these reviews are reported directly to the Board of Management and allow us to eliminate any deficiencies that have been identified and ensure that the ICS is continually refined.

OPPORTUNITIES REPORT

DEUTZ operates in a fast-paced market environment. The aforementioned risks that are associated with this have the potential to negatively impact on the attainment of its business objectives. However, opportunities are also presented that could have a positive effect on the objectives of the Group for 2022 and beyond. It is to be viewed as an opportunity, for example, that particular events or developments may result in a positive deviation from the planned objectives for 2022. Identifying and harnessing these opportunities is the responsibility of the individual operating segments of the Group and the Board of Management. From the beginning of 2022, opportunities are being collated and assessed centrally for the first time, as was already the case for the management of risks.

OPPORTUNITY ASSESSMENT

Since 2021, the assessment of opportunities in the DEUTZ Group has been based on the estimated probability of occurrence in conjunction with the potential impact of the opportunity on the business objectives. As with the assessment of risks, a 'best case', 'mid case', and 'worst case' are considered. In the following opportunity report for the DEUTZ Group, the opportunities are categorized as either 'low', 'moderate', or 'high'. Opportunities that have been classified as 'low' would be expected to have a low impact of up to €10 million on financial position and financial performance. Opportunities classified as 'moderate', however, would have a significant impact, of between €10 million and €50 million, and opportunities classified as 'high' would have a major impact, of over €50 million, on financial position and financial performance.

Unless otherwise stated, the opportunities refer to the relevant expected value for 2022, weighted by probability.

Growth strategy We are particularly focusing on three core elements as part of our overarching growth strategy: regional growth initiatives with an emphasis on China, expansion of the activities brought together under our new Green segment, and expansion of the high-margin service business.

Thanks to the implementation of our China strategy, we will be able to benefit more from the expansion of the world's largest individual market for construction equipment. The market share captured as a result will enable us to increase our unit sales and earnings. The joint venture with SANY and the alliance with BEINEI give us local manufacturing options and direct market access. There is also a continued focus on expanding the geographical reach of the service network in the world's biggest individual market. See also 'Strategy and objectives', p. 22 onward.

Reducing or limiting carbon emissions around the world is essential in the face of advancing climate change. For this reason, when adding to or refining our engine portfolio, we particularly focus on the use of drive solutions that offer a more climate-friendly alternative to the classic internal combustion engine or that can even be run on a carbon-neutral basis. This is not only enabling us to build on our competitive position, but also presents the opportunity to target new customer groups. See also 'Research and development', p. 28 onward.

We will also significantly expand our high-margin service business. Potential for growth here may stem in particular from new services and service products that are designed to increase customer loyalty and satisfaction. The focus is on expanding the use of digital technologies, broadening our global service network, and acquiring further service outlets. See also 'Strategy and objectives', p. 22 onward. We categorize the level of strategic opportunity with regard to the attainment of our financial targets as 'low' for 2022.

Market opportunities In our budget for 2022, we have anticipated a continuation of the challenging conditions due to the coronavirus pandemic. If the market environment brightens during the year, opportunities will open up in the market.

We categorize the level of market opportunity with regard to the attainment of our targets as 'low' for 2022.

Legal opportunity Based on the current status of ongoing cases and in view of the measures that have been taken, we categorize the level of legal opportunity as 'low'.

OUTLOOK

ECONOMIC OUTLOOK

GDP growth[1]

YoY change (%)

	2022	2023
Global	4.4	3.8
Developed economies	3.9	2.6
Eurozone	3.9	2.5
Germany	3.8	2.5
USA	4.0	2.6
Emerging markets	4.8	4.7
China	4.8	5.2

[1] IMF, World Economic Outlook Update, January 2022.

In its most recent forecast, the International Monetary Fund (IMF) lowered its expectations for 2022 by 50 basis points to 4.4 percent. This adjustment is due to the expected impact of the Omicron variant of coronavirus, in particular on the first quarter of 2022, and to bottlenecks in global supply chains. Looking ahead to the rest of the year, the negative effects of the Omicron variant should ease in the second quarter, leading the IMF to forecast significant GDP growth for 2022 overall.[1]

The expectations for 2023 underwent a moderate upward adjustment of 20 basis points to 3.8 percent. However, this is essentially a technical effect, based on the assumption that the adverse influences of 2022 will have run their course. On this basis, global trade is predicted to increase by 6 percent year on year in 2022 and by around 5 percent in 2023.[1]

The projected growth in global trade is set to be accompanied by a further recovery in commodity prices. This trend is likely to cause inflation to rise. The IMF estimates that inflation in the developed economies will increase from 3.1 percent in 2021 to 3.9 percent in 2022, while it is expected to reach 5.9 percent in the emerging markets (2021: 5.7 percent). Consequently, it must be assumed that the cost of capital for companies is going to increase as a result of rising interest rates.[1]

Fundamentally, it can be assumed that the emerging markets' growth after the coronavirus pandemic will once again outstrip that of the developed economies.

[1] IMF, World Economic Outlook Update, January 2022.

DIESEL ENGINES MARKET

DEUTZ customer industries: forecast for 2022

YoY change in unit sales (%)

	Europe	North America	China
Construction equipment[1]	+5 – +10	+5 – +10	0 – +5
Material handling[1]	+5 – +10	+5 – +10	+10 – +15
Agricultural machinery[2]	0 – +5	0 – +5	0 – +10

[1] Power Systems Research, OE Link Update Bulletin Q4 2021, January 2022.
[2] VDMA, Business Climate and Market Development Worldwide, January 2022.

Based on currently available figures, there will be very little change in the performance of key industries for sales of DEUTZ diesel engines for the off-highway segment in 2022. Overall, the markets have proven to be quite robust in the face of the pandemic. In some areas, they managed to fully compensate for the collapse in sales caused by supply bottlenecks and lockdowns by the end of 2021. While there was no severe impact on economic growth in the main industries served by DEUTZ in Europe, North America, and particularly China, the recovery is likely to be slowed down for the foreseeable future by the ongoing global bottlenecks in the supply industry. In the rest of Asia, especially in Korea and Japan, the trend is likely to mirror that in Europe and North America. Overall, therefore, growth in 2022 is likely to be moderate.

Demand for construction equipment is expected to continue to rise overall. In addition to a general upturn in the economy, the comprehensive support packages and investment programs approved by the European Commission and the Biden administration should ensure steady demand in Europe and North America over the coming years. In China too, the construction sector – a key driver of Chinese economic growth – is set to contribute to sustained demand for construction equipment, although probably with a lower rate of growth than in previous years as the market is showing signs of saturation.

Demand for material handling applications, especially forklift trucks, lifting platforms, and telehandlers, is also set to grow overall across all regions. The increase in demand in Europe and North America will continue to be driven in particular by equipment leasing companies investing in their fleets. After cuts in capital spending of up to 60 percent in some cases in 2020, it picked up significantly in 2021, and announcements for 2022 indicate that the level of capital investment will be high again.

Unit sales of agricultural machinery are set to benefit from persistently high prices for agricultural products worldwide and are therefore likely to continue to grow during 2022. Growth rates are expected to be in the low single digits. Bottlenecks in the supply chain are likely to slow down market growth in Europe, while in North America there are signs that the rate of growth will drop off after two years of strong sales. In China, sales of more powerful tractors, where demand is rising as a result of the recent agricultural reforms, are just starting to rise slowly.

The Chinese market for heavy duty trucks[1] is expected to contract further in 2022 and level out at around 1.2 million vehicles, matching pre-pandemic levels. The reasons behind this include the high inventory levels at customers who expanded their fleets before the introduction of the CN6 emissions standard in 2021. It is also uncertain whether the central government will incentivize the truck market in the same way that it has in the past, and how long the electricity and energy cuts it has ordered will last. This may have a negative impact on manufacturers' production figures.

[1] China Automotive Industry Association, January 2022.

PROCUREMENT MARKET

Commodity prices, energy prices, and transport costs increased at an extraordinary rate in 2021, and further significant price volatility is expected in 2022. This is primarily due to continuing uncertainty surrounding the coronavirus pandemic, rising inflation, and ongoing political debate on matters such as the transition to a carbon-neutral future.

The supply situation is expected to remain very challenging. This is because of ongoing allocation arrangements in the global market, for example in the semiconductor, steel, and plastics industries, and because of the ongoing coronavirus pandemic.

BUSINESS OUTLOOK FOR 2022

Given the sustained upward trajectory experienced in 2021 by the industries in which the Company's customers operate, we are expecting that customers' propensity to invest will continue to grow in 2022. Nevertheless, it should be borne in mind that there is a lot of uncertainty surrounding the coronavirus pandemic. This makes it impossible to predict the future course of the pandemic and the impact it will have on the global economy and, in turn, on our business performance. At the same time, it is also impossible to anticipate developments in the global procurement market. The business outlook presented here was made on the basis of the information available at the end of February 2022.

UNIT SALES, REVENUE

Based on the forecasts outlined above and the assumption of ongoing bottlenecks in the supply chain, we expect unit sales of 165,000 to 180,000 DEUTZ engines[1] in 2022. This should result in an increase in revenue to between €1.70 billion and €1.85 billion, with the revenue attributable to the Classic segment accounting for between €1.60 billion and €1.75 billion. For the Green segment, which comprises all activities connected with the development and production of new, alternative drive solutions, such as electric or hydrogen-powered drives, we are expecting a revenue contribution of between €75 million and €100 million.

EARNINGS

If unit sales and revenue prove to be as described above, we expect the EBIT margin before exceptional items at Group level to be in a range of 3.5 percent to 5.5 percent. This span reflects the revenue range stated, as well as the fact that commodity prices and energy prices in particular are likely to remain highly volatile in 2022.

Looking at the individual segments, the EBIT margin before exceptional items for the Classic segment is expected to be between 4.5 percent and 6.5 percent, while the EBIT margin before exceptional items for the Green segment is likely to be in a range of minus 30 percent to minus 20 percent. However, it should be noted that in this segment, smaller revenues coincide with the increased level of investment that is required to build up our alternative drive system portfolio. See also 'Strategy and objectives', p. 22 onward, and 'Research and development', p. 28 onward.

In the outlook for 2021 in the 2020 report, DEUTZ anticipated payment of the final installment of the purchase consideration for the sale of the Cologne-Deutz site, which would have led to a positive exceptional item of around €60 million. Based on current information, this payment is now not expected to be made until 2023.[2]

Based on our earnings guidance, we believe that the return on capital employed (ROCE) before exceptional items in 2022 will be in the high single digits.

[1] Excluding electric boat drives from DEUTZ subsidiary Torqeedo.
[2] The amount and the timing of this payment depend on when the development plan for the site is formally approved by the City of Cologne and so cannot be precisely determined yet.

RESEARCH AND DEVELOPMENT EXPENDITURE[1]

After deducting grants[2], we expect expenditure on research and development to be in the range of €75 million to €85 million in 2022. In addition to our R&D activities in the field of alternative drive systems, this money will primarily be spent on the ongoing development of our portfolio of engines with capacities of less than 4 liters, the development of our new TCD 5.2, and the upgrading of our engines to the China IV emissions standard. See also 'Research and development', p. 28 onward.

CAPITAL EXPENDITURE[3]

After deducting grants[2], our capital expenditure is likely to be in a range of €90 million to €100 million in 2022. The expected increase compared to 2021 is due, in particular, to stronger investment in the optimization of our production operations and in building up our portfolio of alternative drive systems. See also 'Production and logistics', p. 30 onward.

WORKING CAPITAL RATIO, FREE CASH FLOW, AND EQUITY RATIO

The average working capital ratio for 2022 is predicted to be between 15 percent and 17 percent.

Free cash flow is likely to be an amount in the low to mid-double-digit millions of euros.

The equity ratio is expected to remain well over 40 percent.

EMPLOYEES

Staffing levels In 2020, as part of the Transform for Growth efficiency program, DEUTZ had initiated a reduction in the number of jobs across the Group with the aim of lowering staff costs. To minimize the social impact of the planned measures, a voluntary redundancy program running from September 1, 2020 to March 31, 2021 was set up for employees working at DEUTZ sites in Germany. It had been taken up by a total of 361 employees by the time that it finished. Of these, 50 employees are expected to leave the Company in 2022. See also 'Transform for Growth', p. 25.

The plan is also to manage short-term peaks in demand for labor as a result of unexpected increases in production volume by offering flexible employment conditions in the shape of fixed-term and temporary employment contracts.

Supplementary collective pay agreement In mid-December 2020, the IG Metall labor union and the employers' association agreed on a supplementary collective pay agreement with a three-year term. As well as a commitment by the Company to protect jobs and the sites in Cologne, Herschbach, and Ulm, the agreement involves certain undertakings by employees in order to secure the future of the sites, including an unpaid increase in working hours during the term of the agreement. See also 'Transform for Growth', p. 25.

[1] Research and development expenditure constitutes actual spending on R&D projects. It differs from the research and development costs recognized in the income statement in that development expenditure that can be capitalized is deducted and amortization on completed development projects is added.
[2] Grants from development partners and subsidies.
[3] Capital expenditure on property, plant and equipment (including right-of-use assets in connection with leases) and intangible assets, excluding capitalization of research and development expenditure.

OUTLOOK FOR 2023/2024

A degree of uncertainty hangs over the pace of the economic recovery given the ongoing coronavirus pandemic and the challenging situation in the global procurement market. In spite of this, DEUTZ is confirming its current medium-term targets for 2023/2024, which envisage an increase in annual revenue to more than €2.0 billion and an EBIT margin before exceptional items in the range of 7 to 8 percent.

Ongoing internationalization and the expansion of the service business, together with our technology-neutral approach to the development of our engine portfolio, will remain key growth drivers. The continued implementation of measures aimed at containing costs while raising efficiency will further underpin our profitability going forward. See also 'Transform for Growth', p. 25.

As part of its electrification strategy, DEUTZ had set itself the target of raising the proportion of consolidated revenue generated by E-DEUTZ to between 5 and 10 percent by 2023/2024, but this has been revised due to the introduction of the new segment reporting structure. The new target is for the proportion of consolidated revenue generated by the Green segment to reach between 5 and 10 percent over the same period. See also 'Strategy and objectives', p. 22 onward.

Disclaimer This management report includes certain statements about future events and developments, together with disclosures and estimates provided by the Company. Such forward-looking statements include known and unknown risks, uncertainties, and other factors that may mean that the actual performances, developments, and results in the Company or those in sectors important to the Company are significantly different (especially from a negative point of view) from those expressly or implicitly assumed in these statements. The Board of Management cannot therefore make any guarantees with regard to the forward-looking statements made in this management report.