DRIVING

POWER

ANNUAL REPORT 2018

DEUTZ

DEUTZ GROUP: KEY FIGURES

€ million

	2018	2017[6]	Change (%)
New orders	1,952.6	1,556.5	25.4
Unit sales (units)	214,776	161,646	32.9
Revenue	1,778.8	1,479.1	20.3
EBITDA	161.4	237.3	–32.0
EBITDA (before exceptional items)	161.4	133.2	21.2
EBIT	82.0	143.8	–43.0
EBIT (before exceptional items)	82.0	39.7	106.5
EBIT margin (%)	4.6	9.7	–
EBIT margin (before exceptional items, %)	4.6	2.7	–
Net income	69.9	118.5	–41.0
Net income (before exceptional items)	69.9	33.0	111.8
Earnings per share (€)	0.58	0.98	–40.8
Earnings per share (before exceptional items, €)	0.58	0.27	114.8
Dividend per share (€)	0.15	0.15	0.0
Total assets	1,249.3	1,198.2	4.3
Non-current assets	506.2	519.3	–2.5
Equity	619.1	584.3	6.0
Equity ratio (%)	49.6	48.8	–
Cash flow from operating activities	97.5	112.7	–13.5
Free cash flow[1]	14.5	82.5	–82.4
Net financial position[2]	93.7	98.2	–4.6
Working capital[3]	276.2	222.2	24.3
Working capital ratio[4] (average, %)	15.8	13.4	–
Capital expenditure[5] (after deducting grants)	59.1	54.7	8.0
Depreciation and amortisation	79.4	93.5	–15.1
Research and development (after deducting grants)	85.0	67.0	26.9
thereof capitalised	21.0	17.5	20.0
Employees (number at 31 Dec)	4,645	4,154	11.8

[1] Free cash flow: cash flow from operating and investing activities less interest expense.
[2] Net financial position: cash and cash equivalents less current and non-current interest-bearing financial debt.
[3] Working capital: inventories plus trade receivables less trade payables.
[4] Working capital ratio (average, %): average working capital at the four quarterly reporting dates divided by revenue for the previous twelve months.
[5] Capital expenditure: capital expenditure on property, plant and equipment and intangible assets, excluding capitalisation of R&D.
[6] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 84 in the notes to the consolidated financial statements for further details.

CONTENT

INTERVIEW

WITH THE CHAIRMAN OF THE BOARD OF MANAGEMENT DR ING FRANK HILLER

Dr Ing Frank Hiller, Chairman of the Board of Management of DEUTZ AG, on the successes of an eventful 2018 and the Company's ambitions for 2019.

Dr Hiller, the beginning of 2019 marks the start of your third year at DEUTZ AG. What are you most excited about at the moment?

Dr Ing Hiller: DEUTZ never fails to impress me. Our employees have done some truly exceptional work over the past months and years. They have shown a huge amount of commitment and openness as well as incredible flexibility and they have drawn on their strong culture of innovation to drive forward electrification and improve all our other products and services. We've all recognised that it is time for DEUTZ to develop a new corporate culture. I am delighted about the team's dedication to this transition. We are on the cusp of successfully leading DEUTZ into a future full of change. It's just great to be able to help actively mould this exciting process and to see how an agile approach can work in a company as old as ours!

A company full of new ideas and headed up by someone who is full of drive. That sounds like a dynamic combination. What exactly changed last year and how has this impacted on DEUTZ's success?

Last year, we pressed ahead with our E-DEUTZ strategy, under which we are electrifying our drive systems, and we completely realigned our market presence in China after terminating the joint venture with FAW. So DEUTZ can look back on a game-changing year featuring some notable successes. As well as reaching the aforementioned milestones, we achieved all of our targets and significantly improved some key financials. Despite several weeks of strike

"WE'VE ALL RECOGNISED THAT IT IS TIME FOR DEUTZ TO DEVELOP A NEW CORPORATE CULTURE. I AM DELIGHTED ABOUT THE TEAM'S DEDICATION TO THIS TRANSITION."

Dr Ing Frank Hiller, Chairman of the Board of Management

action at Halberg-Guss, one of our key suppliers, our overall business performance was more than satisfactory last year: revenue was up by 20 per cent compared with the prior year and, most encouragingly, there was a further sharp increase in profitability as measured by the EBIT margin, which rose to 4.6 per cent.

Dr Ing Frank Hiller (left) and
Mr Hans-Günther Hensengerth
in the new shaft production centre in Cologne

What objectives are you pursuing under the E-DEUTZ strategy and what measures did you put in place in 2018 to achieve them?

DEUTZ's primary objective of becoming the world's leading manufacturer of innovative drive systems is unchanged. The electrification of our product range is playing a crucial role here. At our ELECTRIP Event Week in September 2018, we unveiled the first fully functioning systems. To get to that point, our engineers managed to develop two prototypes in less than six months, demonstrating not only the dynamism of our Company but also – and above all else – making one thing clear: DEUTZ is a technology leader and is already in a position to supply customers with marketable electrification solutions.

Why do you attribute so much growth potential to electrification and what will become of DEUTZ's traditional diesel engines?

Electrified systems reduce noise and particulate emissions while also bringing down running costs for our customers, who benefit in terms of their environmental impact as well. Equipment in the low to medium power range that is subjected to varying loads, such as telescopic handlers, is particularly well suited to electrified drives. Forging ahead with development in this area is therefore clearly worthwhile. At the same time, the broader political and economic picture is changing. So it is important to think long term if you want to achieve sustained success as a company.

Despite all this, DEUTZ's traditional diesel engines are by no means obsolete, not least because of their high power density and the need for independent operation in the off-highway sector. There is currently no substitute for diesel engines in the heavy-duty tractors and excavators that are used in off-highway applications. Here too we are working with various research partners on making alternative fuels an increasingly viable option and we are in constant dialogue with start-ups. Synthetic fuels, known as e-fuels, represent a particularly promising area for us. In addition, we supply gas engines, which are best suited to material handling applications and compact construction equipment. We therefore offer a broad choice of products and can offer solutions to meet a range of requirements.

Alongside the new electrification strategy, DEUTZ is pursuing an international growth strategy. What do your new plans for China entail?

The Chinese market is already the biggest in the world for off-road applications, and it is continuing to grow. With our new three-pillar growth strategy for China, we have come up with an approach that allows us to establish local production operations and be successful in the long term. The first key pillar is the collaboration with China's biggest construction equipment group, SANY. We are forming a joint venture with SANY in which DEUTZ AG will be the majority shareholder with a stake of 51 per cent. The second pillar is the contract manufacturing alliance with China's oldest diesel engine manufacturer, BEINEI, which will enable us to serve further customers independently of the joint venture with SANY and potentially also in other countries. These two pillars are supported by a cooperation agreement with HORIZON, China's largest construction equipment rental company, which gives us access to a comprehensive service network and thereby opens the door to progressing the digitalisation of our service business. This represents the third main pillar of our new China strategy and corresponds to our groupwide objective of expanding the lucrative service business and thus putting our business model on an even more secure footing.

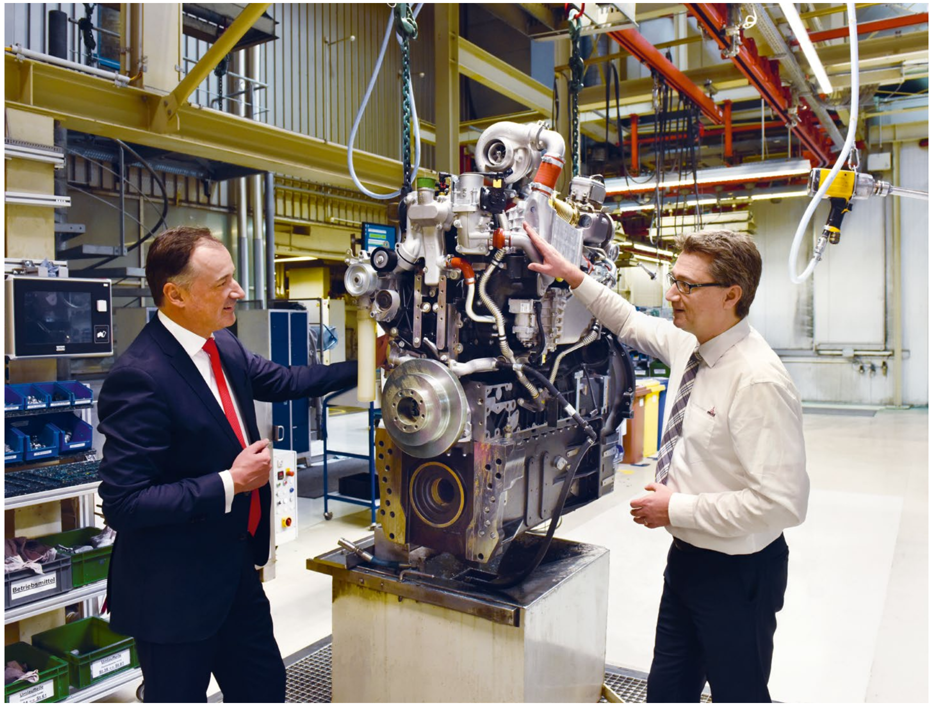
What do you think will be the key milestones in 2019?

2019 is another year that holds a lot of promise for DEUTZ and, of course, it's exciting for me personally as well. We are particularly delighted about not only the persistently high level of demand but also the consistently positive feedback that we are receiving from our customers, who are showing a lot of interest in our electrification strategy and alternative drive systems.

We have our excellent preparations to thank for much of this demand: DEUTZ obtained certification for EU Stage V, which came into force in Europe at the beginning of 2019, at a very early stage and was one of the first suppliers to do so. This year, building on this achievement, the focus will be on working with our customers to bring the first products with alternative drive systems to production readiness. A lot is also expected to happen with regard to our international growth strategy in 2019. Throughout Asia, we are benefiting from a decisive competitive advantage

"DEUTZ'S PRIMARY OBJECTIVE OF BECOMING THE WORLD'S LEADING MANUFACTURER OF INNOVATIVE DRIVE SYSTEMS IS UNCHANGED."

Dr Ing Frank Hiller, Chairman of the Board of Management



Dr Ing Frank Hiller (left) and Michael Reimer, Senior Vice President of Operations at the assembly plant in Cologne

"WE HAVE SET OURSELVES CLEAR TARGETS, INCLUDING ACHIEVING ANNUAL REVENUE OF MORE THAN €2 BILLION BY 2022."

Dr Ing Frank Hiller, Chairman of the Board of Management

in a much-changed market environment: the China VI (China VIa) emissions standard for on-road vehicles is being introduced from 2019 and is broadly similar to the Euro VI standard. The China IV-a emissions standard for off-road vehicles is expected to be introduced in 2020. Our growth strategy is also focused on the US. We have long been active in this target market and are the market leader in certain segments. The aim is now to build on this position and become even more profitable both in the US and across all regions.

Can you put that into figures?

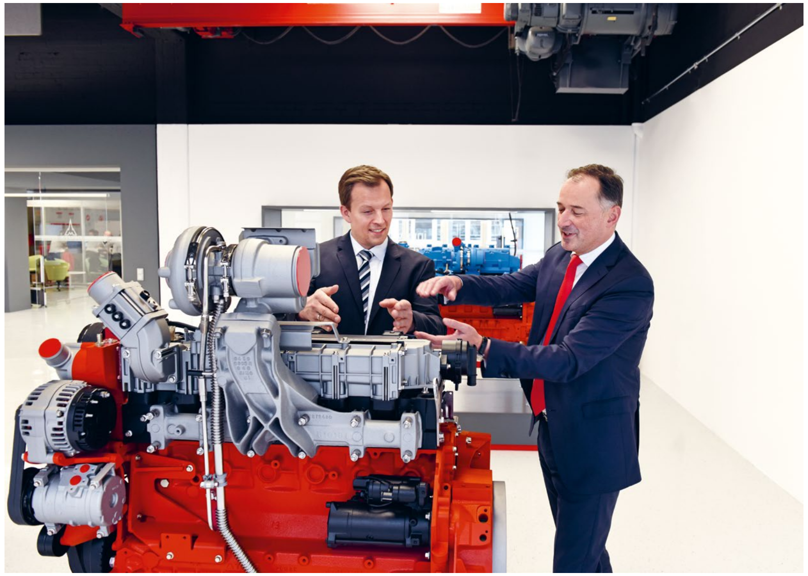
We have set ourselves clear targets, including achieving annual revenue of more than €2 billion by 2022. The further expansion of our core business and product portfolio and the ongoing internationalisation of our activities will help drive this growth. We would like our service business to be generating more than €400 million in annual revenue by this time and for the proportion of revenue attributable to electrified products to have grown to between 5 and 10 per cent.

Our aim is also for profitability to increase during this period. We hope to achieve an EBIT margin of between 7 and 8 per cent in 2022. Numerous initiatives and measures will help us to reach this target. The investments that we have already made, including in the acquisition of Torqeedo, in our E-DEUTZ strategy and in 9 to 18 litre engines, are having a significant impact. We are also reaping profitability gains by further optimising our production operations, product mix and purchasing and sales organisations, by expanding our service business and by generally reducing complexity across all parts of the Company.

For 2019, we are targeting revenue in excess of €1.8 billion and an EBIT margin of at least 5.0 per cent.

I am extremely optimistic that we will achieve all of the targets mentioned and I look forward to a year characterised by teamwork and a pioneering spirit, by shared ideas and by innovation!

Dr Hiller, thank you for talking to us.



Dr Markus Müller, Senior Vice President of Product Development and Technical Customer Support, talking with Dr Ing Frank Hiller in the new innovation centre

BOARD OF MANAGEMENT

Dr Andreas Strecker
Board of Management member, responsible for finance, human resources, purchasing and information services

Michael Wellenzohn
Board of Management member, responsible for sales, marketing and service

Dr Ing Frank Hiller
Chairman of the Board of Management, responsible for technical and head-office functions

DRIVING TECHNOLOGY

The world is in search of the drive system of tomorrow. Whether all-electric, hybrid or a combustion system using alternative fuels, DEUTZ believes that choice is important and offers each customer the optimum mix of a range of technologies. A new dynamic is well on its way.

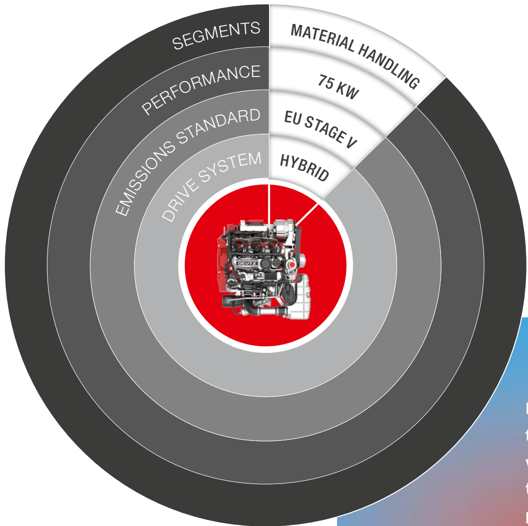
DEUTZ WILL INDUSTRIALISE ELECTRIC DRIVES

When it comes to mobile machinery, there is currently little choice but to use powerful diesel engines that can operate independently for long periods. At the moment, heavy equipment in this application segment is rarely, if ever, fitted with electric drives. This is primarily due to the high energy density of diesel fuel compared with battery storage units. One tankful of diesel will give many more operating hours than a battery. So for many applications, an all-electric drive would still not present the most practical option. The combination of the two technologies, however, offers a lot of potential for raising efficiency.

Launched in 2017, the E-DEUTZ strategy represents the next decisive step forward and combines DEUTZ's low-emission engines with electric drives. Electrification is now an integral part of DEUTZ's development expertise.

In September 2018, at DEUTZ's ELECTRIP event in Cologne for customers, investors and the press, DEUTZ unveiled two prototypes of telescopic handlers that are normally powered by a 74 kW DEUTZ TCD 3.6 diesel engine. They were converted, one to a hybrid drive and the other to an all-electric drive, at our development plant in Cologne. In terms of power output and capacity, every single E-DEUTZ component is scalable, the potential savings essentially depending on the load cycle and on how long the equipment is operated for in the

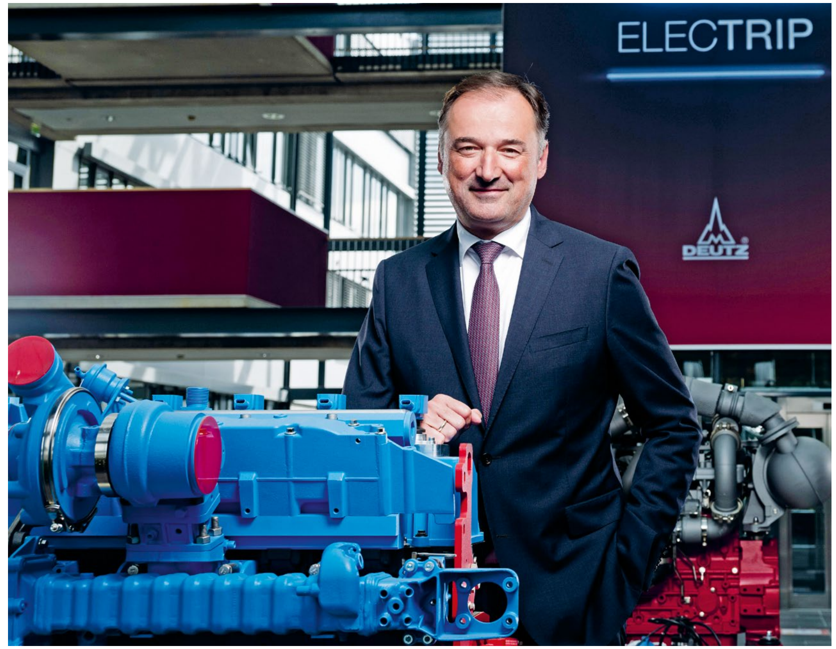
MODULAR SYSTEM



DEUTZ is diversifying its drive portfolio and, going forward, will be offering a range of technologies within a modular system. The customer will set the parameters in terms of application segment, performance, emissions behaviour and technical basis. DEUTZ will then design the ideal drive system to meet these criteria.

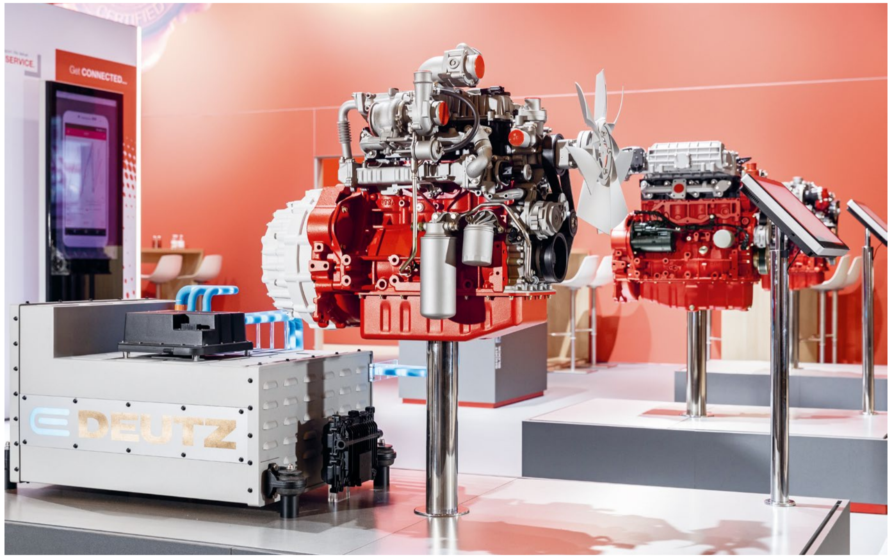
particular application. The E-DEUTZ hybrid prototype machine that was presented achieves fuel savings of around 15 per cent, which means that the cost of investment is typically recouped within two years.

By 2020/2021, DEUTZ will have industrialised these drives and gone into volume production with them. They will thus become part of DEUTZ's modular system for efficient off-highway drives. Based on its product modules, DEUTZ will individually design the optimum drive system for each customer and, drawing on its long-standing expertise, exploit and intelligently combine the benefits of various technologies. As well as conventional diesel engines and new E-DEUTZ drives, this will also encompass the use of alternative fuels. From 2019, for example, we will be launching two LPG engines. Liquefied petroleum gas (LPG) is readily available for material handling applications (e.g. at ports or industrial sites) and helps to reduce carbon emissions. On account of its chemical composition, LPG offers an advantage of around 25 per cent over diesel.



"THIS SHOWS THAT WE HAVE MASTERED THE TECHNOLOGY AND ARE IN A POSITION TO SUPPLY MARKETABLE ELECTRIFICATION SOLUTIONS."

Dr Ing Frank Hiller, Chairman of the Board of Management of DEUTZ AG



E-DEUTZ HYBRID

Electric motor — 55 kW:
- → Greater efficiency
- → More responsive performance
- → Zero-emission, all-electric operation

TCD 2.9 — 55 kW
- → High degree of flexibility
- → Able to operate independently for long periods
- → Downsized combustion engine

Adapting the traditional combustion engine so that it can use hydrogen, which is a sustainable source of energy, is another highly promising area of research. The Munich start-up KEYOU recently unveiled a DEUTZ prototype engine that has been converted to utilise hydrogen, for example. KEYOU has developed a conversion kit that can turn a conventional combustion engine into a drive based on state-of-the-art hydrogen technology. DEUTZ offered its support as a development partner, supplying one of its standard six-cylinder diesel engines with 7.8 litre capacity that was converted into a hydrogen engine using KEYOU components.

MILESTONES

2017:

ACQUISITION OF TORQEEDO

Acquisition of Torqeedo GmbH – a global market leader and a system solution specialist for integrated electric and hybrid drives for boats. This acquisition is the catalyst for the electrification of the DEUTZ product range. For future developments in the core off-highway business, DEUTZ will be bringing its comprehensive expertise and technology portfolio to bear in all relevant areas of electrification.

HYBRID ALL-ELECTRIC

E DEUTZ

2018:

BUILDING OF HYBRID AND ALL-ELECTRIC PROTOTYPES

To provide a real-life illustration of how its e-drives perform in practice, DEUTZ took it upon itself to produce two demonstrator vehicles. Two telescopic handlers that are normally powered by a 74 kW DEUTZ TCD 3.6 diesel engine were converted, one to a hybrid drive and the other to an all-electric drive, at the DEUTZ development plant in Cologne.

AWARD BEARS OUT THE SUCCESS OF OUR DIGITALISATION STRATEGY

In addition to the products themselves, the digitalisation of our processes – particularly those in the service business – are also playing a key part in our development activities. The DEUTZ Connect app is one of the successes of the digitalisation strategy. DEUTZ Connect is the first mobile engine diagnostics app for smartphones or tablets. It displays all relevant DEUTZ engine data in real time, which can then be assessed using an intuitive user interface and sent directly to a service partner. A number of awards bear out the success of the app. DEUTZ was among the winners of the internationally renowned Red Dot design competition, for example. The 24 judges on the panel evaluated 8,600 entries from 45 countries before awarding DEUTZ Connect the prestigious Red Dot design prize in the mobile app category. The accolade recognises our team's creative accomplishment and the excellence of the design.

MILESTONES

FIRST E-DEUTZ CUSTOMER PROJECT LAUNCHED WITH THE MANITOU GROUP

DEUTZ and the Manitou Group, the leading global OEM in the field of all-terrain telescopic handlers, are together embarking upon the electrification of the drive line. Manitou, the first E-DEUTZ project partner, has fitted one of its telescopic handlers with a hybrid drive and a second with an all-electric drive.

2019:

MODULAR PRODUCT SYSTEM

Based on its product modules, DEUTZ will individually design the optimum drive system for each customer and, drawing on its long-standing expertise, exploit and intelligently combine the benefits of the various technologies. This applies both to combustion engines, an area in which DEUTZ has been among the leading manufacturers for over 150 years, and to the electromobility segment. Electrification is now an integral part of DEUTZ's development expertise.

2020:

MARKETABLE HYBRID AND ALL-ELECTRIC PRODUCTS

2021:

START OF ROLLOUT, FIRST RELEVANT REVENUE

2022/2023:

5–10% OF OUR REVENUE

DRIVING POWER

DRIVING

MARKETS

DEUTZ adds value in the many international markets in which it operates. This presents it with a wide range of challenges. As an expert partner, we draw on our considerable experience and strong culture of innovation to meet new market trends and ever stricter emissions legislation, always focusing on our customers' needs before anything else.

MEETING CUSTOMERS' NEEDS AROUND THE GLOBE

Every application, every industry and every region needs a different kind of engine, from workhorses suitable for continuous use to compact engines powered by various types of fuel. The customer's need for flexibility and reliability is always the highest priority for DEUTZ.

Emissions standards in Europe require the use of a different exhaust aftertreatment system to those used in the US or China, for example. Moreover, the greater complexity of this system cannot be allowed to impact too heavily on the dimensions of the engine. DEUTZ engines are flexible enough to meet the different emissions standards while taking up no additional space. The broad power output range of our engines (up to 620 KW) means that they also offer a high degree of flexibility with regard to equipment and application type. Furthermore, our customer offering features a strong and high-performing service network that helps ensure reliability in the field.

Thanks to DEUTZ's new modular engine system, we will be offering our customers even more flexibility going forward. Within a power output range that is specific to individual applications, our customers will be able to choose between various drive technologies, from the latest efficient diesel engines and engines that use alternative fuels to all-electric systems and hybrids for a zero-emissions strategy.

SUCCESSFUL TOGETHER

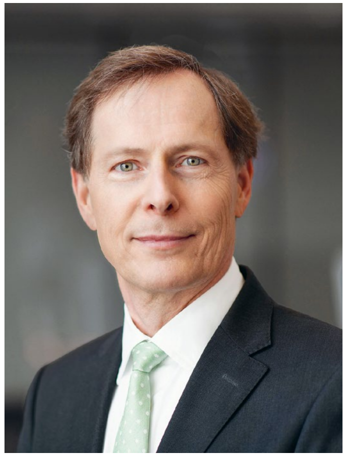
Compact, efficient, strong, clean and innovative. DEUTZ is leading the way in high-quality drive systems for applications in industry, agricultural machinery and commercial vehicles.

Strict emissions standards bring greater complexity, but we are able to support our customers with our well-established expertise in systems integration and exhaust aftertreatment and by offering alternative drives.

DEUTZ focuses on long-term partnerships characterised by absolute trust in the products and services provided. Customer satisfaction is, after all, the only way to secure existing business and exploit new opportunities.

A STRONG PARTNERSHIP, GOING ALL THE WAY BACK TO 1969

KION and DEUTZ have enjoyed a long and close relationship. Since 1969, Linde Material Handling, a KION premium brand, has been installing diesel engines made by DEUTZ AG in its forklift trucks. Today, these engines are mainly found in the H60 to H80 Linde models. Thanks to the DEUTZ TCD 4.1 engine that they use, these forklift trucks are able to move goods weighing up to eight tonnes.



“Forklift trucks are used for a wide range of applications. Some customers need to move particularly heavy loads, so they need a powerful vehicle. Thanks to DEUTZ engines, our Linde forklifts can give them this power.”

Dr Eike Böhm
Chief Technology Officer, KION GROUP

AGCO CORPORATION

Fendt is a manufacturer of agricultural machinery with a full-line product programme. Since 1997, the brand has been part of the US-based AGCO Group, a global leader in the development, production and distribution of agricultural machinery. The AGCO premium brand Fendt uses heavy-duty DEUTZ engines with capacities of up to 7.8 litres for large tractor models.

“Tractors, which are subject to constantly changing demands, drive under a much higher engine load than cars or trucks. This is why we use powerful and robust DEUTZ engines for our Fendt tractors in the 500 to 900 Vario range. After all, top machinery needs a top drive system.”

Wolfgang Geiger
Purchasing Director, AGCO/Fendt

MANITOU

Manitou, the leading OEM in the material handling sector, has enjoyed a long and close relationship with DEUTZ that has been built on strong technology. It has become the first E-DEUTZ project partner to have its equipment fitted with DEUTZ technology. One of its telescopic handlers has been fitted with a hybrid drive and a second with an all-electric drive.

“The integration of electric drives into our machines is a very encouraging development for the future. DEUTZ has the necessary expertise and is familiar with the special requirements of our applications. The potential performance of the new electric drives is extremely compelling.”

Michel Denis
Chief Executive Officer, Manitou Group

HAMM AG

HAMM and DEUTZ: a partnership dating back more than 100 years. Nowadays, the specialist for road construction and earthworks mainly uses compact DEUTZ engines in the 2.9 to 6.1 litre capacity range, for example in tandem rollers that are used around the world to create high-quality asphalt surfaces for everything from airports to Formula 1 racetracks. These ultra-modern combustion engines are adaptable to changing needs and emit very low levels of pollutants. HAMM rollers have been presented with multiple awards in recognition of this combination of sustainable engine technology with an ergonomic, user-friendly design.

“Our rollers need to deliver a lot of power while taking up as little space as possible. The aim is to have a compact design that gives them as much flexibility of movement as possible. DEUTZ engines meet this requirement perfectly, despite the growing complexity of exhaust gas aftertreatment due to EU Stage V.”

Dr Stefan Klumpp
Chief Technology Officer, HAMM AG

SUNBELT RENTALS AND DEUTZ – RELIABLE PARTNERS

Sunbelt Rentals, based in Fort Mill, South Carolina, is one of the largest equipment rental companies in North America. It offers its customers a broad product portfolio ranging from backhoe loaders, telescopic handlers and forklift trucks to pumps and generators. DEUTZ is an important strategic partner and has been supporting the company for many years. Suppliers mean more than just business-to-business, they are real partners. Sunbelt Rentals particularly values DEUTZ’s reliability.

“We chose DEUTZ because of the partnership and the products they offered, and the ease of doing business with them. Whatever we need and whenever we need it, DEUTZ is there for us around the clock, just as we are for our customers.”

Brian Clark
Director of Product Support, Sunbelt Rentals

DEUTZ's stand at the 2019 bauma CHINA trade fair

NEW STRATEGY IN CHINA

DEUTZ has adopted a new strategy for its activities in China. Under the three-pillar strategy, we will be entering into partnerships with a trio of major Chinese companies in order to benefit from the rapid growth in the world's largest individual market for engines.

The first pillar of the strategy is a new joint venture with SANY, China's biggest construction equipment group. DEUTZ will be the majority shareholder in the new company with a stake of 51 per cent. Initially, the plan is to supply SANY with around 75,000 new engines for off- and on-road applications in 2022. These engines will comply with the China IV and China 6 emissions standards respectively. As one of the leading engine manufacturers in the off-highway segment, we will thus be stepping up our activities in the on-highway segment as well. Our initial investment in the new joint venture is in the mid double-digit millions of euros.

Under the second pillar of the strategy, we are entering into a cooperation agreement with HORIZON in order to also strengthen our position in the attractive service business. With more than 80 branches, HORIZON is the largest player in China's construction equipment rental business. It will become our local service partner, servicing engines in the field and taking over the aftermarket sales business in China. HORIZON is also the ideal partner with regard to digital fleet service solutions.

The third pillar of our new strategy for China is a local contract manufacturing alliance with engine manufacturer BEINEI. This will act as a production hub for the Asian market. The DEUTZ management team is to oversee the manufacturing of approximately 20,000 engines in 2022 at a new factory in Tianjin.

OUR TARGETS FOR 2022

↓

> €2 BILLION
REVENUE

7–8%
EBIT MARGIN
(BEFORE EXCEPTIONAL ITEMS)

THREE PILLARS

OUR NEW CHINA STRATEGY

SANY

- China's biggest construction equipment group
- Major customer
- Joint venture partner

FAR EAST HORIZON

- Largest player in the Chinese construction equipment rental business
- Service partner
- Partner for digitalisation

BEINEI

- First manufacturer of diesel engines in China
- Contract manufacturing alliance
- Ability to satisfy additional demand in Asia

Xiang Wenbo, President of SANY Heavy Industrial Inc., (middle) and Dr Ing Frank Hiller, Chairman of the Board of Management of DEUTZ AG, (third from right) at the signing of the contract

As part of our strategic realignment in China, we are also putting in place a new local management team with a great deal of expertise and many years' experience in the Asian market. Our new Asian headquarters will be located in Shanghai. We will also be reconfiguring all other parts of the value chain: purchasing, supplier management, logistics, application development and sales and service.

Thanks to our new partners, we now have the ideal production network for efficiently supplying local customers with DEUTZ drive systems. At the same time, we are expanding our service network and will systematically enhance it with digital solutions. The new strategy will now enable us to fundamentally overhaul our market presence so that we can meet the growing demand for sophisticated engines not only in China but also in other Asian markets. On this basis, we will be looking to generate revenue in China of around half a billion euros in 2022.

"WE CHOSE DEUTZ BECAUSE IT IS ONE OF THE WORLD'S TOP ENGINE MANUFACTURERS. IN THIS PRODUCTION JOINT VENTURE, WE WILL BENEFIT FROM WORKING WITH AN AGILE COMPANY THAT IS LOOKING TO THE FUTURE AND DRIVING FORWARD TECHNOLOGICAL INNOVATION. DEUTZ THUS BRINGS TO THE TABLE EXACTLY WHAT WE NEED FOR OUR ENGINE DEVELOPMENT."

Lincoln Liang, member of the SANY Group's Board of Directors, at the signing of a memorandum of understanding in Beijing

DRIVING

CULTURE

DEUTZ stands for a pioneering spirit, passion and a culture imbued with innovation. Following these values every day, our employees create outstanding new products and services. We are developing a new corporate culture to bring this new dynamic to life. DEUTZ is now embarking on a process of cultural transformation.

A NEW DYNAMIC REQUIRES A NEW CORPORATE CULTURE

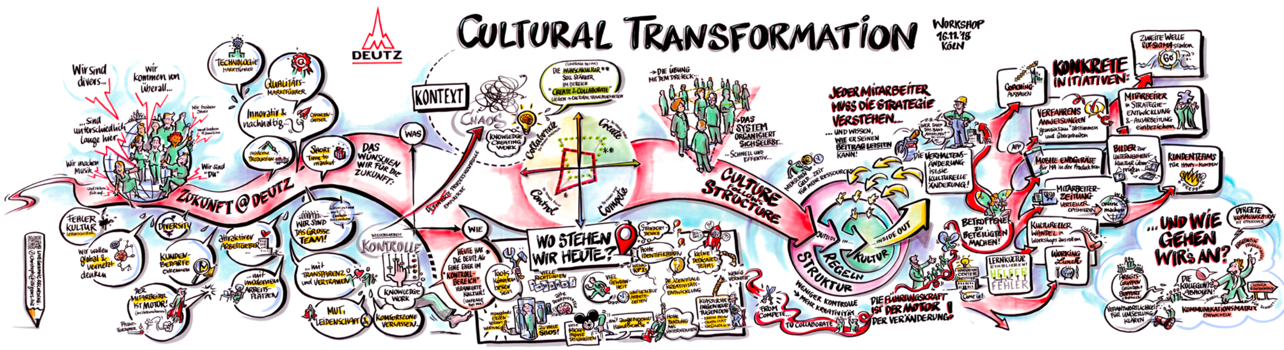
DEUTZ has changed considerably in recent years. Today, we are an agile medium-sized business, yet our processes and culture are still very much those of a large group of companies. That is why the new dynamic that we are already delivering very successfully also requires a new corporate culture.

The first step in developing this dynamic was an analysis of our culture. The key question at the kick-off workshop in November 2018 was “Where does DEUTZ stand today – where do we want to go?” The workshop participants – 24 employees, from the Chairman of the Board of Management to apprentices – were asked to pool their ideas and come up with some initial findings. Employees’ wishes and recommendations for ‘their DEUTZ’ of the future took centre stage. At the top of their wish list were more innovation and room for creativity, less of a silo mentality and less monitoring, more courage to question existing structures and to try out new approaches, more passion and greater interdepartmental and cross-regional collaboration.

The next step is to define shared values and new guiding principles. Everyone at DEUTZ has the opportunity to take part in the various initiatives. In addition, all staff worldwide are being asked to express their own views in a comprehensive employee survey in the first quarter of 2019. We will use the findings as the basis for appropriate measures and work together to implement them throughout the Company to actively shape the future of DEUTZ.

From apprentices to the Chairman of the Board of Management: employees' wishes and recommendations for 'their DEUTZ' took centre stage at the workshop

RESULTS OF THE KICK-OFF WORKSHOP



"A LOT IS HAPPENING, AND WE ARE SEEING MANY SIGNIFICANT CHANGES. OUR OBJECTIVE IS TO TAKE DEUTZ FORWARD BY ESTABLISHING A SHARED MINDSET AND THEREBY EQUIP IT FOR FUTURE CHALLENGES."

Anne von Ritter, Senior Vice President of Organisational & Talent Development

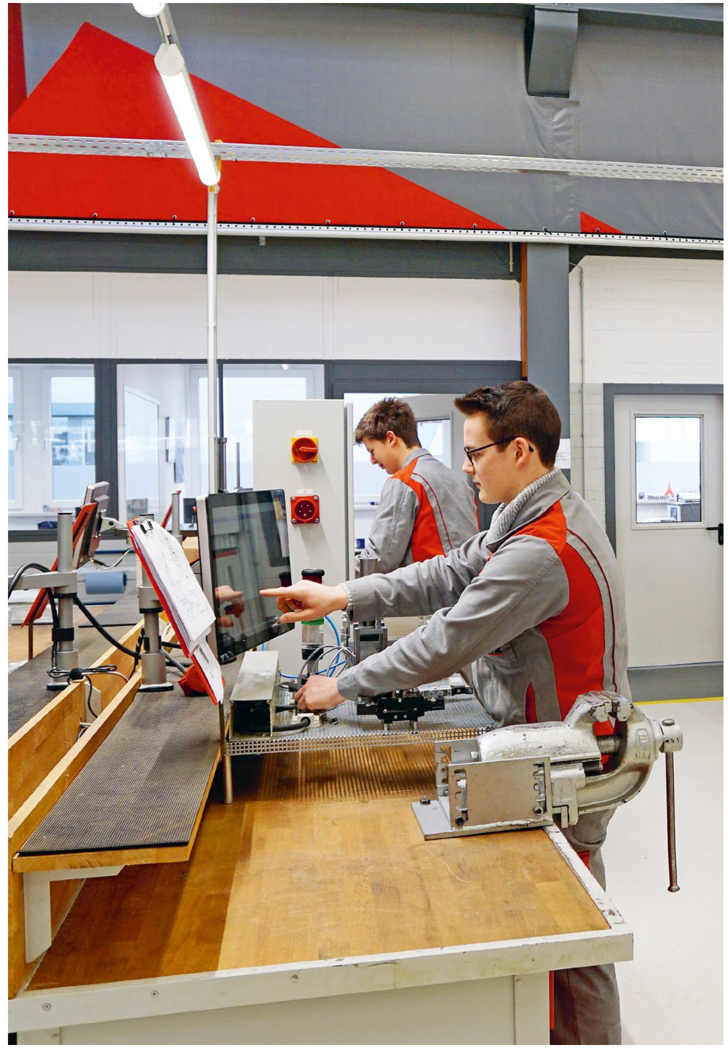
APPRENTICESHIP 4.0

The term Industry 4.0, referring to the digital transformation of manufacturing, has become an established term in Germany, and now DEUTZ is offering an apprenticeship to match. Its Apprenticeship 4.0 recognises that vocational training also needs to be brought in line with the changes and challenges entailed by digitalisation. Only by moving in this direction will our Company continue to have access to sufficient numbers of skilled workers.

We made numerous changes last year. The aptitude test, for example, is now completed digitally using a tablet instead of on paper as before. And all specialist training courses are offered digitally in the form of e-learning programmes. The apprentices can independently access the relevant system and repeat topics or reach specific learning milestones. Touchscreen computers that can be used for this are available at the workbenches.

In 2018, we also began to train our apprentices in 3D printing technology. The specialist courses familiarise the apprentices with the processes involved in 3D printing and the functions of the printer and explain what materials are used and how to programme the machine. The data manual, the 'machinist's bible', was also put online last year. This means that apprentices will always have access to the latest edition, including all changes, right there on their workbench. In addition, the DEUTZ apprentices now write and upload their report books using software provided by the Chamber of Industry and Commerce. If an apprentice still has not uploaded a report that is due, the system will even give them a warning.

But the Apprenticeship 4.0 goes much further than this. The role of the trainer is also changing in the face of advancing digitalisation. He or she is increasingly becoming a coach whose job is to encourage the next generation of workers to be flexible and independent and to drive their interest in new technologies.



DEUTZ is focusing on the digitalisation of training

"I'm training to be a production mechanic at DEUTZ AG. There are lots of reasons why I like working here. For one thing, it's a friendly place to work. And the tasks you are assigned as an apprentice are very interesting. As well as traditional metalworking, we are also trained in new technologies. These include manufacturing processes such as 3D printing. A 3D printer was purchased specially for our department so that we could get experience in this field."

Matthias Lotze, apprentice

DEUTZ TRAINING IS AMONG THE BEST

DEUTZ apprentices and the DEUTZ AG training centre in Cologne once again won accolades in 2018. Four DEUTZ apprentices, training to become metal technology specialists, production mechanics, mechatronics fitters or industrial electronics technicians, were awarded certificates of merit by the Cologne Chamber of Industry and Commerce (IHK) for their outstanding exam results. Cologne IHK also paid tribute to our commitment to vocational training and praised the above-average exam results achieved by DEUTZ apprentices overall. This was the eighth year in a row that the training centre in Cologne has been recognised in this way.

Another DEUTZ apprentice was honoured for his excellent results in his final exam to become a production mechanic. He was recognised by the IHKs of North Rhine-Westphalia as the best apprentice in his profession of 2018. The award was handed over during a ceremony at Motorworld in Cologne, which houses an area dedicated to DEUTZ's important role in the history of engines. Two apprentices at our site in Ulm were also recognised in 2018: an industrial mechanic apprentice and a business apprentice were honoured by the Ulm IHK for their exceptional achievements.

WHY I ENJOY WORKING AT DEUTZ

"I've been with DEUTZ a little over eleven years. I'm really excited to see the investment plans that DEUTZ has for us. We'll be able to do even more for our customers."

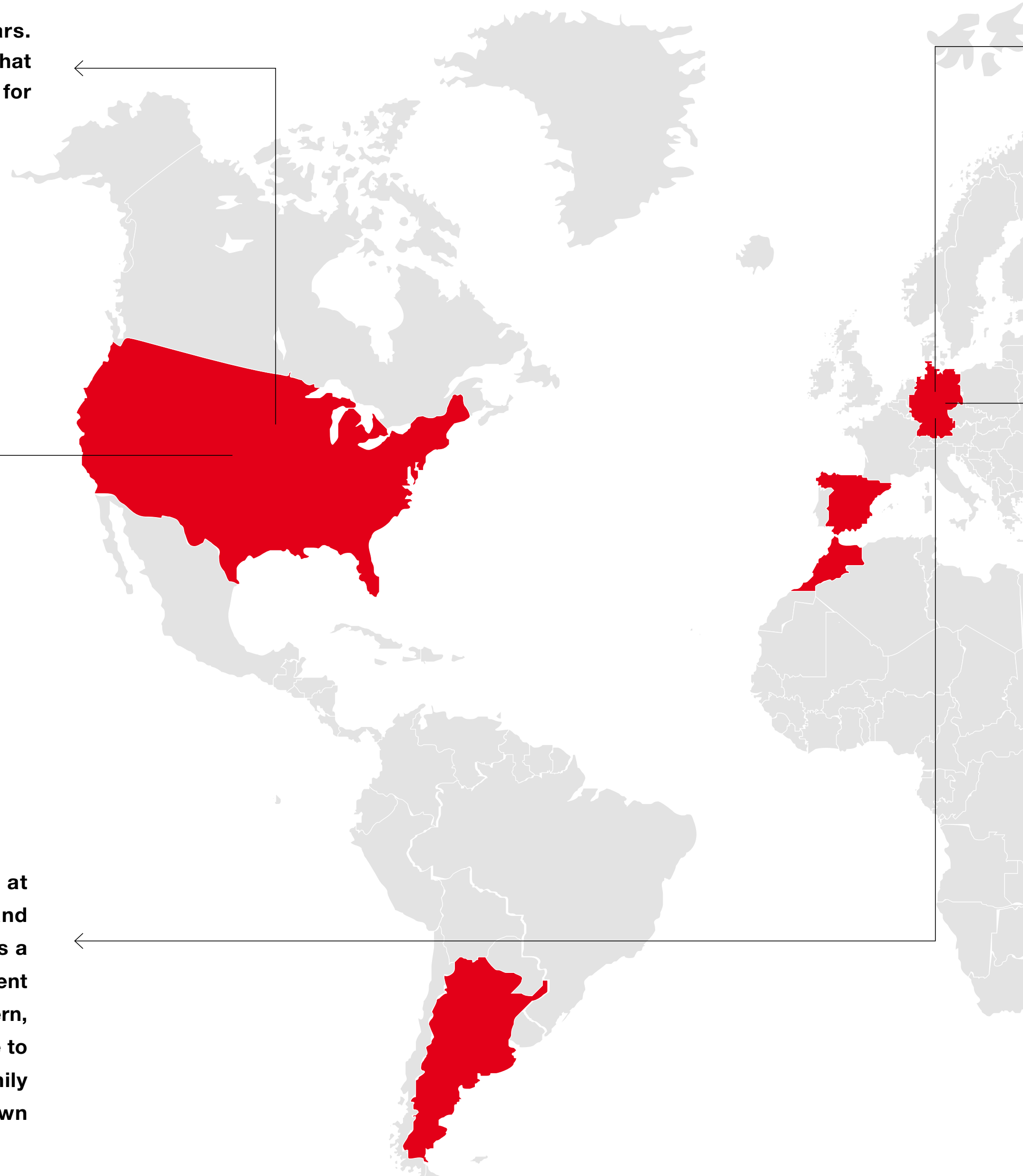
Brian Monaco,
DEUTZ Corporation, USA

"I'm pleased to work for a company that has played such an important role in the development of internal combustion engines and is now investing in new innovative technologies. And we're continuing to work on exciting new challenges."

Russ Sauer,
DEUTZ Corporation, USA

"I have been a member of the finance department at DEUTZ AG for more than 20 years. My colleagues and I enjoy working here at DEUTZ not only because it's a company with a strong culture of innovation and efficient engine technology, but also because we value the modern, employee-friendly working environment. It's possible to achieve a perfect balance between a career and family life here: something that I can confirm from my own experience."

Eva Holstein,
DEUTZ AG, Germany



"I'm the assistant to the Head of Finance & Controlling and I've been working for the Company for 30 years now. I'm delighted to see a new dynamic here at DEUTZ, which can be felt throughout the organisation. I would like to use my commitment and dedication to help actively shape this positive development."

Petra Fuchs,
DEUTZ AG, Germany

"I've been working in DEUTZ's shaft production centre of excellence for 13 years. We manufacture crankshafts and camshafts to the highest quality standards on 130 different systems and using a wide range of production processes. I enjoy working at DEUTZ because it's a place where tradition and innovation come together. An old-established company with more than 150 years of experience is now going in new directions – towards electrification and renewable energies."

Mario Manduca,
DEUTZ AG, Germany

"I enjoy working for DEUTZ as I think that the company offers excellent products featuring innovative technology. These products are very popular in China and across Asia."

Eric Cheng,
DEUTZ Shanghai, China

DEUTZ SHARES

In 2018, the global equity markets did not maintain the upward trajectory that they had been following for many years. The fear that interest-rate hikes in the US could lead to a slowdown in the economy was the main reason why the share indices fell. The introduction of new and higher customs tariffs and the increasing uncertainty surrounding the United Kingdom's departure from the European Union also had an adverse impact. On 28 December 2018, the DAX closed at 10,559 points, which was 18.3 per cent lower than the figure of 12,918 points at the end of 2017.

EQUITY MARKETS FALL SHARPLY

The SDAX, in which DEUTZ shares are listed, dropped by 20.0 per cent in 2018 and closed at 9,509 points (end of 2017: 11,887 points). The DAXsector Industrial, which comprises German industrial companies, lost 16.5 per cent in the reporting year to close at 5,621 points (end of 2017: 6,732 points).

DEUTZ shares were also affected by the general downtrend in the year under review. Having begun the year positively by making gains, the share price reached its high for the year of €8.68 on 17 April 2018. However, the shares subsequently lost a lot of ground and reached their lowest level for the year, €5.02, on the penultimate day of trading (27 December 2018). The year-end closing price of €5.15 was 32.1 per cent below the price twelve months earlier of €7.58.

Market capitalisation stood at €622.4 million at the end of 2018, compared with €916.1 million at the end of 2017.

EARNINGS PER SHARE

Earnings per share is calculated by dividing the net income for the year attributable to the shareholders of DEUTZ AG by the weighted average number of shares in issue. In the year under review, the number of DEUTZ shares in issue was 120.9 million. Basic earnings per share was therefore €0.58, compared with €0.98 in 2017.

Key figures for DEUTZ shares

	2018	2017
Number of shares (31 Dec)	120,861,783	120,861,783
Average number of shares	120,861,783	120,861,783
Share price as at 31 Dec (€)	5.15	7.58
Share price high (€)	8.68	7.78
Share price low (€)	5.02	5.31
Market capitalisation as at 31 Dec (€ million)	622.4	916.1
Earnings per share (€)[1]	0.58	0.98

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

Key data on stock market listing

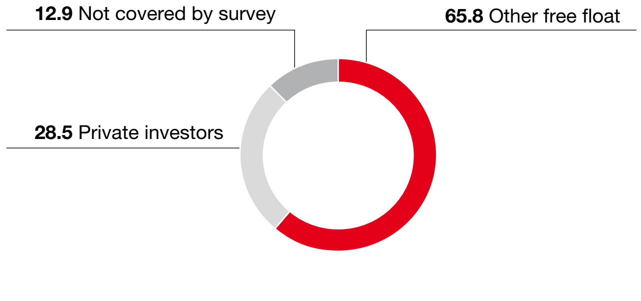
ISIN	DE0006305006
WKN	630500
Reuters	DEZG.DE
Bloomberg	DEZ:GR
Market segment	Regulated Market/ Prime Standard
Trading platforms	Xetra, Frankfurt/Main and all other German stock exchanges

ALL DEUTZ SHARES IN FREE FLOAT

DEUTZ shares are held by a broadly diversified range of private and institutional shareholders both in Germany and abroad. Most of the private investors are in Germany. Among the institutional investors, fund management companies in the United States are the biggest shareholders. At the end of 2018, Union Investment (Germany) held 5.1 per cent of our Company, while Norges Bank (Norway) and Dimensional Holdings Inc. (US) each held 5.0 per cent. These are also considered non-controlling shareholdings.

Shareholder structure as at 31 December 2018[1]

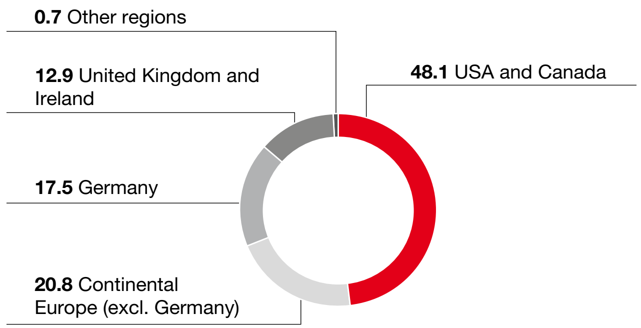
%



[1] IHS Markit January 2019

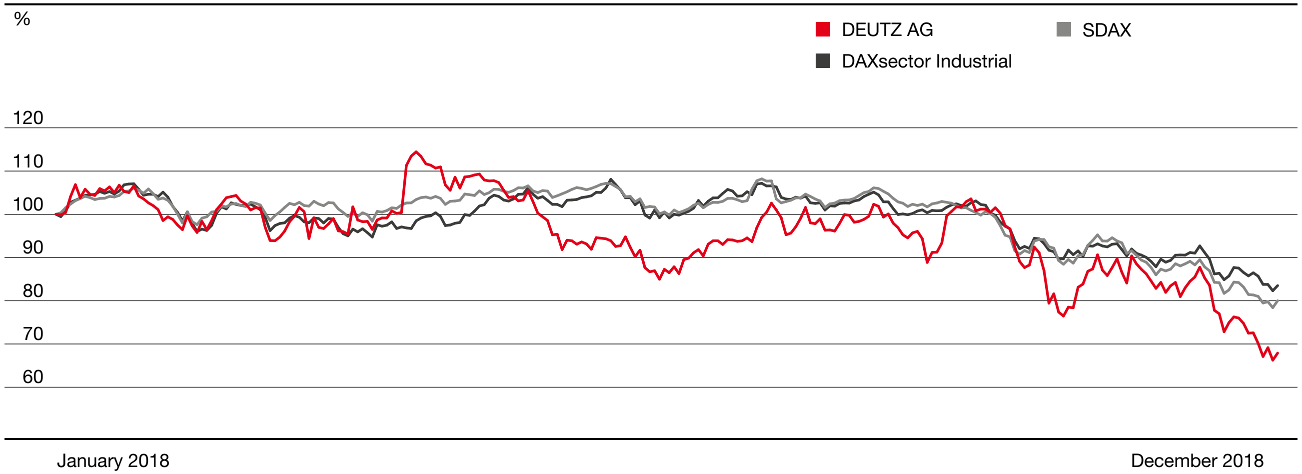
Shareholder structure by country (institutional investors)[1]

%



[1] IHS Markit January 2019

DEUTZ share price performance in 2018



DIVIDEND ENABLES SHAREHOLDERS TO SHARE IN PROFITS

As in the prior year, the Board of Management and Supervisory Board propose using €18.1 million of the accumulated income to pay a dividend of €0.15 per share. The dividend per share is therefore at the same level as in 2017. However, it has been funded exclusively from the operational business, whereas last year the intention of the dividend was to allow the shareholders to benefit from the completed property transactions. We plan to carry on enabling our shareholders to participate in the success of our Company and aim for a dividend ratio of 30 per cent of net income. At the same time, we intend to continue funding a significant proportion of our growth ourselves, that is to say from our own capital.

TRANSPARENT CAPITAL MARKETS COMMUNICATIONS

DEUTZ engages in intensive dialogue with its shareholders, with analysts and with all other interested parties in the capital markets. In doing so, we want to maintain the high levels of acceptance and long-term trust of our shareholders. As in previous years, we provided all shareholders with prompt, transparent and comprehensive information about all significant events in our Company in 2018. All corporate information, such as presentations, financial reports, press releases and ad-hoc announcements, can also be found at www.deutz.com/en/investor-relations/.

At our annual results press conference and analysts' meeting on 14 March 2018, we presented the DEUTZ annual financial statements and discussed our future strategic direction. We also held conference calls when we published our quarterly results. In 2018, we were involved in a total of 19 roadshows and investor conferences in Germany, the United Kingdom, France, the United States and China. We hosted a capital markets day during the ELECTRIP Event Week, which took place in Cologne in September 2018. In addition, we also talked with analysts, institutional investors and private investors throughout the year.

TEN ANALYSTS MONITOR DEUTZ SHARES

As at the end of 2018, ten banks and securities houses were monitoring the performance of DEUTZ shares: Baader Bank, Bankhaus Lampe, Berenberg, Commerzbank, DZ Bank, HSBC Trinkaus & Burkhardt, Kepler Cheuvreux, Metzler, M.M. Warburg and Quirin Bank.

Further information can be found on our website at **www.deutz.com** under Investor Relations.

If you need more information, visit our website or give us a call:

INVESTOR RELATIONS

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2018 COMBINED MANAGEMENT REPORT FOR DEUTZ AG AND THE DEUTZ GROUP

OVERVIEW OF 2018

Significantly better key financials 2018 was a very successful year for DEUTZ AG. New orders went up by just over a quarter on the figure achieved in 2017 to reach €1,952.6 million. We sold 214,776 engines and increased our revenue by 20.3 per cent to €1,778.8 million. Operating profit (EBIT before exceptional items) more than doubled due to the increase in business volume, going up by €42.3 million to reach €82.0 million. As a result, the EBIT margin before exceptional items rose significantly from 2.7 per cent to 4.6 per cent. This underlines the success of the steps that we have taken to improve profitability.

E-DEUTZ strategy bearing fruit Our primary objective of becoming the world's leading manufacturer of innovative drive systems is unchanged. The electrification of our product range is playing a crucial role here. The E-DEUTZ strategy combines DEUTZ's low-emission engines with electric drives, and its launch represents an important step forward for the Company. Last year, engineers from DEUTZ and Torqeedo managed to develop two E-DEUTZ prototypes in less than six months. We presented these fully functioning telescopic handlers at our ELECTRIP event in September 2018 in Cologne, and in doing so provided further evidence of our Company's leadership in technology for off-highway applications.

Modular product system meets all requirements DEUTZ is able to deliver the optimum drive system for customers' individual requirements by drawing on its modular product system. And thanks to our long-standing expertise, we are in a position to exploit a range of technologies and combine them to meet these requirements. As well as our conventional diesel engines and the new E-DEUTZ drives, this will also encompass the use of alternative fuels. From 2019, for example, we will be launching two LPG engines. In addition, the Munich start-up Keyou recently unveiled a DEUTZ prototype engine that has been converted to utilise hydrogen.

New three-pillar growth strategy for China Following the sale of our 50 per cent stake in the DEUTZ Dalian joint venture in November 2018, we are now taking an entirely new approach in China. To this end, we have developed a three-pillar growth strategy that will allow us to establish local production operations and achieve long-term success in this fast-growing market. The first pillar of the strategy entails founding a production-focused joint venture with SANY, the biggest construction equipment manufacturer in China, in which DEUTZ AG is set to hold a 51 per cent stake. A contract manufacturing alliance with China's oldest diesel engine manufacturer, BEINEI, constitutes the second pillar. Under the third pillar, we will be teaming up with HORIZON, China's largest construction equipment rental company, in order to expand our service network. This will also open the door to progressing the digitalisation of our service business at local level.

FUNDAMENTAL FEATURES OF THE GROUP

BUSINESS MODEL AND SEGMENTS

DEUTZ is one of the world's leading manufacturers of innovative drive systems. Our Company's core competences are the development, production, distribution and servicing of diesel, gas and electric engines for professional applications. We offer a broad range of engines with capacities up to 620 kW that are used in construction equipment, agricultural machinery, material handling equipment, stationary equipment, commercial vehicles, rail vehicles and other applications. Founded in 1864 by Nicolaus August Otto, developer of the four-stroke engine, and Eugen Langen, DEUTZ AG is the world's first engine company and one of the world's leading independent engine manufacturers.

The DEUTZ Group's customers include manufacturers of construction equipment, agricultural machinery, lifting and material handling equipment and other equipment as well as the users of such machines. Operating activities are divided into three segments: DEUTZ Compact Engines, DEUTZ Customised Solutions and Other. The DEUTZ Compact Engines segment comprises liquid-cooled engines with capacities of up to 8 litres. The DEUTZ Customised Solutions segment specialises in air-cooled engines and large liquid-cooled engines with capacities of more than 8 litres. Operating under the name DEUTZ Xchange, the DEUTZ Customised Solutions segment also supplies reconditioned engines and parts. The Torqeedo subsidiary has been included in the Other segment since the fourth quarter of 2017. It manufactures electric drives for boats and has extensive expertise in the electrification of drive systems.

DEUTZ also offers its customers advice and support on installing and operating the drive systems. We actively assist customers with the repair, maintenance and servicing of their vehicles fitted with DEUTZ engines. The global DEUTZ service network, which comprises subsidiaries, service centres and authorised agents, ensures a reliable and rapid supply of spare parts.

MAIN SITES AND BASIS OF CONSOLIDATION

With 16 sales companies, eight sales offices and over 800 sales and service partners in more than 130 countries, we can offer our customers service and support virtually anywhere with very short response times. DEUTZ AG is the executive and operating parent company in the DEUTZ Group; it is headquartered in

Cologne, Germany. It has various investments in domestic and foreign companies, including several that perform sales and service functions, plus production facilities in Spain and Germany.

In addition to DEUTZ AG, seven German companies (31 December 2017: eight) and 16 foreign companies (31 December 2017: 17) were included in the consolidated financial statements as at 31 December 2018. A complete list of DEUTZ AG shareholdings as at 31 December 2018 is given in the annex to the notes to the consolidated financial statements on page 140.

MARKET AND COMPETITIVE ENVIRONMENT

DEUTZ's market consists of drive solutions for construction equipment, agricultural machinery, material handling equipment, pumps, gensets, medium-duty trucks and buses. Its sales are concentrated in countries with stringent emissions standards and, currently, on diesel engines. The market for alternative fuels and electrification is expanding all the time. To reflect this evolution, DEUTZ is developing its engines so that they can run on gas, petroleum and biogenic and synthetic fuels. It is also broadening its product portfolio to include electric and hybrid drive systems with the aim of actively shaping customer and market demand. The overall market can be divided into the captive segment and the non-captive segment. The captive segment comprises equipment manufacturers who produce their own engines; some of these manufacturers are also active as engine suppliers in the market but also use third-party engines in their equipment. The non-captive segment is made up of equipment manufacturers who, for the most part, do not produce their own engines and therefore buy in engines from suppliers. Thanks to the competitiveness of its product offering, DEUTZ is able to sell engines with outputs up to 620 kW around the globe in both segments. We face competition from rival engine suppliers in western Europe, North America and Asia. DEUTZ stands apart from others in the market because of the depth and breadth of its product range and because it offers the right solutions for customers' specific requirements.

DEUTZ's main competitors by application

Application segments	Applications	Main competitors (in alphabetical order)
Construction Equipment	Excavators Wheel loaders Pavers Mining equipment	Cummins, USA Isuzu, Japan Kubota, Japan Yanmar, Japan
Material Handling	Forklift trucks Telehandlers Lifting platforms Ground support equipment	Cummins, USA Kubota, Japan Perkins, UK VW, Germany
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
Automotive	Rolling stock Special vehicles Trucks Buses	Cummins, USA Fiat Powertrain, Italy MAN, Germany Mercedes, Germany

INTERNAL CONTROL SYSTEM

RESPONSIBLE CORPORATE MANAGEMENT BASED ON TRANSPARENT PERFORMANCE INDICATORS

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:

		2018	2017
Revenue growth[1]	%	20.3	17.4
EBIT margin (before exceptional items)[1]	%	4.6	2.7[2]
Working capital ratio (average)[1]	%	15.8	13.4
ROCE (before exceptional items)[1]	%	10.3	5.3[2]
R&D ratio[1]	%	4.8	4.5
Free cash flow[1]	€ million	14.5	82.5

[1] 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 recognised in the financial statements is provided below.
[2] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

Revenue growth DEUTZ strives to steadily increase revenue as the basis for the profitable growth of the Company. The level and growth of revenue is 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 react quickly to changes as they materialise.

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. Whereas there were no exceptional items in 2018, they had totalled €104.1 million in 2017.

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 presented to senior management.

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

€ million

	2018	2017[1)]
Total assets	1,249.3	1,198.2
Cash and cash equivalents	–132.8	–143.8
Trade payables	–214.6	–207.5
Other current and non-current liabilities	–90.7	–71.3
Capital employed	**811.2**	**775.6**
Capital employed (average for the year)[2)]	**793.4**	**755.4**
EBIT (before exceptional items)	**82.0**	**39.7**
ROCE (before exceptional items)	**10.3%**	**5.3%**

[1)] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.
[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 reimbursements) to revenue in the period in question. The R&D ratio is calculated at least once a quarter and is 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 at least once a quarter.

Based on these performance indicators, 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 minimise risks and make the most of opportunities. Three times a year we produce an annual forecast for all key performance indicators. This enables us to ensure transparency with regard to our business performance, benefiting both the Group and our stakeholders.

In addition to the financial performance indicators which form part of the management system described above, we also employ a range of other parameters 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 amortisation (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 OPTIMISATION OF THE CONTROL SYSTEM

Regardless of fluctuations in the economic cycle, one of the DEUTZ Group's overriding aims is the continuous optimisation of its management systems. This essentially involves the annual planning of all specified performance indicators. This planning takes account of internal estimates of future business as well as benchmark figures from competitors. Each organisational unit prepares detailed plans for its area of responsibility, which are then coordinated with the management strategy. 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 operational management.

We specify working capital targets for the individual companies in the DEUTZ Group in order to optimise 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 (internal rate of return, amortisation period, 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.

BUSINESS PERFORMANCE IN THE DEUTZ GROUP

ECONOMIC ENVIRONMENT

Slowdown in global economic growth Although overall the global economy grew at a similar rate in 2018 as it did the year before, the pace of growth dropped off noticeably in the second half of the year. The International Monetary Fund (IMF)[1] estimates that price-adjusted growth was 3.7 per cent in 2018, a fall of 0.1 percentage points compared with 2017. The economy weakened in the emerging markets in particular, mainly because of the interest-rate hikes in the USA and the strength of the US dollar. Generally speaking, the export-oriented economies suffered most from the slowdown in global growth. Oil-exporting nations proved to be an exception, with rising oil prices until autumn 2018 shoring up their economies.

As a result of the escalation of the trade dispute between the USA and China, the global economy continued to deteriorate in the second half of 2018.

In 2018, the US economy bucked the global trend with a growth rate of 2.9 per cent that was once again up on the previous year and also high compared with historical levels. The US administration's fiscal measures, particularly the reforms that came into effect at the beginning of 2018 to reduce taxation for households and companies, had a stimulating effect on growth.

GDP in China advanced at a slightly slower rate than in the prior year. This general slowdown in economic expansion in China coincided with the imposition of customs tariffs by the USA.

The high rate of growth in the eurozone, which had been a feature of the second half of 2017, dropped off in 2018. Weaker foreign trade had a particularly negative impact here. Protectionist US trade policy and the associated concerns about further escalation of the trade dispute between the USA and the EU and China took their toll on exports. The rates of growth in the individual member states increasingly diverged. Additional factors that came into play temporarily during the summer months, such as problems in the automotive industry related to the switch to new emissions testing standards, even led to some quarters of negative growth in Germany and Italy.

Growth in the German economy dropped off in 2018 because of its dependency on exports. Increases in exports to countries outside the EU were particularly below par. In addition, the protracted attempts to form a government resulted in the postponement of spending and thus a temporary weakening of demand at federal government level at the start of the year. According to IMF estimates, the German economy grew by 1.5 per cent in real terms last year.

An absence of reforms and a banking sector burdened with poor profitability and a high volume of non-performing loans are the structural factors behind the weak growth in the Italian economy. Difficulties in forming a government and the budget dispute with the EU also weighed on economic growth in Italy last year. In France, consumer spending weakened as a result of tax increases and falling real wages. The yellow vest protests held in late 2018 that saw people take to the streets in high-vis jackets had a negative impact on the country's economic growth. By contrast, the Spanish economy maintained its upward trajectory in 2018, albeit at a somewhat slower pace. The rate of growth, which was above the EU average

[1] IMF, 'World Economic Outlook Update', January 2019.

but down on the prior year, reflects the diminishing catch-up effects following the country's rebound from its severe economic crisis. Consumer spending increased again thanks to a fall in the unemployment rate. However, the number of people who are out of work in Spain remains very high.

Year-on-year GDP growth in the aforementioned countries and regions

%

	2018	2017
Global	3.7	3.8
Eurozone	1.8	2.4
Germany	1.5	2.5
Spain	2.5	3.0
France	1.5	2.3
Italy	1.0	1.6
USA	2.9	2.2
China	6.6	6.9

Mixed trend in DEUTZ's customer industries In 2018, DEUTZ's main customer markets largely performed well. Demand for construction equipment and material handling applications rose across all regions. The agricultural machinery market grew in North America, whereas demand in China and Europe fell.

DEUTZ customer industries in 2018

Growth (%)

	Europe	North America	China
Construction equipment	3[1]	4[2]	24[3]
Material handling	9[4]	3	13
Agricultural machinery	–5[5]	4	–16

[1] Off-Highway Research, 'European Mid-year Review' August 2018.
[2] PSR, 'OE Link Update Bulletin Q3 2018'.
[3] PSR, 'OE Link Update Bulletin Q4 2018'.
[4] FEM, 'World Industrial Trucks Statistics – Information Sheet Q4 2018'.
[5] VDMA, 'Business Climate and Market Development in Europe' November 2018.

IMPACT OF ECONOMIC CONDITIONS ON BUSINESS PERFORMANCE

Market environment slightly weaker The overall economic climate in 2018 was not quite as upbeat as in 2017. Although the prices of oil and commodities rose again last year, they weakened slightly in the second half of the year in line with the global economic trend. Nevertheless, investment activity in DEUTZ's main application segments and regions remained brisk. Our Company registered a much higher volume of new orders as a result.

DEUTZ's revenue rose at a much faster rate than the global economy as a whole last year. GDP growth in the USA was higher than in 2017. Demand for construction equipment, material handling equipment and agricultural machinery increased only moderately in North America, however. Despite this, our revenue in the Americas region advanced by a substantial 26.0 per cent.

In 2018, China's economy did not expand quite as strongly as in the prior year. The markets for construction equipment and material handling managed to make significant gains nonetheless. The amount of revenue generated by DEUTZ in the Asia-Pacific region rose by 10.9 per cent in line with this trend. There was a significant decline in the agricultural machinery sector, however.

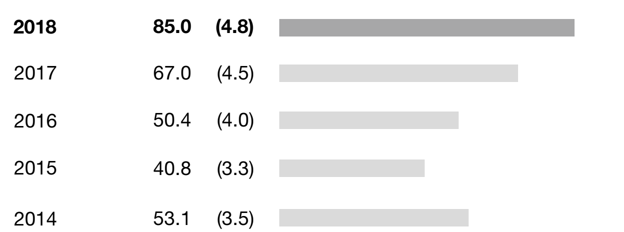
Economic activity in the eurozone expanded moderately last year; this was reflected in the markets for construction equipment and material handling, which are DEUTZ's main customer segments. By contrast, the market for agricultural machinery contracted. Despite this, revenue in our largest market, EMEA (Europe, Middle East and Africa), climbed by a substantial 20.1 per cent in 2018.

DEUTZ thus outperformed the market in virtually all regions and application segments during the reporting year. It should be noted here that DEUTZ benefited from the effects – in relation to around 20,000 engines – of spending being brought forward in 2018 due to the introduction of the EU Stage V emissions standard.

RESEARCH AND DEVELOPMENT

Research and development expenditure (after deducting grants)[1]

€ million (R&D ratio in %)



[1] Research and development expenditure after deducting grants from development partners and subsidies.

R&D spending stepped up significantly[1)] Expenditure on research and development in 2018 amounted to €88.7 million (2017: €70.9 million). After deducting grants received from development partners and subsidies, expenditure was €85.0 million (2017: €67.0 million), which was in line with the planning. The R&D ratio (after deducting grants), i.e. the ratio of net development expenditure to consolidated revenue, thus increased slightly to 4.8 per cent (2017: 4.5 per cent). The rise in R&D expenditure compared to spending in the prior year was largely attributable to the expansion of our product range. In the year under review, 24.7 per cent of development expenditure after deducting grants was capitalised (2017: 26.1 per cent).

Spending by the DEUTZ Compact Engines segment after deducting grants came to €71.3 million (2017: €63.5 million) and that of the DEUTZ Customised Solutions segment came to €7.1 million (2017: €2.2 million). The Other segment's spending after deducting grants amounted to €6.6 million (2017: €1.3 million); the prior-year figure included Torqeedo's R&D expenditure only in the fourth quarter.

Stage V certified Our engines are equipped to meet the next European emissions standard, EU Stage V[2)], which comes into effect in 2019 for engines with outputs up to 56 kW and greater than 130 kW. Back in 2017, we became the world's first engine manufacturer to be certified for Stage V. In 2018, we brought all engines with capacities of up to 4 litres and outputs up to 56 kW into line with the new emissions legislation in Europe. The 6 to 8 litre engines with outputs greater than 130 kW were also certified. This year, it is the turn of our engines between 56 and 130 kW; Stage V legislation will come into effect for these engines from 1 January 2020. It is not yet known whether a further emissions standard will be introduced in the USA.

Ongoing expansion of the product portfolio We are adding to our product range through alliances, acquisitions and the development of new products. The D/TD/TCD 2.2, for example, is a three-cylinder engine that has been developed on the basis of the existing four-cylinder engine with a 2.9 litre capacity. The first engines in this series went into production in 2018. In addition, we are supplying the smaller engines not only in a diesel variant but also in a liquefied petroleum gas (LPG) variant. The latter is a particularly interesting option for forklift trucks and other material handling applications. We are also planning to offer 'bi-fuel' engines, i.e. engines that can run on either LPG or petroleum. With China IV, the new emissions legislation in China, scheduled to come into force in mid-2020, we have commenced development of engines that eschew SCR catalytic converters.

We are also adding a powerful four-cylinder engine to our diesel portfolio. The DEUTZ TCD 5.2, which has a 5.2 litre capacity, is a new derivative of the successful DEUTZ TCD 7.8 and closes a performance gap in our 4 to 8 litre portfolio. Because of the high level of synergy with our existing 7.8 litre six-cylinder engine, we will be able to keep expenditure on this new development very low.

Our plans for our larger engines include the introduction of a four-cylinder engine with a 9 litre capacity and six-cylinder engines with capacities of 12.0, 13.5 and 18.0 litres in cooperation with Liebherr Machines Bulle S.A. These industrial engines with outputs between 200 and 620 kW represent an important extension to our upper power output range. The first customer prototypes were built last year.

The diesel engine debate is driving the development of new technologies. Alternative drives will also play an important role in DEUTZ's core segments in future. DEUTZ wasted no time in seizing the opportunities arising from the changing conditions by introducing the E-DEUTZ strategy to complement its innovative drive systems. The strategy focuses on the development and manufacture of hybrid and all-electric drive systems for off-highway applications. The acquisition of Torqeedo in 2017 is significantly accelerating the electrification of DEUTZ's drive units. Some of the greatest potential is to be found in the substantial reduction of fuel consumption and the lowering of operating costs. Fully electric drives could also pave the way for new applications, for example in enclosed spaces or low-emission zones. We have integrated not only all-electric drives but also hybrid systems into customer vehicles. A modular system for the electrification of our drive systems is being implemented in close consultation with key customers. We have developed electric motors and batteries on a 48 V and 360 V basis depending on the performance requirements. The underlying concept for the modular system was defined in 2018 and tested in prototype vehicles as well as on our test rigs. The move to volume production is set to follow this year.

We have also continued to concentrate on data transfer and analysis (Industry 4.0) so that we can offer our customers new services in the future. The DEUTZ Connect app, launched in 2017, was used intensively and refined strategically.

Preliminary development work intensified Exhaustive research and development will continue to form the basis for innovative products and services from DEUTZ in future. We have recently expanded our activity in the field of alternative fuels. As well as looking at natural gas, we are focusing on hydrogen and on fuels generated from renewable sources. The aforementioned projects under the E-DEUTZ strategy are still classified as preliminary development work at the moment.

An innovation centre that commenced operations in 2018 is bringing together mould-breaking ideas from across the DEUTZ Group. On behalf of internal and external customers and within a creative environment, collaborative teams work on accelerated projects in which new ideas are turned into prototypes in order to test new business ideas.

[1)] Research and development expenditure constitutes actual spending on R&D projects. It differs from the research and development costs recognised in the income statement in that development expenditure that can be capitalised is deducted and amortisation on completed development projects is added.

[2)] Regulation (EU) No 2016/1628 of the European Parliament and of the Council dated 14 September 2016.

PROCUREMENT

In 2018, our suppliers coped well with the persistently strong demand for engine components in the medium and heavy-duty sector and with the high level of orders on hand at DEUTZ. As in 2017, the management of supply bottlenecks was an important task for purchasing and this was achieved using preventive measures.

To cover the increased demand for crankcases and cylinder heads at the beginning of the year, we took early steps to secure an adequate and timely supply of these parts.

A particular issue in the year under review was disruption at our supplier Neue Halberg-Guss that resulted from several weeks of strike action by its workforce. In early December, a long-term solution was found that will ensure a stable supply situation for the coming years. By providing partial financing, the DEUTZ Group is actively supporting the new owners of the company in their plans to acquire the relevant production facilities and land at the Saarbrücken and Leipzig sites.

In 2018, despite the many new production parts that were introduced and the temporary capacity bottlenecks, we significantly improved delivery quality thanks mainly to preventive measures such as local audits and advanced product quality planning (APQP)[1].

Further slight rise in commodity prices Prices for the commodities cast-iron scrap, iron and steel again rose moderately in the first half of 2018. They consolidated slightly in the second half of the year, however.

Gearing up procurement for new and innovative products The activities and challenges involved in finding, selecting and nominating suppliers are intensifying because of the way the modular engine system is expanding to cover innovative drive concepts such as gas engines, bi-fuel, hybrid applications and all-electric drives.

Where it makes commercial sense, we are switching to a two-supplier strategy that will underpin our growth strategy. Furthermore, we are optimising our supplier portfolio from a geographical perspective.

Purchasing also plays a role in DEUTZ AG's new three-pillar growth strategy for China. A purchasing strategy has been developed as an integral part of this and the first steps have already been taken. This includes the establishment of local purchasing operations in China.

PRODUCTION AND LOGISTICS

In production and logistics, the main areas of focus in 2018 were quality, output and efficiency.

The Cologne and Herschbach plants, Germany Last year, we initiated various steps aimed at improving quality at our largest site, Cologne-Porz. For example, we made further improvements to delivery quality by engaging in PDCA management[2] and by tightening feedback loops. We also ran Six Sigma projects and Kaizen weeks in order to optimise processes on an ongoing basis. To implement the assembly strategy for engines with capacities of up to 4 litres, a project team for a new line was set up that has already commissioned all major new capital spending. The new assembly strategy included the integration of the gas engine variants, which were successfully built in preproduction, and the introduction of cold testing as a replacement for some of the hot testing. We have also adopted agile methods for making ongoing improvements to the way we work together within assembly. A high degree of flexibility and numerous extra shifts were required in production to compensate for disruptions at suppliers, particularly in the case of Neue Halberg-Guss. The high output targets were achieved by the end of the year as a result of this.

In the mechanical centres of excellence in Cologne and Herschbach, new plant was brought on stream primarily to create sufficient capacity for engine series with capacities of less than 4 litres. We also invested in new technologies. For example, we installed a 3D plastics printer for jigs that will enable us to quickly print covers for our engines' paintwork.

The Ulm plant The Xchange processes that were relocated to Ulm in 2017 were consolidated and fine-tuned last year. In January 2018, the decision was made to relocate the 2011 engine series from Cologne to Ulm. We took a number of preparatory measures at the Ulm site in connection with this. Customer-specific applications were implemented as part of the alliance with Liebherr.

The Zafra plant, Spain At our plant in Zafra, we worked at full capacity for most of the year to ensure that components were delivered on time to the assembly lines in our plants in Ulm and Cologne-Porz. In the second half of the year, the plant in Zafra worked with agile project management methods (scrum and kanban) to bring new production lines for the DEUTZ Group on stream in record time and to incorporate new Industry 4.0 concepts into our approach to the management and quality assurance of processes.

The Pendergrass plant, USA Last year, to support the planned growth strategy for Xchange and value-added production in the USA, we initiated a project aimed at expanding and optimising the existing sites. This is further increasing capacities in the Xchange business and in spare parts fulfilment. We are also making space so that we can commence production of Xchange engines in the 2.9 and 3.6 model series and are installing the assembly infrastructure for powerpacks with capacities of up to 18 litres.

[1] Recognised advanced planning method for quality under which suppliers are closely and methodically managed during the project phase.

[2] Plan Do Check Act.

JOINT VENTURE

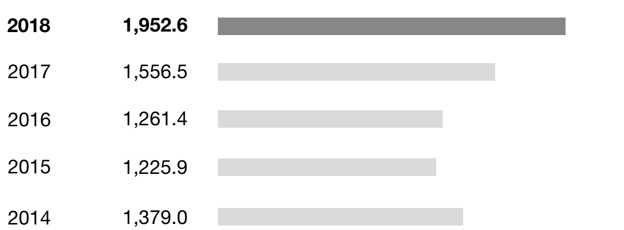
In November 2018, we sold our 50 per cent stake in the DEUTZ Dalian joint venture to the First Automotive Works Group, our joint venture partner since 2007 and one of China's leading truck manufacturers.

Also in November 2018, we signed a memorandum of understanding with SANY, China's largest construction equipment group, as part of our new strategy for the Chinese market. Together, we are planning to form a production-focused joint venture in which DEUTZ AG is set to be the majority shareholder with a stake of 51 per cent. DEUTZ AG's initial investment is in the mid double-digit millions of euros.

NEW ORDERS

DEUTZ Group: New orders

€ million



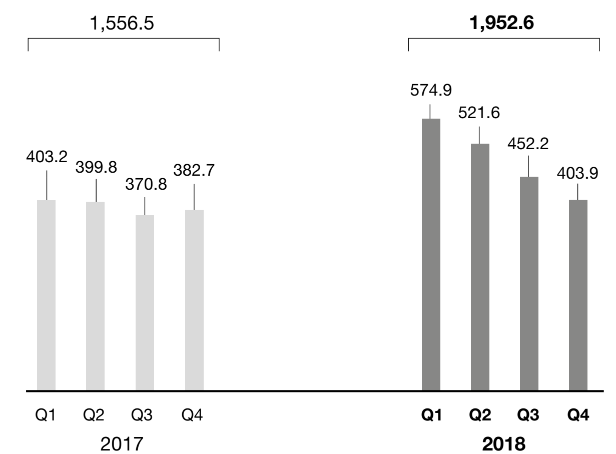
Significant increase in new orders The DEUTZ Group received new orders worth €1,952.6 million in 2018, which was 25.4 per cent above the figure of €1,556.5 million achieved in the previous year. New orders increased in all application segments except Automotive: by 48.1 per cent in Material Handling, by 34.1 per cent in Construction Equipment, by 17.6 per cent in Agricultural Machinery and by 7.3 per cent in Stationary Equipment. The Automotive application segment registered a 4.7 per cent decline in new orders. This had been expected because of the Euro 6 emissions standard introduced in Europe in early 2014, for which DEUTZ does not offer compliant engines.

The service business maintained the strong performance seen in recent years with a rise of 6.3 per cent.

New orders also followed a positive trajectory over the course of the year, with year-on-year increases in every quarter. In the fourth quarter of 2018, we received new orders amounting to €403.9 million. This was 5.5 per cent higher than in the fourth quarter of 2017, the first quarter in which DEUTZ Italy (formerly IML Motori S.r.l.) and Torqeedo were fully consolidated and hence included their new orders as well.

DEUTZ Group: New orders by quarter

€ million

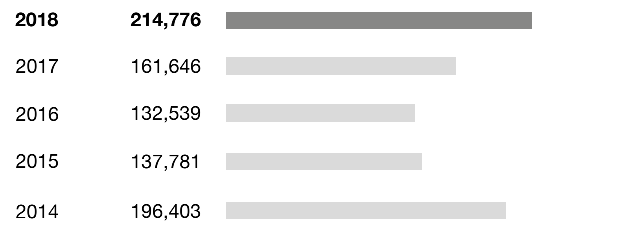


Orders on hand totalled €438.9 million as at 31 December 2018, a rise of 62.0 per cent compared with the figure of €270.9 million at the end of 2017.

UNIT SALES

DEUTZ Group: Unit sales

units

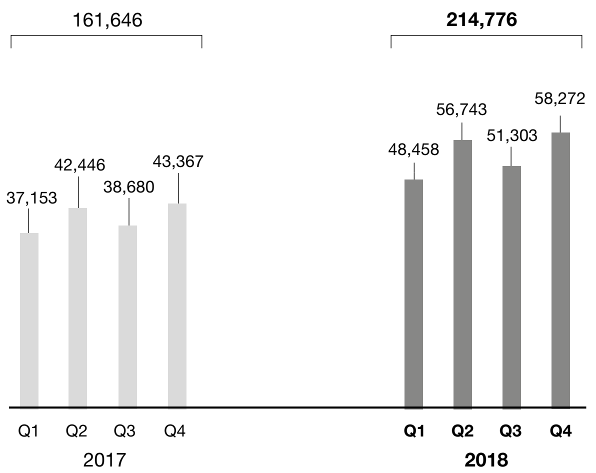


Significantly more engines sold DEUTZ sold 214,776 engines in 2018, which was 32.9 per cent more than in the prior year (2017: 161,646 engines). Unit sales rose particularly sharply in the application segments Material Handling (up by 47.0 per cent), Construction Equipment (up by 26.8 per cent) and Agricultural Machinery (up by 17.6 per cent). The Stationary Equipment application segment recorded an 8.2 per cent increase in unit sales, whereas 6.4 per cent fewer engines were sold in the Automotive application segment.

All regions again reported higher unit sales in the reporting year. Sales of engines in our largest market, EMEA (Europe, Middle East and Africa), increased by 32.2 per cent to 145,808. In the Americas, unit sales rose by 38.0 per cent to 49,184 engines, while 19,784 engines were sold in the Asia-Pacific region, up by 25.7 per cent on the prior year.

DEUTZ Group: Consolidated unit sales by quarter

units

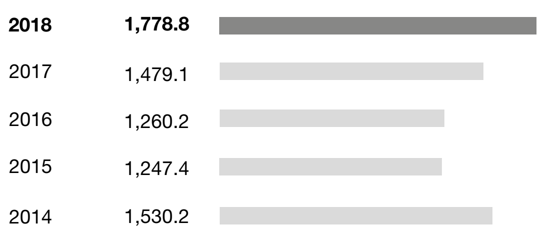


Year-on-year increases in unit sales were registered in all four quarters. DEUTZ sold 58,272 engines in the fourth quarter of 2018, up by 34.4 per cent on the fourth quarter of 2017.

RESULTS OF OPERATIONS

DEUTZ Group: Revenue

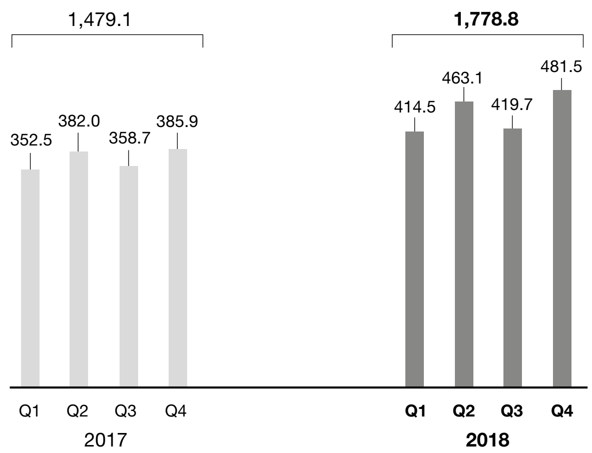
€ million



Significant increase in revenue DEUTZ generated revenue of €1,778.8 million during the reporting year. This was 20.3 per cent higher than the figure of €1,479.1 million achieved in 2017. We therefore significantly exceeded the forecast of a marked rise in revenue to more than €1.6 billion that we had published in our 2017 annual report and reiterated in July 2018.

DEUTZ Group: Revenue by quarter

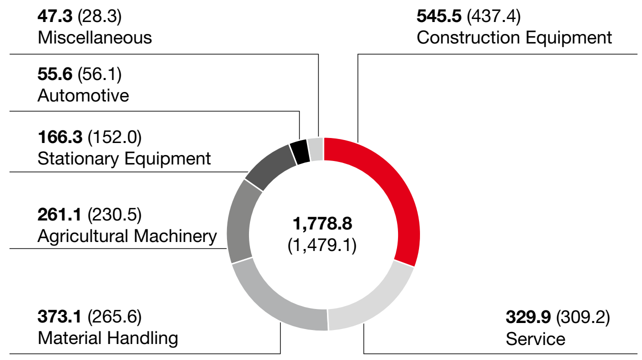
€ million



As with new orders, we saw year-on-year increases in revenue in all four quarters. Revenue for the fourth quarter came to €481.5 million, an increase of 24.8 per cent on the equivalent period of the prior year (Q4 2017: €385.9 million). This also made the fourth quarter of 2018 the strongest of last year in terms of revenue growth.

DEUTZ Group: Revenue by application segment

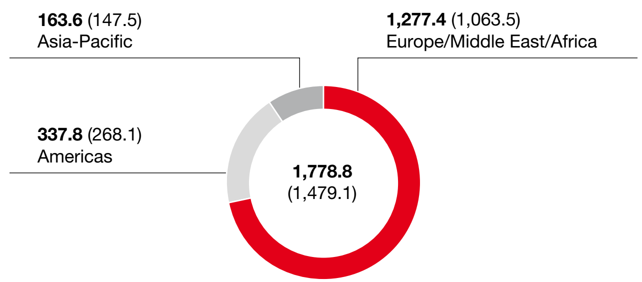
€ million (2017 figures)



The main contributors to the sharp growth in revenue in 2018 were the application segments Material Handling (up by 40.5 per cent) and Construction Equipment (up by 24.7 per cent). Increases were also reported for Agricultural Machinery (up by 13.3 per cent), Stationary Equipment (up by 9.4 per cent) and the service business (up by 6.7 per cent). Revenue in the Automotive application segment was on a par with the prior year despite a modest fall in unit sales.

DEUTZ Group: Revenue by region

€ million (2017 figures)



In the EMEA region (Europe, Middle East and Africa), revenue advanced by 20.1 per cent year on year to reach €1,277.4 million. Revenue went up by 26.0 per cent to €337.8 million in the Americas region and by 10.9 per cent to €163.6 million in the Asia-Pacific region.

EARNINGS

Operating profit doubles Operating profit (EBIT before exceptional items) more than doubled in 2018, going up by €42.3 million year on year to reach €82.0 million (2017: €39.7 million)[1]. This was mainly due to the increase in the volume of business and the related economies of scale. It was achieved in spite of several weeks of strike action at our supplier Neue Halberg-Guss GmbH. Some of the negative effects resulting from this disruption were compensated for by reconfiguring production plans and initiating catch-up measures. We also disposed of our DEUTZ Dalian joint venture during the reporting year. The reduction in earnings attributable to this joint venture – resulting from the pro-rata share of the loss of €2.8 million reported by this equity-accounted investment for the first half of 2018 and from the write-down on its carrying amount of €11.3 million – was, as expected, slightly outweighed by cumulative positive currency translation differences totalling €15.8 million that were reclassified to profit or loss in connection with the disposal of the stake in the joint venture in the fourth quarter of 2018. The EBIT margin (before exceptional items) improved to 4.6 per cent in the reporting year (2017: 2.7 per cent)[1] owing to economies of scale as well as positive effects from the efficiency programme. At the start of 2018, we projected a moderate increase in the EBIT margin before exceptional items. The EBIT margin actually rose by 1.9 percentage points, which means that we comfortably exceeded our forecast. It also meant that we achieved the more specific forecast made in July 2018 of an EBIT margin of least 4.5 per cent.

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

Overview of the DEUTZ Group's results of operations

€ million

	2018	2017[1]	Change (%)
Revenue	**1,778.8**	**1,479.1**	**20.3**
Cost of sales	–1,468.3	–1,222.9	20.1
Research and development costs	–92.0	–94.8	–3.0
Selling and administrative expenses	–145.7	–120.3	21.1
Other operating income	40.6	144.1	–71.8
Other operating expenses	–17.7	–41.9	–57.8
Write-down of financial assets	–0.7	–0.2	250.0
Profit/loss on equity-accounted investments	–2.2	–0.2	–
Write-down of equity-accounted investments	–11.3	0.0	–
Other net investment income	0.5	0.9	–44.4
Operating profit (EBIT)	**82.0**	**143.8**	**–43.0**
thereof exceptional items	0.0	104.1	–100.0
EBIT (before exceptional items)	**82.0**	**39.7**	**106.5**
Interest expenses, net	–1.9	–2.4	–20.8
Income taxes	–10.2	–22.9	–55.5
Net income	**69.9**	**118.5**	**–41.0**
thereof exceptional items after taxes	0.0	85.5	–100.0
Net income (before exceptional items)	**69.9**	**33.0**	**111.8**

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

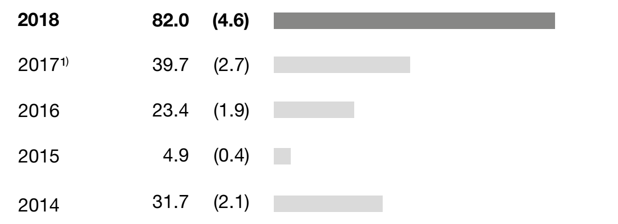
The higher operating profit resulted in a substantially improved return on capital employed (ROCE before exceptional items)[2], our internal KPI, which rose from 5.3 per cent[3] in 2017 to 10.3 per cent in the reporting year and meant that we fully achieved our forecast made at the beginning of the year.

[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.

[3] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

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

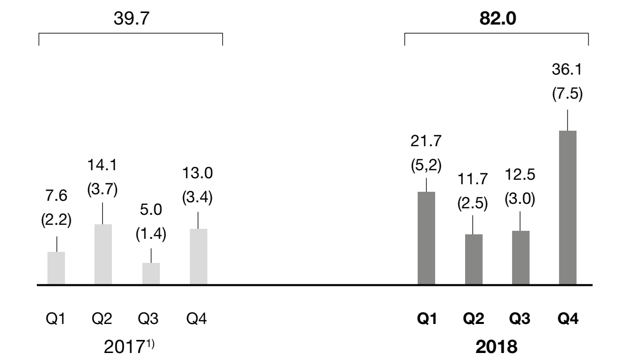
€ million (EBIT margin in %)



[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

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

€ million (EBIT margin in %)



[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

Cost of sales The cost of sales went up to €1,468.3 million in 2018 as a result of the growth in the volume of business and in the production volume. This year-on-year increase of €245.4 million was mainly attributable to the rise in the cost of materials and in staff costs. Because of the aforementioned economies of scale, the gross margin[4] nudged up from 17.3 per cent in 2017 to 17.5 per cent in the year under review. This was in spite of the negative impact resulting from the periods of strike action at Neue Halberg-Guss GmbH.

[4] Gross margin: ratio of revenue less cost of sales to revenue (excluding amortisation relating to capitalised development expenditure).

Research and development costs In the year under review, research and development costs amounted to €92.0 million. They largely comprised staff costs, the cost of materials and amortisation on completed development projects, from which investment grants received and capitalised development costs were deducted. The modest year-on-year contraction of €2.8 million was attributable, in particular, to lower amortisation.

Selling and administrative expenses Selling and administrative expenses went up by €25.4 million to €145.7 million. This year-on-year increase was mainly due to the acquisition of Torqeedo and DEUTZ Italy (formerly IML Motori S.r.l.) with effect from 1 October 2017. In 2017, the business activities of these companies were included in the consolidated financial statements of DEUTZ AG only in the fourth quarter, whereas the consolidated financial statements for 2018 covered their business activities for the whole year.

Other operating income Other operating income totalled €40.6 million in the reporting year. This year-on-year contraction of €103.5 million was due largely to the gains recorded in 2017 in relation to the sale of the land at our former Cologne-Deutz site and the disposal of the building lease of our subsidiary Ad. Strüver KG for a plot of land in Hamburg. The gains on these two transactions were classified as exceptional items in 2017. In 2018, an amount of just €15.8 million was recognised for the reclassification of the cumulative positive currency translation differences in relation to the disposal of our shares in the joint venture DEUTZ (Dalian) Engine Co., Ltd., Dalian, China.

Other operating expenses Other operating expenses totalled €17.7 million in 2018, which was €24.2 million lower than in the prior year. The exceptional items recorded in 2017 in relation to the disposal of the land occupied by our former Cologne-Deutz site were the main factor in this decrease.

Write-down on equity-accounted investments The write-down recognised as at 30 June 2018 relates to the shares in the DEUTZ Dalian joint venture. Details of the background to the write-down can be found in the in-depth information regarding the DEUTZ Dalian joint venture in the next section.

Income taxes The income tax expense amounted to €10.2 million in the year under review (2017: €22.9 million). Current tax expenses came to €16.0 million. The reduction in operating profit (EBIT) explains why these fell by €7.3 million compared with the prior year (2017: €23.3 million). The current tax expenses were partly offset by deferred tax income of €5.8 million (2017: €0.4 million).

Earnings per share Net income decreased by €48.6 million to €69.9 million in the reporting year. Earnings per share fell to €0.58 as a result (2017: €0.98)[1]. When adjusted for exceptional items recorded in the prior year, which totalled €85.5 million after taxes, net income rose by €36.9 million. Adjusted earnings per shares thus improved from €0.27 in the prior year to €0.58 in 2018.

DEUTZ DALIAN JOINT VENTURE

As announced in April 2018, the carrying amounts for the DEUTZ (Dalian) Engine Co., Ltd. joint venture based in Dalian, China, were reviewed by an auditor as part of an overall review into strategic options in China. The audit firm engaged to conduct the review informed us on 17 April 2018 that it suspected that some items on the DEUTZ Dalian balance sheet had been overstated and that the carrying amount calculated using the equity method in DEUTZ AG's consolidated financial statements may have to be adjusted as a result.

The subsequent thorough review of the carrying amounts for DEUTZ Dalian revealed that the carrying amount calculated using the equity method would have to be written down by €23.1 million. Of this figure, €14.9 million related to financial years prior to 2018 and, in line with the applicable IFRSs, was applied retrospectively by adjusting the carrying amount calculated using the equity method for DEUTZ Dalian and by adjusting Group equity as at 31 December 2017 and earlier. The remaining €8.2 million relates to 2018 and thus reduces the share of profit/loss under the equity method attributable to DEUTZ Dalian, which amounted to a total loss of €2.8 million up to the point that the shares were reclassified as non-current assets held for sale. The carrying amounts subject to correction for DEUTZ Dalian related mainly to inventories, property, plant and equipment, own development projects and provisions for warranty costs.

Because of the write-downs carried out and the intention to dispose of our stake in DEUTZ Dalian, the carrying amount for the DEUTZ Dalian shares as at 30 June 2018, calculated using the equity method, was tested for impairment in accordance with IAS 36 and written down by €11.3 million to the total proceeds of €9.7 million that are expected to be obtained from the disposal.

Following the disposal of the shares in the fourth quarter of 2018, positive currency translation differences of €15.8 million recognised in other comprehensive income were reclassified to the income statement for 2018. As expected, this slightly outweighed the total negative impact on operating profit (EBIT before exceptional items) in 2018 up to the point of disposal, which mainly resulted from the pro-rata share of the loss reported by the equity-accounted investment and from the write-down on its carrying amount as at 30 June 2018. The total contribution to operating profit generated in connection with the DEUTZ Dalian joint venture in 2018 came to €1.2 million.

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

BUSINESS PERFORMANCE IN THE SEGMENTS

DEUTZ Group: Segments

€ million

	2018	2017
New orders		
DEUTZ Compact Engines	1,638.2	1,290.4
DEUTZ Customised Solutions	286.0	261.3
Other	31.6	4.8
Consolidation	–3.2	0.0
Total	**1,952.6**	**1,556.5**
Unit sales (units)		
DEUTZ Compact Engines	195,259	151,671
DEUTZ Customised Solutions	9,259	8,740
Other	10,258	1,235
Consolidation	0.0	0.0
Total	**214,776**	**161,646**
Revenue		
DEUTZ Compact Engines	1,484.0	1,227.5
DEUTZ Customised Solutions	271.2	247.9
Other	26.8	3.7
Consolidation	–3.2	0.0
Total	**1,778.8**	**1,479.1**
EBIT		
DEUTZ Compact Engines	63.2	19.8
DEUTZ Customised Solutions	32.9	24.5
Other	–14.1	–4.6
Consolidation	0.0	0.0
Total	**82.0**	**39.7**

BUSINESS PERFORMANCE IN THE DEUTZ COMPACT ENGINES (DCE) SEGMENT

New orders up significantly on the prior year In 2018, the DEUTZ Compact Engines (DCE) segment received new orders worth €1,638.2 million, which was 27.0 per cent up on 2017 when orders worth €1,290.4 million were received. All application segments saw rises. Orders on hand amounted to €360.4 million at the end of the year, up by 72.4 per cent compared with the end of 2017.

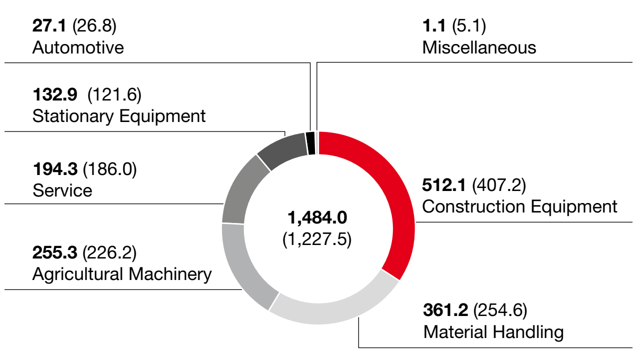
Sharp increase in unit sales The DCE segment's unit sales rose by 28.7 per cent to reach 195,259 engines, compared with 151,671 engines in 2017. In EMEA, our largest market, we sold 134,707 engines, which was 27.8 per cent more than in the prior year. Unit sales climbed by 30.7 per cent in the Americas region and by 31.0 per cent in the Asia-Pacific region. All application segments except Automotive registered an increase in unit sales. Unit sales in the Automotive application segment were on a par with the prior year.

High revenue growth At €1,484.0 million, revenue in the DCE segment was up by 20.9 per cent year on year (2017: €1,227.5 million). The EMEA region's revenue advanced by 20.0 per cent to €1,093.6 million. Revenue also rose in the Americas region, by 23.8 per cent to €279.1 million, and in the Asia-Pacific region, by 23.3 per cent to €111.3 million. The strongest increases among the application segments were recorded by Material Handling (up by 41.9 per cent) and Construction Equipment (up by 25.8 per cent). Revenue growth was also reported for Agricultural Machinery (up by 12.9 per cent), Stationary Equipment (up by 9.3 per cent), the service business (up by 4.5 per cent) and the Automotive application segment (up by 1.1 per cent).

Good final quarter New orders in the DCE segment reached €326.0 million in the fourth quarter of 2018. This was 1.5 per cent higher than in the corresponding quarter of the prior year. Unit sales amounted to 54,225 engines, which was up by 36.5 per cent year on year and by 16.4 per cent on the previous quarter. Revenue for the final quarter of 2018 came to €398.8 million, an increase of 24.7 per cent compared with the fourth quarter of 2017.

DEUTZ Compact Engines: Revenue by application segment

€ million (2017 figures)



DEUTZ Compact Engines

	2018	2017[1]	Change (%)
New orders (€ million)	1,638.2	1,290.4	27.0
Unit sales (units)	195,259	151,671	28.7
Revenue (€ million)	1,484.0	1,227.5	20.9
EBIT (€ million)[1]	63.2	19.8	219.2
EBIT margin (%)	4.3	1.6	–

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

DCE's operating profit triples Operating profit (EBIT before exceptional items) in the DEUTZ Compact Engines segment improved by a substantial €43.4 million to €63.2 million despite the negative impact of strike action at our supplier Neue Halberg-Guss GmbH. This sharp increase was mainly due to the higher volume of business and associated economies of scale as well as efficiency gains.

BUSINESS PERFORMANCE IN THE DEUTZ CUSTOMISED SOLUTIONS (DCS) SEGMENT

More orders than in 2017 In the year under review, the DEUTZ Customised Solutions (DCS) segment received new orders worth €286.0 million, which was 9.5 per cent up on 2017 when orders worth €261.3 million were received. All application segments except Automotive and Stationary Equipment saw rises. As at the end of 2018, orders on hand totalled €75.2 million, an increase of 26.0 per cent on the figure reported a year earlier.

More engines sold Unit sales in the DCS segment rose by 5.9 per cent to 9,259 engines in 2018. The regional analysis showed a mixed picture: whereas the EMEA region registered a modest increase in unit sales, engine sales increased sharply in the Americas and fell in Asia-Pacific.

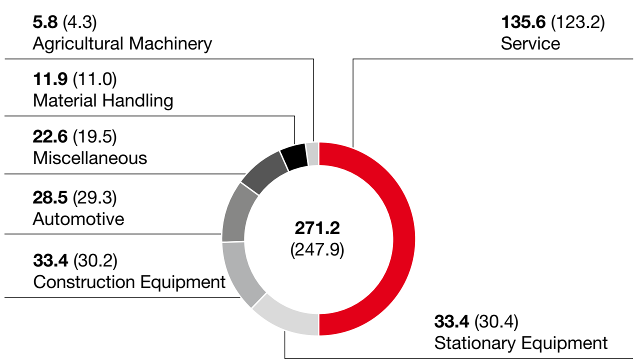
Faster growth in revenue than in unit sales In the reporting period, the DCS segment's revenue rose by 9.4 per cent to €271.2 million. Segment revenue in the EMEA region was up by 12.3 per cent on the prior year. It advanced by 25.3 per cent in the Americas region but declined by 10.6 per cent in the Asia-Pacific region. The breakdown by application segment reveals that revenue rose by 34.9 per cent in Agricultural Machinery, by 10.6 per cent in Construction Equipment, by 9.9 per cent in Stationary Equipment and by 8.2 per cent in Material Handling.

The service business also saw its revenue go up, by 10.1 per cent. Revenue attributable to the Automotive application segment was down by 2.7 per cent year on year.

Positive trend in the fourth quarter In the fourth quarter of 2018, new orders in the DCS segment amounted to €70.7 million, 24.5 per cent higher than in the fourth quarter of 2017. The 2,766 engines sold in the final quarter exceeded the corresponding figure for the fourth quarter of 2017 by 14.9 per cent. The revenue attributable to the DCS segment in the final quarter rose by 27.4 per cent year on year to €79.4 million.

DEUTZ Customised Solutions: Revenue by application segment

€ million (2017 figures)



DEUTZ Customised Solutions

	2018	2017	Change (%)
New orders (€ million)	286.0	261.3	9.5
Unit sales (units)	9,259	8,740	5.9
Revenue (€ million)	271.2	247.9	9.4
EBIT (€ million)	32.9	24.5	34.3
EBIT margin (%)	12.1	9.9	–

Sharp increase in DCS's operating profit Operating profit for the DEUTZ Customised Solutions segment also rose sharply on the prior year and at a faster rate than revenue. The biggest factors in this improved performance were the higher volume of business, the increase in the proportion of earnings generated by the high-margin service business and efficiency gains.

OTHER

Operating profit in the Other segment The Other segment reported an operating loss of €14.1 million for 2018. This was mainly due to the negative contribution to earnings from Torqeedo, which has been included in the consolidated financial statements of DEUTZ AG since the fourth quarter of 2017. A negative impact on earnings had been budgeted for the reporting year.

Other

	2018	2017	Change (%)
New orders (€ million)	31.6	4.8	558.3
Unit sales (units)	10,258	1,235	730.6
Revenue (€ million)	26.8	3.7	624.3
EBIT (€ million)	–14.1	–4.6	206.5
EBIT margin (%)	–52.6	–124.3	–

FINANCIAL POSITION

BASIC PRINCIPLES AND OBJECTIVES OF FINANCIAL MANAGEMENT

Central responsibility for treasury Responsibility for financial management in the DEUTZ Group lies with DEUTZ AG as the parent company of the Group. Financial management primarily consists of obtaining the necessary funds, managing their use within the Group, pooling cash resources and hedging interest-rate risk, currency risk and commodities risk throughout the Group.

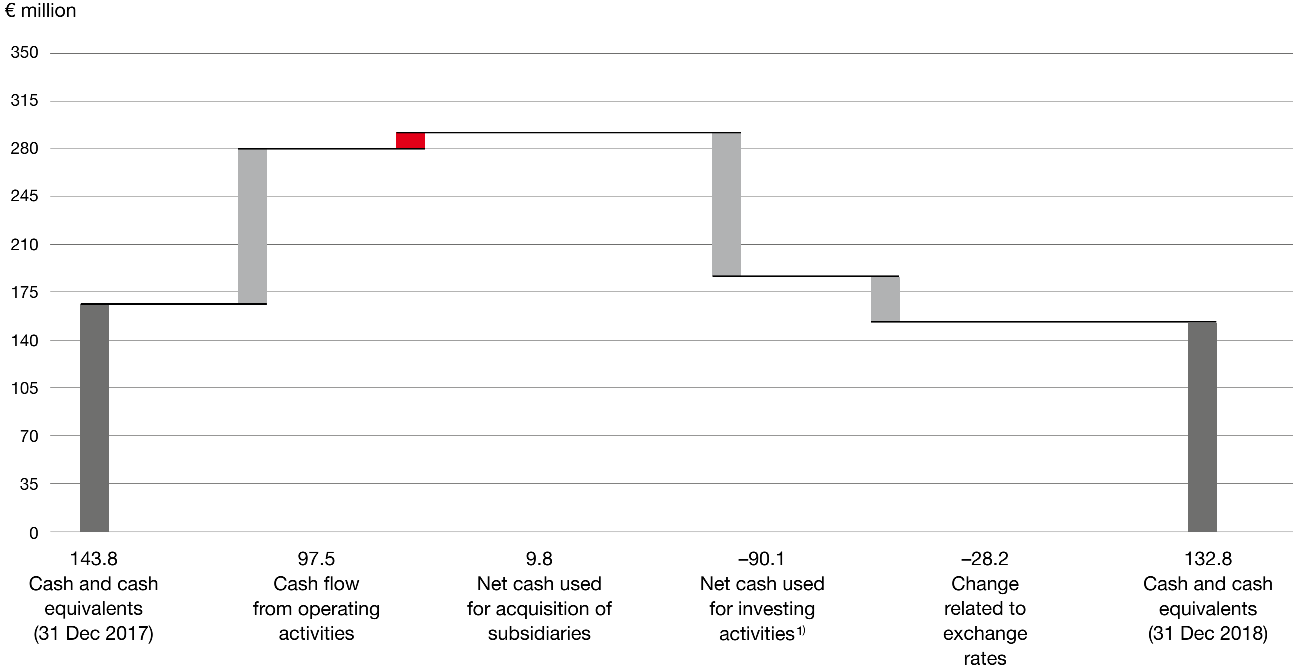
FUNDING

Syndicated credit line and loan from the European Investment Bank ensure sufficient liquidity In order to ensure sufficient liquidity, DEUTZ has at its disposal a syndicated, revolving working capital facility of €160 million provided by a consortium of banks. This is an unsecured, floating-rate credit line and runs until June 2023.

In addition, we have an amortising loan from the European Investment Bank with a remaining balance of €25.2 million at 31 December 2018. This loan, which is also unsecured, is repayable in instalments until July 2020. We have hedged the interest-rate risk arising from this loan.

As part of the contractual agreements for both loans, DEUTZ is obliged to comply with certain financial covenants. They do not limit our leeway for growth projects, however. The working capital facility and the loan from the European Investment Bank have enabled us to secure funding for our projects and for further growth over the coming years.

DEUTZ Group: Change in cash and cash equivalents



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

Receivables management optimised by means of factoring The sale of receivables is an important way of optimising receivables management. Because the credit quality of our customer receivables is excellent, factoring is also a cost-effective way of improving working capital, especially as considerable cash resources are tied up by the preliminary financing of production and due to the payment terms that we have granted to our customers. The volume of sales of receivables on the balance sheet date was slightly higher than at the end of 2017 as a result of the business situation, the volume as at 31 December 2018 being around €142 million (31 December 2017: €117 million).

CASH FLOW

Overview of the DEUTZ Group's financial position

€ million

	2018	2017	Change (%)
Cash flow from operating activities	97.5	112.7	–13.5
Cash flow from investing activities	–80.3	–27.3	194.1
Cash flow from financing activities	–28.2	–32.6	–13.5
Change in cash and cash equivalents	–11.0	52.8	–120.8
Free cash flow[1] from continuing operations	14.5	82.5	–82.4
Cash and cash equivalents at 31 Dec	132.8	143.8	–7.6
Current and non-current interest-bearing financial debt at 31 Dec	39.1	45.6	–14.3
Net financial position[2] at 31 Dec	93.7	98.2	–4.6

[1] Cash flow from operating activities, before payment of compensation for vested company pension rights, and from investing activities less interest expense (continuing operations).
[2] Cash and cash equivalents less current and non-current interest-bearing financial debt.

The fall in cash flow from operating activities compared with the prior year was mainly due to the sharper increase in working capital in 2018.

By contrast, net cash used for investing activities was significantly higher than the level reported in 2017, in part because of the increase in payments related to capital spending on property, plant and equipment and on intangible assets and the granting of a loan to a supplier. In 2017, the disposal of the land occupied by our former Cologne-Deutz site had also had a very favourable impact on cash flow from investing activities.

The dividend payment of €18.1 million for the prior year, which was much higher than the amount paid out in 2017, and the subsidised loan of €11.2 million taken out by our Spanish subsidiary were the main factors affecting cash flow from financing activities. Free cash flow decreased significantly as a result of the decline in cash flow from operating activities and the sharp rise in net cash used for investing activities.

The change in cash flow described here caused cash and cash equivalents and the net financial position[1] to contract slightly in 2018.

CAPITAL EXPENDITURE

After deducting investment grants, capital expenditure on property, plant and equipment and on intangible assets totalled €80.1 million in 2018, which was €7.9 million more than in the previous year (2017: €72.2 million). This was broken down into €54.8 million (2017: €34.9 million) on property, plant and equipment and €25.3 million (2017: €37.3 million) on intangible assets.

[1] Net financial position: cash and cash equivalents less current and non-current interest-bearing financial debt.

Additions to property, plant and equipment mainly related to a change in supplier, the relocation of the 2011 engine series from Cologne-Porz to Ulm and the new TCD 2.2 engine series. We also invested in new and more efficient testing equipment as well as replacement machinery.

Capital expenditure on intangible assets mainly related to the development of the new TCD 2.2 engine series and the adaptation of our engines to meet the new Stage V emissions standard for Europe.

Before the capitalisation of development expenditure, capital investment amounted to €59.1 million (2017: €54.7 million). This was only slightly below our forecast range of €60 million to €70 million. Capitalised development expenditure, at €21.0 million (2017: €17.5 million), was within the range that we had anticipated (€20 million to €25 million).

The bulk of the total capital expenditure after deducting investment grants – €69.5 million – was invested in the DEUTZ Compact Engines segment (2017: €51.7 million). Capital expenditure in DEUTZ Customised Solutions stood at €8.4 million (2017: €20.1 million). Capital expenditure in the Other segment amounted to €2.2 million (2017: €0.4 million). As in the prior year, this relates to capital expenditure by Torqeedo.

NET ASSETS

Overview of the DEUTZ Group's net assets

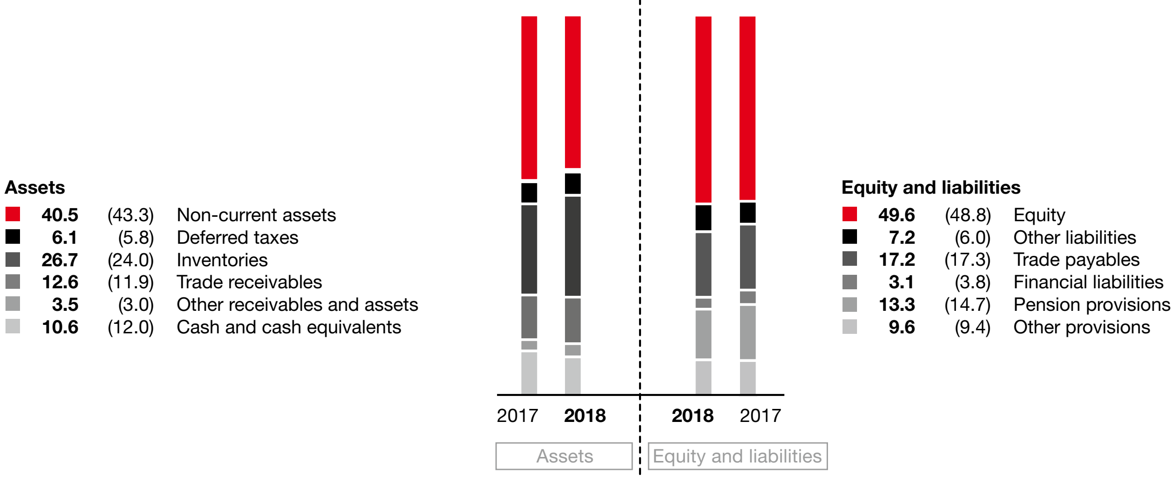
€ million

	31 Dec 2018	31 Dec 2017[1]	Change (%)
Non-current assets	582.1	588.5	–1.1
Current assets	666.8	609.3	9.4
Assets classified as held for sale	0.4	0.4	0.0
Total assets	**1,249.3**	**1,198.2**	**4.3**
Equity	619.1	584.3	6.0
Non-current liabilities	212.3	240.4	–11.7
Current liabilities	417.9	373.5	11.9
Total equity and liabilities	**1,249.3**	**1,198.2**	**4.3**
Working capital[2] (€ million)	276.2	222.2	24.3
Working capital ratio (31 Dec, %)	15.5	15.0	–
Working capital ratio (average, %)	15.8	13.4	–
Equity ratio[3] (%)	49.6	48.8	–

[1] Figures as at 31 December 2017 adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.
[2] Inventories plus trade receivables less trade payables.
[3] Equity/total equity and liabilities.

DEUTZ Group: Balance sheet structure

% (2017 figures)



Non-current assets The change in the DEUTZ Group's non-current assets can mainly be explained by two countervailing effects. Firstly, we disposed of our shares in the DEUTZ Dalian joint venture in the fourth quarter of 2018 after they had been written down in the middle of the year. Secondly, DEUTZ granted a loan of €13.8 million to the new owners of the business of Neue Halberg-Guss GmbH in November 2018.

Working capital Working capital as at 31 December 2018 had increased to €276.2 million. The main reason for this was the rise in inventories and trade receivables, which was driven primarily by the higher volume of business. The working capital ratio[1] as at 31 December 2018 had therefore deteriorated to 15.5 per cent in spite of the increase in revenue. The average working capital ratio[2] went up. As at 31 December 2018, it stood at 15.8 per cent, which was the forecast for this key figure at the beginning of the year.

[1] Working capital (inventories plus trade receivables less trade payables) as at the balance sheet date divided by revenue for the previous twelve months.
[2] Working capital ratio (average, %): average working capital at the four quarterly reporting dates divided by revenue for the previous twelve months.

Equity As at 31 December 2018, equity had risen to €619.1 million because of the net income generated in the reporting year. The equity ratio therefore increased to 49.6 per cent (31 December 2017: 48.8 per cent). It thus remains well above our target of above 40 per cent.

Non-current liabilities The €28.1 million fall in non-current liabilities was largely attributable to the reduction in financial debt and provisions for pensions and other post-retirement benefits. Financial debt decreased as planned by €8.8 million to €19.3 million. The decline in provisions for pensions and other post-retirement benefits was mainly due to ongoing pension payments.

OVERALL ASSESSMENT FOR 2018

From an operational and strategic perspective, DEUTZ can consider 2018 a success. We made significant progress with the E-DEUTZ strategy, proving our expertise in the electrification of customer equipment by demonstrating fully operational systems during the ELECTRIP Event Week in September 2018. An interdisciplinary team comprising engineers from Torqeedo and DEUTZ managed to develop two prototypes in less than six months. We thus showed that DEUTZ has mastered the technology and is in a position to supply marketable electrification solutions to its customers. DEUTZ is restructuring its market presence in China. Under a three-pillar strategy based around planned alliances with major Chinese companies, namely SANY, HORIZON and BEINEI, we will be looking to drive growth in the world's biggest individual market for engines and achieve long-term success.

Orders on hand exhibited a very strong trend in all regions and all off-highway application segments in 2018. Against this backdrop, new orders increased by a substantial 25.4 per cent to €1,952.6 million. Revenue and profitability also improved in 2018, despite the detrimental effect on production of a strike at a supplier. We were largely able to contain the negative impact of this by adapting our production plans at an early stage. On 27 July 2018, DEUTZ AG either reiterated or raised its forecast for 2018. We projected a sharp rise in revenue to more than €1.6 billion and an EBIT margin before exceptional items of at least 4.5 per cent. Previously, DEUTZ had raised the prospect only of a sharp rise in revenue and a moderate improvement in the EBIT margin. The raised forecasts were either fully achieved or exceeded. Revenue in 2018 went up by 20.3 per cent to €1,778.8 million. Operating profit (EBIT before exceptional items) advanced to €82.0 million in the reporting year, an increase of more than 100 per cent that comfortably outstripped revenue growth. This was because of the higher volume of business and the resulting economies of scale as well as positive effects from the efficiency programme. The EBIT margin (before exceptional items) improved to 4.6 per cent (2017: 2.7 per cent).

EMPLOYEES

Overview of the DEUTZ Group's workforce

Headcount

	31 Dec 2018	31 Dec 2017
DEUTZ Group	**4,645**	**4,154**
Thereof		
In Germany	3,446	3,060
Outside Germany	1,199	1,094
Thereof		
Non-salaried employees	2,732	2,421
Salaried employees	1,825	1,657
Trainees	88	76
Thereof		
DEUTZ Compact Engines	3,752	3,333
DEUTZ Customised Solutions	741	688
Other/Torqeedo	152	133

Further increase in headcount At the end of 2018, the DEUTZ Group employed a total of 4,645 people, 491 more than at the end of 2017 (a rise of 11.8 per cent). This was mainly due to the sharp increase in the volume of business. As at 31 December 2018, we also had a further 382 people on temporary employment contracts, compared with 423 a year earlier. By offering fixed-term contracts and employing temporary workers, DEUTZ can respond flexibly to any fluctuations in demand. Almost 20 per cent of all staff at DEUTZ had fixed-term or temporary contracts as at 31 December 2018.

Around 74 per cent of our workforce was employed in Germany as at the reporting date. Most of these employees were based in Cologne – 2,661 as at 31 December 2018. As at the reporting date, 498 employees of our Company were based in Ulm. Of the 1,199 employees outside Germany, 603 of them work at our DEUTZ Spain subsidiary.

From a segment perspective, DEUTZ Compact Engines employed 3,752 people as at 31 December 2018, 12.6 per cent more than it had employed a year earlier. The number of employees at DEUTZ Customised Solutions was 741, up by 7.7 per cent compared with the end of 2017. There were 152 employees in the Other segment at the reporting date, including Torqeedo's employees.

DEUTZ Group: Breakdown of workforce by location

Headcount

	31 Dec 2018	31 Dec 2017
Cologne	2,661	2,356
Ulm	498	450
Other	287	254
In Germany	**3,446**	**3,060**
Outside Germany	1,199	1,094
Total	**4,645**	**4,154**

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. At home and abroad, DEUTZ AG has a direct or indirect stake in 31 companies (2017: 34 companies). DEUTZ AG is also by far the largest production company of the DEUTZ Group and provides the head-office functions for the Group. For details of DEUTZ AG's equity investments, please see the list of shareholdings on page 140 of the annual report.

Because the business performance of DEUTZ AG and the economic environment in which it operates are essentially the same as for the DEUTZ Group, we make reference here to the 'Business performance in the DEUTZ Group' section on page 27 et seq. of this combined management report.

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 management system for the DEUTZ Group is described on page 29 et seq. of this combined management report. The DEUTZ Group's net income in accordance with IFRS is reconciled to DEUTZ AG's net income in accordance with the HGB:

DEUTZ AG: Reconciliation

€ million

DEUTZ Group net income (IFRS)	**69.9**
Consolidation of equity investments	–50.2
DEUTZ AG income (IFRS)	**19.7**
Material differences due to different financial reporting standards	
Recognition of development expenditure	28.0
Measurement of provisions for pensions and other post-retirement benefits	–10.5
Recognition of deferred taxes	–6.4
Other differences relating to the financial reporting standards	1.0
DEUTZ AG net income (HGB)	**31.8**

RESULTS OF OPERATIONS

Overview of DEUTZ AG's results of operations

€ million

	2018	2017	Change
Revenue	**1,601.5**	**1,356.0**	**245.5**
Cost of sales	–1,371.6	–1,171.5	–200.1
Research and development costs	–59.9	–60.3	0.4
Selling and administrative expenses	–82.7	–74.5	–8.2
Other operating income	28.3	145.5	–117.2
Other operating expenses	–58.6	–55.4	–3.2
Net investment income	–5.1	15.5	–20.6
Write-downs of investments	–2.5	–0.5	–2.0
Operating profit (EBIT)	**49.4**	**154.8**	**–105.4**
Interest expenses, net	–5.0	–6.8	1.8
Income taxes	–11.9	–16.7	4.8
Other taxes	–0.7	–2.6	1.9
Net income	**31.8**	**128.7**	**–96.9**

Revenue DEUTZ AG's revenue amounted to €1,601.5 million. This year-on-year rise of 18.1 per cent was primarily due to increased demand in the Material Handling, Construction Equipment and Agricultural Machinery application segments. In the Material Handling application segment, revenue surged by 42.5 per cent to €328.7 million (2017: €230.6 million). Revenue went up by

23.2 per cent to €525.5 million in the Construction Equipment application segment (2017: €426.6 million) and by 13.9 per cent to €263.2 million in the Agricultural Machinery application segment (2017: €231.0 million).

The region with the strongest revenue growth was our largest region, EMEA (Europe, Middle East and Africa), where revenue advanced by 19.1 per cent to €1,218.4 million (2017: €1,023.3 million). Revenue also increased significantly in the Americas region, where it went up by 15.7 per cent to €235.6 million (2017: €203.6 million), and in the Asia-Pacific region, where it went up by 14.3 per cent to €147.5 million (2017: €129.1 million).

Earnings performance In 2018, DEUTZ AG generated an operating profit (EBIT) of €49.4 million. This was €105.4 million lower than in 2017, despite the sharp rise in the volume of business. The main reasons for this reduction were the gain realised in 2017 on the disposal of the land occupied by our former Cologne-Deutz site and the loss of €40.5 million recognised in 2018 on the disposal of our stake in DEUTZ (Dalian) Engine Co., Ltd. Dalian, China. Moreover, net investment income deteriorated markedly year on year.

Cost of sales DEUTZ AG's cost of sales came to €1,371.6 million in 2018. The year-on-year increase of €200.1 million was mainly attributable to the volume-related rise in the cost of materials and staff costs. The gross margin[1] continued to improve, advancing from 13.6 per cent to 14.4 per cent.

Other operating income Other operating income fell by €117.2 million year on year to €28.3 million. This was predominantly due to income being realised in 2017 from the disposal of the land occupied by our former Cologne-Deutz site.

Other operating expenses Other operating expenses rose by €3.2 million year on year to €58.6 million (2017: €55.4 million). The main influence on this item in 2017 had been expenses in connection with reversing the sale to Deutz-Mülheim Grundstücksgesellschaft mbH in 2001/2002 of the former Company premises at the Cologne-Deutz site. In 2018, this item primarily comprised the loss arising on the disposal of our stake in DEUTZ (Dalian) Engine Co., Ltd., Dalian, China.

Net investment income Net investment income was down on the previous year, declining by €20.6 million to a net expense of €5.1 million. This was attributable, above all, to the transfer of losses from our subsidiary Torqeedo GmbH – the shares of which we had acquired on 1 October 2017 – and to the lower earnings of DEUTZ Asien Verwaltungs GmbH. In 2017, DEUTZ Asien Verwaltungs GmbH had posted particularly high earnings as a result of the reversal of the sale of land to Deutz-Mülheim Grundstücksgesellschaft mbH in 2001/2002.

Net interest expense Net interest expense amounted to €5.0 million. This year-on-year improvement of €1.8 million was mainly due to lower interest expense paid to banks as a result of the reduction in the utilisation of credit lines. Interest expense for provisions for pensions and other post-retirement benefits also decreased because of the lower discount rate.

Income taxes Income taxes fell by €4.8 million year on year. This was primarily attributable to the €7.5 million decrease in current tax expenses to €10.6 million (2017: €18.1 million) on the back of lower operating profit. Deferred tax expenses amounted to €1.3 million, whereas there had been deferred tax income of €1.4 million in 2017.

Net income At €31.8 million, net income was down by €96.9 million compared with the previous year. The main reason for this reduction was that the figure for 2017 of €128.7 million had been boosted as a result of the disposal of the land occupied by our former Cologne-Deutz site, whereas the figure for 2018 was adversely affected by a loss of €40.5 million on the disposal of our stake in DEUTZ (Dalian) Engine Co., Ltd. Dalian, China.

At the start of 2018, we predicted that net income would increase when adjusted for the disposal of land. This adjusted net income had amounted to €57.1 million in 2017. We therefore fell short of our forecast, despite the sharp rise in the volume of business. This was due to the loss on the disposal of our stake in DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, which had not been anticipated in our forecast.

In view of the positive level of net income, the Board of Management and Supervisory Board propose using €18.1 million of the accumulated income to pay a dividend of €0.15 per share.

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

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 on page 41 of this combined management report.

Overview of DEUTZ AG's financial position

€ million

	2018	2017	Change
Cash flow from operating activities	96.9	100.8	–3.9
Cash flow from investing activities	–75.5	–29.0	–46.5
Cash flow from financing activities	–33.7	–24.6	–9.1
Change in cash and cash equivalents	–12.3	47.2	–59.5
Free cash flow[1]	20.2	70.1	–49.9
Cash and cash equivalents at 31 Dec	115.7	128.0	–12.3

[1] Cash flow from operating and investing activities less net interest expense.

Liquidity Despite the increase in the volume of business, cash flow from operating activities fell slightly owing, above all, to the sharper rise in working capital. By contrast, net cash used for investing activities in 2018 was above the level reported in 2017 due, among other reasons, to the increase in payments related to capital spending on property, plant and equipment and on intangible assets. In 2017, the disposal of the land occupied by our former Cologne-Deutz site had also had a very favourable impact on cash flow from investing activities. The net cash used for financing activities in 2018 consisted of the repayment of loans and a dividend payment to shareholders of €18.1 million. The year-on-year increase was attributable, in particular, to the higher dividend payment, which had amounted to €8.5 million in 2017. Free cash flow decreased substantially, above all because of significantly higher net cash used for investing activities.

Capital expenditure After deducting investment grants, DEUTZ AG's capital expenditure in 2018 amounted to a total of €86.0 million (2017: €160.0 million). This was broken down into €49.3 million (2017: €32.6 million) on property, plant and equipment, €22.8 million (2017: €36.9 million) on intangible assets and €13.9 million (2017: €90.5 million) on investments. Additions to property, plant and equipment mainly related to a change in supplier, the relocation of the 2011 engine series from Cologne-Porz to Ulm and the new TCD 2.2 engine series. DEUTZ AG also invested in new and more efficient testing equipment as well as replacement machinery. Capital expenditure on intangible assets mainly related to the development of the new TCD 2.2 engine series and the adaptation of our engines to meet the new Stage V emissions standard for Europe. The additions to investments consisted primarily of a loan to the subsidiary DEUTZ Spain S.A., Zafra, Spain.

NET ASSETS

Overview of DEUTZ AG's net assets

€ million

	31 Dec 2018	31 Dec 2017	Change
Non-current assets	565.5	572.6	–7.1
Current assets	523.3	484.5	38.8
Prepaid expenses	1.7	1.4	0.3
Deferred tax assets	83.8	85.1	–1.3
Total assets	**1,174.3**	**1,143.6**	**30.7**
Equity	642.7	629.0	13.7
Provisions	266.7	260.6	6.1
Liabilities	264.3	253.5	10.8
Deferred income	0.6	0.5	0.1
Total equity and liabilities	**1,174.3**	**1,143.6**	**30.7**
Working capital[1] (€ million)	92.8	63.2	29.6
Working capital ratio[2] (31 Dec, %)	5.8	4.7	1.1
Equity ratio[3] (%)	54.7	55.0	–0.3

[1] Inventories plus trade receivables less trade payables.
[2] Working capital ratio as at the balance sheet date: ratio of working capital (inventories plus trade receivables less trade payables) at the end of the reporting period to revenue for the preceding twelve months.
[3] Equity / total equity and liabilities.

Non-current assets Compared with the end of 2017, non-current assets had fallen by €7.1 million. This change was primarily the result of disposing of our stake in DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, and the related decrease in investments. The decrease was partly offset by an increase in intangible non-current assets as a result of capital expenditure on the development of new engines and the refinement of existing ones.

Working capital Working capital had risen to €92.8 million as at 31 December 2018 and was thus €29.6 million higher than the level reported a year earlier. The rise in working capital was attributable, above all, to increased inventories due to the larger volume of business. Despite the revenue growth, the working capital ratio also increased and stood at 5.8 per cent as at the balance sheet date (31 December 2017: 4.7 per cent).

Equity ratio Owing to the net income generated in the reporting year, equity advanced again to reach €642.7 million, an increase of €13.7 million. The rise was partly offset by the distribution of a dividend to the shareholders of DEUTZ AG of €18.1 million for 2017. At 54.7 per cent, the equity ratio was down slightly at the end of the year.

Provisions As at 31 December 2018, provisions had increased by €6.1 million. This change was predominantly the result of higher provisions for warranties in connection with the growth of revenue in the reporting year.

Liabilities As at 31 December 2018, liabilities had risen by €10.8 million to €264.3 million. The main reasons for this were a reporting date-related increase in other liabilities to factoring companies and a volume-related rise in trade payables. A decrease in liabilities to banks, which were scaled back as planned, was the primary factor in the opposite direction.

EMPLOYEES

As at 31 December 2018, a total of 3,344 people were employed by DEUTZ AG. This meant that the number of employees had gone up by 366 year on year, mainly due to the increase in the volume of business. We also had a further 331 people on temporary employment contracts as at 31 December 2018 (31 December 2017: 366 temporary workers). Employing temporary workers enables us to respond flexibly to any fluctuations in demand.

From a segment perspective, DEUTZ Compact Engines employed 2,846 people as at 31 December 2018, 312 more than it had employed a year earlier. The number of employees at DEUTZ Customised Solutions was 498, which was up by 54 compared with the end of 2017.

DEUTZ AG: Employees

Headcount

	31 Dec 2018	31 Dec 2017
Cologne	2,661	2,356
Ulm	498	450
Other	185	172
Total	**3,344**	**2,978**

OPPORTUNITY AND RISK 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 our notes on pages 55 to 56.

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 associated with the DEUTZ Group are described on pages 56 to 60 of this combined management report.

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 on pages 58 and 59 of this combined management report.

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 2018 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. As the effect of the loss on the disposal of our stake in DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, will not be repeated, we expect net income to rise sharply in 2019. The final instalment of the purchase consideration from the disposal of our former Cologne-Deutz site could also provide a positive one-off item. Further information can be found in the outlook for the DEUTZ Group on pages 60 to 61.

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 page 64 et seq. of the annual report and to our website www.DEUTZ.com/NFR.

CORPORATE GOVERNANCE DECLARATION PURSUANT TO SECTION 289F 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 155 to 162 of the annual report and to our website www.DEUTZ.com/CGD.

DISCLOSURES PURSUANT TO SECTIONS 289A (1) AND 315A (1) HGB

Composition of the issued capital There were no changes to the issued capital (share capital) of DEUTZ AG in 2018. As at 31 December 2018, 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 per cent of voting rights At the end of 2018, there were no direct or indirect shareholdings in DEUTZ AG representing more than 10 per cent 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 Co-determination 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 authorised, subject to the consent of the Supervisory Board, to increase the issued capital of the Company on or before 25 April 2023 on one or more occasions in instalments 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 (authorised 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 authorised, 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 authorised, 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 authorised capital I.

The Board of Management is also authorised, subject to the consent of the Supervisory Board, to increase the issued capital of the Company on or before 25 April 2023 on one or more occasions in instalments 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 (authorised 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 authorised, 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 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 a shareholder 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 per cent of the issued capital either at the time this authorisation becomes effective or – if this value is lower – at the time this authorisation is utilised. The aforementioned 20 per cent limit includes shares that are sold or issued during the term of this authorisation on the basis of all other authorisations 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 authorisation during the term of this authorisation, disapplying pre-emption rights. If another authorisation for a disapplication of shareholders' pre-emption rights that was exercised during the term of this authorisation is renewed by the Annual General Meeting, however, the disapplication limit will not apply to the extent that the renewed authorisation 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 per cent of the issued capital at the time the issue becomes effective or – if lower – 10 per cent of the issued capital existing at the time this authorisation is exercised.

The aforementioned 10 per cent limit includes shares that are sold or issued during the term of this authorisation on the basis of other authorisations 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 authorisation with the disapplication of pre-emption rights in application with the necessary modifications of section 186 (3) sentence 4 AktG. If another authorisation for a disapplication of shareholders' pre-emption rights that was exercised during the term of this authorisation is renewed by the Annual General Meeting, the disapplication limit will cease to apply to the extent that the renewed authorisation permits the issue of shares with the disapplication of pre-emption rights in direct application or application with the necessary modifications of section 186 (3) sentence 4 AktG. The Board of Management is further authorised, 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 authorised 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, revolving cash credit line of €160 million. DEUTZ AG also took out a loan with the European Investment Bank that has a remaining balance of €25.2 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 per cent of all shares and/or voting rights in DEUTZ AG.

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 per cent of the voting rights in DEUTZ AG or is able to exert direct or indirect influence by means of contracts.

The service contracts of the Board of Management members stipulate, subject to certain requirements, the following provision in the event of a change of control: if their appointment (1) is revoked within nine months of the change of control or (2), subject to certain other requirements, ends as a result of a change to the legal form of DEUTZ AG, they will receive 150 per cent of the severance cap pursuant to article 4.2.3 of the German Corporate Governance Code. As set out in the service contracts, a change of control is deemed to occur when one or more other people or other companies acting jointly within the meaning of section 30 of the German Securities Acquisition and Takeover Act (WpÜG) acquire more than 30 per cent of the voting rights and therefore control of the Company. In the case of Dr Hiller, no change of control will be deemed to have occurred if the former major shareholder, AB Volvo, acting on its own or with others acquires more than 30 per cent of the voting rights in the Company.

The 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 page 133 et seq. in the notes to the consolidated financial statements.), contain the following provision in the event of an entity – either alone or acting jointly with an affiliated company – acquiring a minimum of 50 per cent 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.

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 (1) AND 315A (1) HGB

The disclosures contained in the combined management report and management report pursuant to sections 289a (1) and 315a (1) 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 OF THE BOARD OF MANAGEMENT

The annual remuneration paid to the members of DEUTZ AG's Board of Management consists of fixed and variable components as well as a pension benefit contribution. The fixed component is paid monthly as basic salary. The variable component is performance-related and consists of two parts: the first is a bonus that is based on attainment of specific targets; the other comes in the form of virtual performance shares that offer a long-term incentive. For the pension contribution, an amount is paid into a benevolent fund; there is no other entitlement to a pension or surviving dependants' pension.

The calculation of the annual bonus is based on the degree of attainment of annual performance targets (short-term targets). The number, content and weighting of the short-term targets are set annually by the Supervisory Board at its due discretion after consulting with the respective Board of Management member. The minimum level of target attainment for the payment of a bonus is 75 per cent; the maximum level of target attainment relevant to the payment of the bonus is 150 per cent. The highest amount that can be paid as a bonus in the case of maximum target attainment is determined by the respective service contract. Only 60 per cent of the annual bonus is paid out at the end of the year. The rest of the bonus is paid out in two equal instalments of 20 per cent, subject to the attainment of further medium-term financial targets (medium-term targets), at the end of a further one year and two years, whereby the amount that is paid out is based on the level of attainment of these medium-term targets (to a maximum of 150 per cent). The highest permissible amounts for these further payments are also contractually agreed. The targets for all payments are set at the beginning of the year for which the bonus is to be paid.

Details regarding the virtual performance shares are set forth in a long-term incentive plan for the Board of Management (LTI plan BoM), which forms part of the contractual agreements with the Board of Management members. The number of virtual performance shares allocated to a Board of Management member is calculated each year on the basis of the contractually specified euro amount divided by a reference price. The reference price is the average closing price of DEUTZ AG shares in Xetra trading (or a comparable successor system) on the Frankfurt Stock Exchange during the 60 trading days preceding the grant date. Virtual performance shares represent an entitlement to payment of a cash amount in accordance with the provisions of the LTI plan BoM. The cash amount per virtual performance share corresponds to the average closing price of DEUTZ shares in Xetra trading (or a comparable successor system) on the Frankfurt Stock Exchange during the last 60 trading days prior to the expiry of a vesting period of four years after the grant date, and is limited to a maximum of 1.5 times the reference price. Entitlement to the cash payment only arises, however, if either the market price of DEUTZ shares has increased by at least 30 per cent relative to the reference price or the market price of DEUTZ shares has outperformed the MDAX (or a future index replacing the MDAX) by at least 10 percentage points during the vesting period. A further requirement is that the Board of Management member makes a personal investment by holding one DEUTZ share for every 20 virtual performance shares received.

The variable remuneration is designed in a way that the majority of it is measured against performance over several years. The overall remuneration structure is designed to support the sustainable growth of the Company.

Additional benefits received by the members of the Board of Management include, in particular, a company car and allowances towards insurance policies.

If the employment contract of a member of the Board of Management is terminated prematurely without good cause, the member of the Board of Management receives a severance payment equivalent to the total remuneration for the period until the original termination date of his or her contract of employment up to a maximum of two years. For the purpose of this severance payment, the amount of total remuneration is determined by the total remuneration paid for the last full financial year, or the anticipated total remuneration for the then current financial year, if appropriate (cap on severance pay in accordance with article 4.2.3 of the German Corporate Governance Code).

The service contracts of the Board of Management members stipulate a special provision in the event of a change of control. Further details can be found in the section 'Disclosures pursuant to sections 289a (1) and 315a (1) HGB on page 51 et seq.

The table below presents the total remuneration of the Board of Management in accordance with the recommendation in the German Corporate Governance Code dated 7 February 2017. In line with this recommendation, the benefits granted in 2018 and those actually paid are reported separately.

The following table shows the breakdown of benefits granted to members of the Board of Management:

Benefits granted

€ thousand

	Dr Ing Frank Hiller Chairman of the Board of Management				**Dr Andreas Strecker** Took office on 1 March 2018				**Michael Wellenzohn**				**Dr Margarete Haase** Left on 30 April 2018			
	2017	2018	2018 (min)	2018 (max)	2017	2018	2018 (min)	2018 (max)	2017	2018	2018 (min)	2018 (max)	2017	2018	2018 (min)	2018 (max)
Fixed remuneration	750	750	750	750	0	483	483	483	520	520	520	520	580	194	194	194
Additional benefits [1]	177	179	179	179	0	142	142	142	107	108	108	108	147	9	9	9
Total	**927**	**929**	**929**	**929**	**0**	**625**	**625**	**625**	**627**	**628**	**628**	**628**	**727**	**203**	**203**	**203**
One-year variable remuneration [2]	450	450	0	675	0	225	0	338	255	255	0	383	270	90	0	135
Multi-year variable remuneration																
2018–2019 deferral (2017 bonus)	300	0	0	0	0	0	0	0	170	0	0	0	180	0	0	0
2019–2020 deferral (2018 bonus)		300	0	450	0	150	0	225	0	170	0	255	0	60	0	90
LTI 2017–2021 [3]	223	0	0	0	0	0	0	0	173	0	0	0	167	0	0	0
LTI 2018–2022 [3]	0	200	0	300	0	150	0	188	0	133	0	233	0	50	0	75
Total	**973**	**950**	**0**	**1,425**	**0**	**525**	**0**	**750**	**598**	**558**	**0**	**870**	**617**	**200**	**0**	**300**
Total remuneration	**1,900**	**1,879**	**929**	**2,354**	**0**	**1,150**	**625**	**1,375**	**1,225**	**1,186**	**628**	**1,498**	**1,344**	**403**	**203**	**503**

Instead of the target values for one-year variable remuneration and for deferrals from one-year variable remuneration required under the German Corporate Governance Code (DCGK), the figures in the table below for total remuneration indicate the remuneration figures that are required to be disclosed under the applicable accounting standards.
For the one-year variable remuneration, these represent the provisions for the annual bonus for 2018, adjusted for any over- or under-allocation in the previous year.
With regard to the deferrals from the one-year variable remuneration, the figures represent the amounts vested and recognised in provisions in 2018.

One-year variable remuneration	629	537			0	269			356	304	–	–	377	108		
Multi-year variable remuneration																
2017–2018 deferral (2016 bonus)	0	0			0	0			102	0	–	–	108	0		
2018–2019 deferral (2017 bonus)	416	0			0	0			236	0	–	–	250	0		
2019–2020 deferral (2018 bonus)	0	372			0	186			0	211	–	–	0	74		
Total remuneration	**2,195**	**2,038**			**0**	**1,230**			**1,494**	**1,276**	**–**	**–**	**1,629**	**435**		

[1] Includes payment into a life insurance policy.

[2] The figures given for one-year variable remuneration and for deferrals from one-year variable remuneration represent the amount granted for full achievement of targets.

[3] Share-based remuneration represents the fair value of the options on the date of grant. Please refer to Note 31 in the notes to the consolidated financial statements for a description of the structure of the share-based remuneration agreements. General contractual conditions are identical for all members of the Board of Management.

The following table shows the breakdown of benefits actually paid to members of the Board of Management:

Benefits paid

€ thousand	**Dr Ing Frank Hiller** Chairman of the Board of Management		**Dr Andreas Strecker** Took office on 1 March 2018		**Michael Wellenzohn**		**Dr Margarete Haase** Left on 30 April 2018	
	2018	2017	2018	2017	2018	2017	2018	2017
Fixed remuneration	750	750	483	0	520	520	194	580
Additional benefits	179	177	142	0	108	107	9	147
Total	**929**	**927**	**625**	**0**	**628**	**627**	**203**	**727**
One-year variable remuneration	629	0	0	0	356	227	377	240
Multi-year variable remuneration								
2015–2016 deferral	0	0	0	0	0	14	0	18
2017–2018 deferral	0	0	0	0	51	0	54	0
LTI 2013–2017	0	0	0	0	0	185	0	219
Total	**629**	**0**	**0**	**0**	**407**	**426**	**431**	**477**
Total remuneration	**1,558**	**927**	**625**	**0**	**1,035**	**1,053**	**634**	**1,204**

The total expense for share-based payments recognised in the reporting year amounted to €67 thousand for Dr Hiller (2017: €75 thousand) and €21 thousand for Dr Strecker (2017: €0). In connection with the share-based payments for Dr Haase and Mr Wellenzohn, income recognised from the reversal of provisions amounted to €50 thousand in the reporting year (2017: expense of €32 thousand) and €14 thousand (2017: expense of €74 thousand) respectively.

REMUNERATION OF THE SUPERVISORY BOARD

The rules on remuneration that currently apply to the Supervisory Board were approved by the Annual General Meeting on 26 April 2018. They are set out in section 15 of the Company's Statutes and stipulate that the members of the Supervisory Board of DEUTZ AG receive fixed annual remuneration of €40 thousand. The chairman of the Supervisory Board receives twice this amount and the deputy chairman one-and-a-half times the amount. The members of the Supervisory Board are also reimbursed for their out-of-pocket expenses and receive a fee of €1.5 thousand for each Supervisory Board meeting they attend. Members of the Human Resources Committee and members of the Audit Committee receive additional fixed annual remuneration of €12 thousand. Members of other committees, in particular members of the Nominations Committee and Arbitration Committee, receive additional fixed annual remuneration of €8 thousand. The chairman of a committee receives double this amount, and his deputy one-and-a-half times the amount. Each member of a committee also receives an attendance fee of €1.5 thousand for each committee meeting attended.

In addition, DEUTZ reimburses the members of the Supervisory Board for any VAT they incur in connection with the performance of their mandate.

The following table shows the breakdown of total remuneration paid to members of the Supervisory Board for their work as Supervisory Board members:

€ thousand	Fixed remuneration	Attendance fees	**Total**
Hans-Georg Härter Chairman	115	46	161
Corinna Töpfer-Hartung Deputy Chairwoman (from 26 April 2018)	67	14	81
Werner Scherer Deputy Chairman (until 26 April 2018)	11	22	33
Sophie Albrecht (from 26 April 2018)	33	7	40
Sabine Beutert	47	24	71
Dr Bernd Bohr (from 26 April 2018)	27	9	36
Yavuz Büyükdag (from 26 April 2018)	27	9	36
Dr Fabian Dietrich (from 26 April 2018)	27	9	36
Hans-Peter Finken	35	13	48
Gisela Füssel (until 26 April 2018)	7	8	15
Dr Ing Hermann Garbers	40	17	57
Gerhard Gehweiler (until 26 April 2018)	7	8	15
Patricia Geibel-Conrad (from 26 April 2018)	44	11	55
Göran Gummeson (until 26 April 2018)	7	7	14
Leif Peter Karlsten (until 26 April 2018)	7	5	12
Herbert Kauffmann (until 26 April 2018)	7	22	29
Alois Ludwig	48	16	64
Dr Witich Roßmann (until 26 April 2018)	7	8	15
Ali Yener (from 26 April 2018)	33	8	41
Total	**596**	**263**	**859**

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. Against the background of increasingly complex corporate structures and growing internationalisation, 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 organisational units: the operating segments of the Group's parent company, subsidiaries, sales offices and authorised dealers. This organisational structure presents the Company with opportunities, but also gives rise to 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. It is therefore critically important to identify and assess business risks at an early stage and take corrective action where required. DEUTZ has an appropriate risk management system to ensure it can meet this requirement.

Such a system heightens employees' sense of responsibility and raises their awareness of potential or existing risks. It also helps everyone involved to identify, analyse 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 summarised 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 have arisen compared with the Company's short-term and medium-term planning. The risks are categorised 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 minimised the known risks or whether there is still a need for further action. The Risk Management Committee then analyses the risks and the progress of the action that is being taken and reports to the Board of Management on the results of the risk inventory. To enable the Company to respond promptly at all times to any possible risks that may arise, risk officers and their employees are under an obligation to submit immediate reports on any new material risks or if there is an increase in the threat from known risks. These reports are to be separate from the regular reporting requirements. The risk management system does not identify opportunities, only risks.

Each year, the Group internal audit department and the independent auditors carry out an audit of the DEUTZ Group's system for the early identification of risks pursuant to section 91 (2) AktG to assess whether the system is functioning efficiently. Suggestions for improvements proposed by the internal audit department, the Risk Management Committee or the auditors are promptly implemented by DEUTZ.

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 DEUTZ Group's 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 relevant member of the Board of Management plus the Head of Finance & Controlling and representatives of the treasury department.

The objective of risk management is to mitigate fluctuations in profits and cash flows caused by volatility in commodity, interest-rate and foreign-exchange markets. 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 minimise 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.

We manage the financial risk as follows:

Risk from bad debts We protect ourselves against the risk of bad debts by constantly monitoring our situation through electronic and other means and by regularly analysing 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 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 per cent 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. We hedged the interest-rate risk arising from the funding arranged in mid-2012 with the European Investment Bank.

Liquidity risk The funding agreements concluded provide the Company with adequate liquidity for its further development. During the term of the agreement, DEUTZ AG must ensure that the DEUTZ Group complies with certain financial covenants (ratio of financial debt to equity and to EBITDA). The financial covenants allow sufficient leeway in line with our medium-term balance sheet and profit planning. If, however, there is a dramatic deterioration in the general economic situation, there is a risk of the covenants being breached.

Further information on financial risk management can be found in Note 26 on page 121 in the notes to the consolidated financial statements.

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. In the following risk report for the DEUTZ Group, the risks are categorised 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 (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 categorised 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 more strongly aggregated and are listed by risk category. Unless otherwise stated, the risks refer to 2019 and relate to the DEUTZ Compact Engines, DEUTZ Customised Solutions and Other segments.

MARKET RISK

We operate in sales markets that are characterised by particular sensitivity to cyclical influences. This can 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 our main application segments, Construction Equipment and Material Handling. Our objective is to continue to reduce this cyclicality from a regional and application segment perspective.

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 alliances. Close alliances with our key customers are of considerable importance in enabling us to achieve these sales targets, although there is a risk of becoming dependent on them in the long term. We therefore pursue a strategy of signing up new customers and progressively expanding our business with them. These business development activities are focused on Asia and elsewhere.

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. Despite the countermeasures that are in place, we cannot completely control the external risks. In view of the measures in place, we categorise the market risk as 'low' in respect of the achievement of our corporate targets for 2019 because of the level of orders on hand. Still factoring in these measures, we assume a 'medium' level of risk in the medium term, however.

The United Kingdom's upcoming departure from the European Union does not constitute a material market risk because our volume of business in the country is comparatively low.

STRATEGIC RISK

Based on our objective of broadening our customer and product base, our new strategy focuses on continued globalisation and the electrification of our existing product range. Under our three-pillar growth strategy, we will strengthen our engine and service business in China through our planned alliances with SANY, BEINEI and HORIZON. In particular, these will open up opportunities and potential for growth resulting from new customer relationships, production facilities and service partners. However, any investment always entails risks. The target market might not grow as anticipated and there could be delays and additional costs when projects are implemented. Under our E-DEUTZ strategy, we are adding electric and hybrid drive systems to the existing technology portfolio. This strategy presents the DEUTZ Group with numerous opportunities but is, of course, also associated with risks. These markets might not grow as anticipated either, while new product developments may not be as well received by customers as predicted or may not be able to compete with rival products.

We attempt to mitigate these risks by precisely analysing trends in our markets and by taking into account external market research. We also enter into close alliances with our major customers in the target markets. Our partners under our three-pillar growth strategy for China are market leaders. In September 2017, we acquired the electric drive specialist Torqeedo in order to accelerate the implementation of the E-DEUTZ strategy. Finally, we closely monitor our strategic projects so that we are able to respond immediately to changes.

In view of the measures in place, we categorise the strategic risks with regard to the attainment of our financial targets as 'low' in 2019 and as 'moderate' in the medium term.

OPERATIONAL RISK

Procurement risk Supply shortages at our suppliers – e.g. as a result of Brexit or the economic situation – may lead to production downtime and delays in our own deliveries if there are no alternative sources of supply. This would adversely affect our earnings. These potential risks arise specifically in connection with the procurement of components and input materials from third parties. This could have a negative impact on DEUTZ's net income and on its capacity utilisation.

We seek to mitigate these risks by carrying out intensive supplier management and ongoing monitoring of the market.

Besides these global activities, there are three cornerstones to our procurement strategy for strategic and production-critical components: firstly, long-term supplier relationships and supply agreements; secondly, increased dual sourcing; and, thirdly, where appropriate, allocation of production to subcontractors. These proven approaches together minimise the procurement risks and secure the required capacity to the greatest possible extent.

Furthermore, we supported a change of ownership at a supplier of cast parts in order to improve this supply relationship. This involved making a financial commitment in 2018 that may give rise to financial risks.

In view of the measures in place, we categorise the procurement risks with regard to the attainment of our financial targets as 'low' in 2019.

Production risk Fluctuations in capacity utilisation in production that result from our level of dependency on the general economic situation can, just like breakdown-related production delays, have a negative impact on profitability.

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 programme meetings and capacity planning meetings are held monthly to ensure that our capacity is adjusted in line with orders on hand. 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 minimise these risks, we continue to categorise 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, for example as a result of delays to production start-up. Potential warranty claims and claims for compensation could have a negative impact on our financial position and financial performance.

We have set up local quality departments to ensure quality in all plants and relevant areas of the Group. These departments systematically analyse sources of errors and defects, optimise production processes, take action to minimise the risk in production start-ups and reduce warranty risks. A central quality management organisation ensures that standardised 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. In 2018, twelve employees successfully trained as Lean Six Sigma Black Belts. This method is being applied to projects in development, production and service departments with the aim of quickly rectifying errors or even preventing them in the first place.

Sufficient provisions are recognised on the balance sheet to account for warranty risks. In view of the precautionary measures that have been taken, we categorise any further quality risks that could negatively impact on our financial targets as ‘low’ for 2019.

OTHER RISKS

Cyber risk We are a technology-driven company that is heavily focused on research and development. Being an innovation leader gives us a competitive advantage that forms 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 authorisation. Cyber risks such as these could have a negative impact on our market position and limit our financial flexibility. This might ultimately harm our reputation.

We have put a series of measures in place to protect against cyber risks. As well as 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 categorise these risks as ‘low’.

Legal risks As a Group with multinational operations, DEUTZ is subject to a variety of regulations under tax, competition and patent law as well as to other legal and statutory requirements. Existing and potential legal disputes are recorded and analysed on an ongoing basis at DEUTZ; they are assessed in terms of their legal and financial impact and an appropriate amount is recognised in the risk provisions in the accounts. The outcome of legal disputes is 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 organisational 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 finalisation 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 minimise risk, we continue to categorise the 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 jeopardise the continued existence of the enterprise as a going concern. Other risk factors changed only marginally year on year.

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.

ACCOUNTING-RELATED INTERNAL CONTROL SYSTEM

The risk management system 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) brings together activities aimed at avoiding or limiting risk.

The Board of Management is responsible for setting up, monitoring, refining and ensuring the effectiveness of the ICS. 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 operating processes that provide the value flows for financial reporting, 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 unauthorised access to relevant data. There are written procedural instructions and, in particular, Group accounting guidelines that are regularly updated at head office and communicated throughout the Group. Each reporting entity is responsible for compliance with the guidelines, 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 Chief 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. In addition, the Audit Committee's monitoring function includes the ICS set up by the Board of Management as well as the accounting process itself.

The internal audit department prepares a risk-based audit plan and verifies whether the statutory regulations and the DEUTZ Group's internal guidelines for its entire control and risk management system are being complied with. As part of its monitoring function it reviews whether the defined 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

In the fast-paced, dynamic markets in which the DEUTZ Group operates, there are, in addition to the aforementioned risk factors that can negatively impact on the attainment of the business objectives, also opportunities that can have a positive effect on the business objectives of the Group for 2019 and beyond. Identifying and harnessing these opportunities is the responsibility of the individual operating segments of the Group. Unlike risks, opportunities are not collated and assessed centrally.

Unless otherwise stated, the opportunities described below refer to 2019 and relate to the DEUTZ Compact Engines and DEUTZ Customised Solutions segments.

Three-pillar growth strategy in China Because of its size and rate of growth, China – the world's largest individual market – is a very promising sales market. That is why we have reorganised our market presence in China. Our planned alliances with SANY, HORIZON and BEINEI will give us the ideal local production and service network and, at the same time, expand our customer base. We will further strengthen our business with enhanced digital solutions. By realigning our business in China, we can benefit more from the growth of this market and increase our revenue. On this basis, we are aiming to generate revenue in China of around €500 million in 2022.[1)]

Research and development Increasingly stringent emissions standards and general technological progress are placing huge demands on our entire industry. We are one of the innovation leaders and have a very strong competitive position thanks to our proven expertise, our many years of experience and our efficient processes in the research and development of innovative drive systems. We will continue to reinforce our strong competitive position by developing gas engines with a capacity of up to 4 litres, expanding our portfolio of products with a capacity of over 4 litres and developing hybrid and all-electric drives. Following a development period of just six months, we unveiled the first prototypes at the ELECTRIP Event Week in September 2018. The acquisition of Torqeedo and successful knowledge transfer has given us a five-year head start in terms of development.

New trends Diesel technology is currently the subject of much debate. We firmly believe that diesel technology will continue to be the dominant type of drive in off-highway applications for a long while yet. However, the discussion is making potential customers who, until now, have invested in their own diesel development work, more willing to collaborate with us instead. This creates a tremendous opportunity for us. Although we continue to have faith in diesel, we are also investing in other innovative technologies and the debate about diesel is opening up good opportunities to pursue new and innovative approaches – which is what our E-DEUTZ strategy is all about. In 2018, we opened an innovation centre that will provide further support for our innovation processes. This includes the possibility of tapping into new markets and customer groups by offering innovative solutions on a much bigger scale.

Services and digitalisation We intend to significantly expand our high-margin service business. Potential for growth may stem from offering new service products, broadening our service network and acquiring dealers. Opportunities are also presented by new sales channels, such as online shops, and digitalisation. Our DEUTZ Connect app, which we brought out in 2017 and will continue to add to, gives users access to engine diagnostics. This creates greater customer loyalty and satisfaction and has the potential to increase efficiency. In 2022, we want to generate revenue of more than €400 million from our service business.

[1)] DEUTZ is still examining whether this revenue will be fully consolidated.

OUTLOOK

SLIGHTLY MORE CAUTIOUS ECONOMIC FORECASTS

The International Monetary Fund (IMF)[1] has moderately lowered its forecasts for 2019 and 2020. It now predicts that global economic growth will be slightly below the 2018 rate. These lower expectations are primarily due to the trade conflict between the USA and China. Other factors include risks stemming from financial policy in Italy, the increasing uncertainty about the economic impact of the United Kingdom leaving the European Union and the downturn in Turkey.

Economic growth rates in Germany and in the eurozone as a whole are forecast to be slightly below or on a par with the level seen in 2018. The pace of growth in the US economy is expected to slacken, particularly in 2020. China's growth is also likely to falter in 2019 and next year.

GDP growth

%	2018	2019	2020
Global	3.7	3.5	3.6
Eurozone	1.8	1.6	1.7
Germany	1.5	1.3	1.6
Spain	2.5	2.2	1.9
France	1.5	1.5	1.6
Italy	1.0	0.6	0.9
USA	2.9	2.5	1.8
China	6.6	6.2	6.2

The business climate index published by the ifo Institute of Economic Research, which covers trade and industry in Germany[2], fell from 102.0 points to 101.0 points in December 2018. Companies were again less satisfied with their current business situation. Their expectations for the months ahead were also gloomier. The ISM purchasing managers' index[3] in the USA had risen to 56.6 points as at 1 February 2019. January was therefore surprisingly strong for US industry.

DIESEL ENGINES MARKET

We anticipate that most markets will see a slight rise in unit sales in 2019. The biggest increase is likely to be in demand for material handling applications in China. By contrast, we believe that the Chinese market for agricultural machinery will contract slightly.

GDP growth in 2019[4]

%	Europe	North America	China
Construction equipment	0 to 5	0 to 5	0 to 5
Material handling	0 to 5	0 to 5	5 to 10
Agricultural machinery	0 to 5	0 to 5	–10 to –5

UNIT SALES, REVENUE

This year, DEUTZ's engine business will benefit from continuing strong demand from customers against the background of a robust economy. The start of 2019 has been characterised by a high level of orders on hand, which bodes very well for business in the first half of the year. Following the very healthy economic situation in 2018, we anticipate more moderate growth in 2019. Moreover, we do not expect a repeat of the substantial effects from customers bringing forward their spending ahead of the switch to the new emissions standard in the European Union on 1 January 2019 (EU Stage V).

We believe the service business's revenue will continue to rise thanks to various service initiatives.

Overall, we predict that revenue will climb to more than €1.8 billion in 2019, with all segments contributing to this increase.

Our forecasts are of course subject to great uncertainty. The flexibility of our business and a competitive cost structure therefore remain key factors in our competitiveness.

EARNINGS

In 2019, we expect to see a further increase in the EBIT margin before exceptional items to ≥ 5.0 per cent. The improvement to the EBIT margin before exceptional items will be mainly due to the expected further rise in revenue, but also to the various initiatives designed to boost efficiency. These include the ongoing optimisation of our product portfolio, the supply chain and production. The continued expansion of the service business will also help to improve overall profitability relative to 2018. Conversely, collectively agreed pay increases and higher commodity prices will squeeze earnings. We believe the improvement in earnings will come mainly from the DEUTZ Compact Engines segment, whereas operating profit in the DCS and Other segments will be on a par with 2018 or slightly higher.

[1] IMF, 'World Economic Outlook Update', January 2019.

[2] ifo Institute of Economic Research, January 2019.
[3] ISM Institute for Supply Management, February 2019.
[4] PSR, 'OE Link Update Bulletin Q4 2018'.

The final instalment of the purchase consideration from the disposal of the Cologne-Deutz site could provide a positive exceptional item. After the development plan for the site has been approved, we will receivable a variable payment in the region of around €50 million. The amount and timing of this payment depends on this approval and is therefore not yet certain. From a current perspective, we assume that the payment will be made in 2019.

As a result of the anticipated increase in operating profit, we believe that the return on capital employed (ROCE) before exceptional items will see a further improvement in 2019.

COMMODITIES, COLLECTIVE PAY AGREEMENTS

Commodity prices Given the growth of the global economy and strong demand in the manufacturing sector, we anticipate that prices will continue to rise in the primary markets this year.

Collective pay bargaining at the start of 2018 The parties signed the current collective pay agreement for the metalworking and electrical engineering industry in Germany, which runs until 31 March 2020, after intensive negotiations. The main features of the agreement are a pay rise of 4.3 per cent in 2018, one-off payments for employees in 2019 and the flexibility to choose working hours of between 28 and 40 hours per week.

RESEARCH AND DEVELOPMENT EXPENDITURE[1)]

We predict that research and development spending will rise to between €85 million and €90 million, of which approximately €15 million to €20 million will be capitalised. This is because of new engine projects and activities relating to the E-DEUTZ strategy that will lead to the expansion of our engine portfolio.

CAPITAL EXPENDITURE

We forecast that our capital expenditure on property, plant and equipment and on intangible assets (excluding capitalisation of research and development expenditure) will be in the range of €85 million to €95 million in 2019. In addition, we anticipate capital expenditure in the mid double-digit millions in connection with our three-pillar growth strategy for China.

WORKING CAPITAL RATIO, FREE CASH FLOW AND EQUITY RATIO

We expect that the working capital ratio will rise to around 16 to 17 per cent. The level of free cash flow will depend to a significant extent on working capital. We expect it to be in the mid double-digit millions of euros, given that working capital is budgeted to increase. In 2019, free cash flow will also be influenced by the final instalment of the purchase consideration from the disposal of the land occupied by our former Cologne-Deutz site.

We intend to maintain our equity ratio, which is currently 49.5 per cent, at well above 40 per cent. The good level of equity reduces our dependency on capital markets in a volatile market environment.

[1)] Research and development expenditure constitutes actual spending on R&D projects. It differs from the research and development costs recognised in the income statement in that development expenditure that can be capitalised is deducted and amortisation on completed development projects is added.

EMPLOYEES

Flexible headcount adjustment In view of the planned increase in production, we anticipate that we will continue to need additional workers. We intend to further increase the proportion of flexible contracts, whether fixed-term or temporary, while complying with the provisions of the German Labour Leasing Act (AÜG). As we operate in a cyclical industry, this is the best way that we can respond to fluctuations in our demand for employees.

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.

SEPARATE COMBINED NON-FINANCIAL REPORT

ABOUT THIS NON-FINANCIAL REPORT

In accordance with section 315b et seq. and section 289b et seq. of the German Commercial Code (HGB), DEUTZ has been publishing a separate combined non-financial report ('non-financial report') for each financial year since 2017. The content of this report covers both the DEUTZ Group and the parent company DEUTZ AG and is issued as a separate report. Unless otherwise indicated, all disclosures pertain to the Group ('DEUTZ') as a whole. Disclosures that relate only to DEUTZ AG are labelled accordingly. The non-financial report summarises the key topics pertaining to the following areas of focus: environmental matters, treatment of employees, social responsibility and measures to combat corruption and bribery. Reference is made at the relevant points to further information contained in other parts of this annual report. References to disclosures outside the scope of the consolidated financial statements and the annual financial statements of DEUTZ AG and the combined management report of DEUTZ AG and the Group for 2018 do not form part of the non-financial report.

This non-financial report has been produced with reference to the framework provided by the German Sustainability Code (DNK). It covers criteria 1, 3 and 6 of the DNK.

The non-financial report has been voluntarily submitted for a review with limited assurance pursuant to ISAE 3000 (Revised).

Using the net method, we identified no material risks in relation to our own business activity, to our business relationships, products and services or to aspects relating to the 13 key topics pursuant to sections 289c (3) nos. 3 and 4 HGB, that are very likely to have a serious impact on the reportable areas of focus now or in the future. All other information on opportunities and risks are presented in the opportunity and risk report on page 55 et seq. of the combined management report.

BUSINESS MODEL

DEUTZ is one of the world's leading manufacturers of innovative drive systems. It offers a broad range of engines with capacities ranging from 19 kW to 620 kW that are used in construction equipment, agricultural machinery, material handling equipment, stationary equipment, commercial vehicles, rail vehicles and other applications. For further information on the business model, see page 28 et seq. in the combined management report of this annual report.

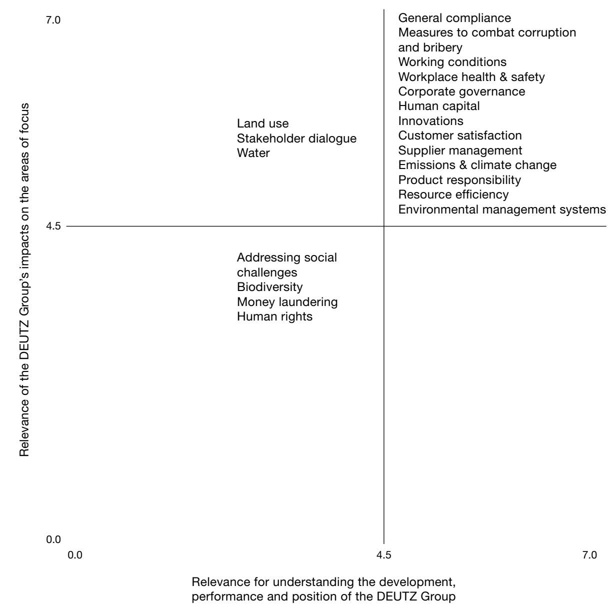
MATERIALITY ASSESSMENT

In 2017, in preparation for the non-financial report, we set up a project to identify the key topics in accordance with the HGB criteria.

We reviewed the materiality assessment for the 2018 reporting year and, having found no changes, adopted it as is.

The materiality matrix encompasses the dimensions 'Impacts of DEUTZ's activities on the areas of focus' and 'Relevance for understanding the development, performance and position of the DEUTZ Group'.

DEUTZ Group: Materiality matrix



The following key topics were identified for each area of focus:

- Environmental matters: environmental management systems, resource efficiency, air quality and climate
- Treatment of employees: working conditions, health and safety, employee development and training
- Social responsibility: product responsibility
- Compliance: general compliance, measures to combat corruption and bribery, corporate governance
- Overarching topics: customer satisfaction, innovation, supplier management

In the following section, we report on the 13 key topics on the basis of the criteria specified under HGB.

The materiality assessment revealed that the subject of human rights has little relevance in terms of impacts on the areas of focus and in terms of understanding the development, performance and position of our Company because our compliance with applicable domestic and international laws and collectively agreed working conditions means that human rights infringements can essentially be ruled out. Furthermore, it emerged that there were no material risks with regard to our business activities, to our business relationships, products and services, or to aspects relating to the 13 key topics that are very likely to have a serious impact on the reportable areas of focus now or in the future.

According to the materiality assessment, the subject of corporate social responsibility (CSR) has low relevance. DEUTZ reports on its CSR activities on a voluntary basis.

In 2018, DEUTZ decided to formulate an overarching CSR strategy and to review the materiality assessment in this context. The outcome will be presented in the non-financial report for 2019.

ENVIRONMENTAL MATTERS

Key environmental concerns for DEUTZ are environmental management systems, resource efficiency, air quality and climate. These are explained below.

DEUTZ AG's integrated management system, which covers environmental protection, energy and quality, meets the requirements in the current versions of the DIN EN ISO 14001, 50001 and 9001:2015 standards. During the reporting period, this conformity was reviewed and recertified by the independent auditors from TÜV Rheinland Cert GmbH. No nonconformities with the standards were identified.

DEUTZ AG routinely sets its own targets under the integrated management system. The departments and the highest management level of our Company are jointly responsible for determining whether these voluntary targets have been achieved. Every year, they decide on appropriate measures to facilitate the attainment of the targets and make the necessary adjustments to processes.

Providing legal certainty In order to ensure that legal requirements and its own rules are satisfied, DEUTZ AG has assembled a team of auditors who examine all relevant areas of the business. Noncomformities and areas with potential for improvement are recorded and communicated and are actioned with the support of the Energy Management and Environmental Management departments. The individuals responsible for resolving the nonconformities and the deadlines by which this must be done are always clearly defined.

An approval procedure is in place to ensure that substances that can harm our employees, our customers or the environment are used as little as possible. As a downstream user of products, DEUTZ AG rigorously assesses its suppliers to check that they are compliant with the REACH and RoHS directives.

Energy management In 2018, the external auditors carried out a monitoring audit and recertified DEUTZ AG's energy management system under ISO 50001. As in previous years, there were no nonconformities. The system, with its monitoring instruments, is being continually improved in order to enhance transparency and enable energy flows to be recorded and allocated to the relevant stages of the production process. This makes us better able to plan and implement measures aimed at raising efficiency.

The gradual replacement of old light sources with smart LEDs is an example of the type of project whose economic impact can be estimated using this method. The approximately 75 per cent reduction in the amount of power used by lighting in the relevant areas of the business is resulting in a direct and substantial improvement in energy-related performance.

Energy consumption in our plants rose year on year due to the higher volume of units manufactured in 2018. This is particularly down to increased electricity consumption in production and assembly. The difference in the amount of heating (natural gas, heating oil and district heating) used is the result of the restructuring of our sites, where the various heating systems in use resulted in a shift in the proportion of energy sources. In total, the amount of heating required rose due to the higher number of shifts.

The ramp-up of alternative drive system production (see the 'Product responsibility' section on page 70) is leading to higher consumption of LPG as the fuel for these engines. This increase is more than offset by lower diesel consumption.

Through our energy management, we optimised the higher overall energy consumption caused by increased manufacturing output in such a way that fuel consumption per engine, which we report as CO_2 emissions per engine, was further reduced in 2018, exceeding the targets we set ourselves.

DEUTZ Group: Energy consumption in our plants [1]

MWh

	2018	2017 [5]
Electricity	94,999	84,605
Natural gas	38,271	35,277
District heating	12,349	12,223
Heating oil [2]	3,359	3,653
Diesel fuel [3]	18,165	19,218
LPG [4]	633	421
Total	167,777	155,397

[1] Plants in the DEUTZ Group, excluding joint ventures.
[2] At 10.5 kWh/litre (mean).
[3] At 9.85 kWh/litre (mean).
[4] At 12.8 kWh/kg (mean).
[5] Prior-year figures are only partially comparable because no data was included for the subsidiary Torqeedo.

Targets for emissions reduction set For 2018, the DEUTZ Group again set itself the target of reducing CO_2 emissions per manufactured engine by at least 2 per cent per annum. And for the first time, we also set DEUTZ AG targets for dust and nitrogen oxide emissions. Both were to be reduced by 1 per cent per manufactured engine compared with 2017. Diesel engines do not generally emit benzene, and where they do so it is below the official measurements' threshold for detection. For this reason, benzene emissions are not reported on for 2018.

Factoring in sustainability at an early stage The optimisation of our network of sites, which was completed last year, is having a major effect on resource efficiency. The closure of the Cologne-Deutz site and the opening of the shaft centre in Cologne-Porz have greatly improved our energy efficiency. When designing its workspaces, DEUTZ AG takes sustainability aspects into account as soon as planning starts. At the Porz plant, the supply of coolant has been centralised and the new shaft centre's flow of materials optimised from an economic and ecological perspective.

The amount of fluids consumed in mechanical fabrication at the Porz plant was down by 6.4 per cent (2017: 0.47 litres per shaft; 2018: 0.44 litres per shaft). In the period under review, we further reduced the throughput times[1] of camshafts by around 18 per cent and of crankshafts by more than 63 per cent. This is attributable to the modernisation of machinery and the ongoing optimisation of work processes.

Nitrogen oxide and dust emissions fall below the approved thresholds Modern and efficient exhaust aftertreatment systems and modifications to make our engine products more environmentally friendly are substantially lowering the level of air pollutants released in tests carried out in our engine test bays. This is particularly significant given that emissions standards are becoming ever stricter. Routine measurements carried out by experts confirm that we comply with or fall significantly below the approved thresholds.

Cold tests significantly reduce carbon emissions A number of different measures are in place to achieve the aim of reducing CO_2 emissions. At DEUTZ itself, emissions are primarily produced by the engine test bays used in development and production. The optimisation of the duration and technical aspects of the test bay processes, often down to the tiniest details, is steadily reducing fuel consumption in the test bays per manufactured engine (2017: 11.23 litres per manufactured engine, 2018: 8.60 litres per manufactured engine). The implementation of the plan to 'cold test' some of the diesel engines is lowering the amount of fuel consumed by the testing of these engines to an absolute minimum. In a cold test, comprehensive diagnostics are run on the engine without it needing to be started, which helps to reduce fuel consumption and emissions. The project to implement the cold tests was completed last year. The phasing in of cold testing for selected production engine series will commence in 2019.

[1] Mean throughput times of camshafts and crankshafts. The calculation method currently used differs from the one used in the prior-year calculation.

Significant reduction in emissions The DEUTZ Group's primary environmental target is to reduce CO_2 emissions per engine manufactured by at least 2 per cent every year, and it did significantly better than this in 2018, cutting emissions by around 14 per cent. This is mainly attributable to the optimisation of the number of sites in Germany and the greatly expanded production programme. The overall impact will soon be enhanced by the introduction of cold testing, which reduces some of the test runs that engines have to undergo.

Nitrogen oxide and dust emissions are only reported for DEUTZ AG, as they are mainly generated in the test bays at the Cologne-Porz and Ulm plants. The fall in emissions per engine (NOx: down by 24 per cent, dust down by 19 per cent) is attributable to the 14 per cent reduction in fuel consumption in the engine development test bays at the Cologne-Porz plant.

DEUTZ Group: Annual CO_2 emissions in our plants [1]

Tonnes

	2018	2017[2]
CO_2 emissions (Scope 1)	13,530	13,239
CO_2 emissions (Scope 2)	42,240	38,012
CO_2 emissions (total)	55,770	51,251

Scope 1: CO_2 emissions from diesel, natural gas, LPG and heating oil caused by combustion in our own facilities.
Scope 2: CO_2 emissions relating to purchased energy (e.g. electricity, district heating).
[1] CO_2 = carbon dioxide equivalents.
CO_2 emissions in plants in the DEUTZ Group, excluding joint ventures. CO_2 figures are reported in accordance with the Greenhouse Gas Protocol and are determined by multiplying the energy consumed by the relevant emissions factor. Prior-year figures have been adjusted in line with the new calculation method.
[2] Prior-year figures are only partially comparable because no data was included for the subsidiary Torqeedo.

DEUTZ Group: CO_2 emissions per engine [1]

Emissions per engine

	2018	2017[2]
CO_2 (kg)	257	299

[1] CO_2 = carbon dioxide equivalents.
CO_2 emissions in plants in the DEUTZ Group, excluding joint ventures. The other data relates only to German plants.
CO_2 figures are reported in accordance with the Greenhouse Gas Protocol. Prior-year figures have been adjusted in line with the new calculation method. The 'emissions per engine' figure is calculated by dividing total emissions by the number of engines made.
CO_2 reporting includes scopes 1 and 2. Only combustion engines and electric motors are counted as manufactured units. Components such as batteries, gearwheels and piston rods for third-party engines are not counted.
[2] Prior-year figures are only partially comparable because no data was included for the subsidiary Torqeedo.

DEUTZ AG: Emissions per engine in our plants [1]

	2018	2017[2]
Nitrogen oxide (kg)[3]	0.19	0.25
Dust (g)	1.80	2.21

[1] The 'emissions per engine' figure is calculated by dividing total emissions by the number of engines made.
[2] In 2018, the scope considered for nitrogen oxide and dust changed compared to the previous year as from 2017 the figures were reported for DEUTZ AG and not for the Group. The figures for 2017 have been restated accordingly to allow for comparison.
[3] Only combustion engines and electric motors are counted as manufactured units. Components such as batteries, gearwheels and piston rods for third-party engines are not counted. Electric motors do not emit nitrogen oxide or dust.

TREATMENT OF EMPLOYEES

A pioneering spirit and innovation are key to the DEUTZ mission. To implement them, the Company needs highly qualified and motivated employees who will show initiative and ingenuity in pursuit of our objectives.

Because of the materiality of DEUTZ AG as the executive parent company, there is currently no overarching system that monitors the treatment of employees in the Group as a whole. Our reporting therefore focuses on the treatment of employees at DEUTZ AG. The subsidiaries are managed on an individual basis on account of different local circumstances. The local senior management teams regularly report on relevant matters to DEUTZ AG's management. Certain activities at DEUTZ Spain are also reported on in this section as examples of the DEUTZ Group's engagement at regional level.

Employee development and training DEUTZ AG has formulated the following goals in this area:

- Provide foundation training for specific specialist positions
- Fill vacancies for specialist/management roles with qualified internal candidates
- Nurture the creativity and commitment of employees at all levels and help them to develop their skills

The number of apprentices to be employed and their distribution across the various occupations is agreed every year with the Board of Management and a works council commission made up of equal numbers of employer representatives and workforce representatives. Training management regularly reports to HR about the status of recruitment.

We systematically pursue our objective of filling specialist and management positions from within the Company by advertising all open vacancies internally. No annual target has been set in this regard.

We promote employee training and skills in particular by offering internal and external continuing professional development (CPD). This is based on the requirements of the departments, which are ascertained by conducting an annual survey of the line managers. No target figure has been set, for example for the number of CPD events or the amount of budget used.

Ideas management is an established method for promoting and rewarding our employees' creativity. A company-wide agreement is in place that outlines the procedure and the processes.

Training and development a high priority Measures in place at DEUTZ AG include succession planning processes, individual development plans, training in technical and IT professions, career guidance for young people, student programmes, support for part-time education (e.g. master's degrees), inhouse training courses and training courses run in collaboration with external providers. These measures are designed to continually develop our existing employees in the various functions and to attract suitably qualified candidates to join them in the Company.

DEUTZ AG has long been committed to providing vocational training. In Germany, our apprentices can train in careers ranging from electronics, mechatronics and metal engineering to warehouse logistics and business administration. Our training centre in Cologne also provides vocational training for apprentices from other companies. The achievements of trainees and the DEUTZ training centre in Cologne are regularly recognised, and 2018 was no exception. For the eighth year in a row, the DEUTZ training centre was recognised by the Chambers of Industry and Commerce for its outstanding achievements in vocational training. DEUTZ AG apprentices were awarded 'best performer' certificates at regional and federal state level.

DEUTZ AG takes on apprentices after they have completed their training and recruits graduates who worked at the Company while they were studying. Technical and *meister* grade positions are generally filled by internal candidates. We have also improved skills training for employees and expanded the training programmes.

Our overall ratio of trainees to other employees at DEUTZ AG was 3.2 per cent in 2018 (2017: 2.5 per cent). We gave a permanent employment contract to all apprentices and trainees who passed their final examination. Currently, around 8 per cent of apprentices at DEUTZ are female.

Our Company also employed interns and students in the year under review. Some of the students wrote their bachelor or master's dissertations with us and some spent a semester with us to gain industry experience.

DEUTZ Spain nurtures talent In the year under review, DEUTZ Spain launched its second training programme for high-potential individuals, in which the four best engineering graduates from the Universidad de Extremadura and the two best graduates from the dual vocational training scheme rotate between three areas of the company (production, logistics and design). After each rotation, a project is presented and evaluated. The most promising participants in the programme will be employed on a permanent basis.

The opening of the DEUTZ Business School in Zafra moved a step closer last year, with construction work commencing after the capital expenditure was authorised. Talks were also held with potential partners. Teaching is scheduled to begin at the school in April 2019.

Professional training and development We run a special leadership programme for our management trainees that is tailored to their individual strengths. In 2018, a new cohort of high-potential employees were given the opportunity to prepare for their future roles in the Company. Their development targets and action plans were agreed on an individual basis.

We ran internal training courses and external events as part of our professional development programme, and specialist employees participated in skills training provided by the employers' liability insurance association. We continued to work successfully with the training provider macils.management-centrum GmbH on the implementation of specific workshops.

In 2018, as part of the DEUTZ quality offensive, twelve DEUTZ AG employees trained to become Lean Six Sigma Black Belts in accordance with the standards set forth by the American Society for Quality (ASQ). The 16-day training programme culminated in the completion of a Lean Six Sigma project.

Successful ideas management DEUTZ AG uses a bonus-driven ideas management scheme to harness the creativity of its employees.

Last year, the ideas that they submitted (an average of 23.3 per 100 employees) generated a benefit of €162 thousand.

This creativity pays off for employees and the Company in equal measure.

Commitment to the local workforce As well as training and developing its own employees, DEUTZ AG also provides general support to workers in the regions where it is based. The following initiatives complement the activities undertaken by the Company that are reported on in the 'Social responsibility' section.

Helping young people and the unemployed into work For more than 27 years, we have been working with IN VIA – an association under the auspices of the German Caritas organisation – and the German Federal Employment Agency to provide career preparation courses for young people with learning and social difficulties. In 2017/18, around 30 participants underwent basic metalwork/warehouse training over a ten-month period at the DEUTZ training centre. In the year under review, 82 per cent of those who completed this training secured a place on a vocational apprenticeship scheme or were hired, which is a relatively high proportion.

Successful integration of disabled workers DEUTZ has also successfully worked with GWK, a not-for-profit organisation based in Cologne, for more than 40 years. We have worked with GWK for many years on finding new areas of the business where the workshops could add significant value for DEUTZ AG and vice versa.

Today, some 200 people with disabilities work at the various GWK workshops and service centres where they provide services for DEUTZ AG. And we would very much like to expand this collaboration in the future.

Industrial placement in Spain As part of its Experiencing Europe programme, DEUTZ Spain gave young people from Germany the opportunity to complete an industrial placement in Spain. As well as finding out what it is like to live and work in another country, the participants were able to experience the common values of European integration at first hand.

WORKING CONDITIONS

Compliance with laws and agreements DEUTZ acts in accordance with the collective pay agreements, tax laws, social insurance guidelines and rules on variable remuneration that are currently applicable. Our corporate culture is built on respect for different cultural values and supports equal opportunities for all employees, regardless of gender, age, ethnicity, sexual orientation or disability. Our management culture helps managers and employees to work together efficiently and from a position of trust. DEUTZ strives for fair and appropriate remuneration for all employees.

DEUTZ champions diversity In 2018, we adopted a diversity plan for the Supervisory Board and Board of Management of DEUTZ AG. The objective is to consciously harness diversity as a means of driving the Company forward. After all, taking account of different perspectives, skills, backgrounds and experience will be key to maintaining our competitiveness and success over the long term. Diversity within the Board of Management will, in particular, help us to better understand new business models and the wide-ranging expectations of our customers from around the world.

DEUTZ Spain commits to gender equality DEUTZ Spain has signed an agreement with its works council guaranteeing equality for women and men.

Employee communications and consultation At all locations, the senior management team is closely involved in the implementation of measures. DEUTZ AG also follows the principle of codetermination, which gives workers a voice in company decisions. All pay-scale employees in Germany are subject to the collective pay agreement of the metalworking and electrical engineering industry. Employees are represented by a works council at each site. There is also a General Works Council with responsibility for matters concerning multiple sites. An elected Senior Staff Committee represents the interests of senior managers at DEUTZ AG. Both the works council and senior managers appoint representatives to the Company's Supervisory Board. Employee rights are safeguarded by adherence to the Company's own corporate and management principles, collective bargaining agreements and the corresponding agreements with the employee representative bodies.

The myDEUTZ staff magazine, the intranet, noticeboards and ad-hoc announcements keep employees up to date with what is going on in the Company. Moreover, any employee can attend one of the local works meetings and have their voice heard if they feel this is necessary.

Childcare facilities Employees of DEUTZ AG in Cologne can have children under the age of three looked after at the 'DEUTZlinge' day care centre, which makes it easier for them to return to their day-to-day work after parental leave. The centre, which opened in autumn 2017, is proving very popular with employees. More than 85 new fathers at DEUTZ AG made use of the option to take parental leave. In 2018, two members of staff looked after a total of seven children at the day care centre in Cologne-Porz.

Sharing profits with employees One of the ways that DEUTZ AG motivates its employees is by letting them share in its success. The Board of Management and General Works Council have agreed to annually reward all employees covered by collective pay agreements with a share of the Company's profits. DEUTZ AG also hosted celebrations for staff of DEUTZ AG and Torqeedo at the sites in Cologne and Ulm. All employees and their families were invited to the events, which proved extremely popular and further strengthened the feeling of togetherness within the Company.

Codetermination in action On the basis of the applicable collective pay agreements and laws, the employee representatives at DEUTZ AG are closely involved in the processes and in any action taken that concerns the treatment of employees (recruitment, remuneration, reassignment, development, dismissal). The objective is to agree mutually acceptable rules and arrangements for the matters at hand.

Key figures bear out the effectiveness of measures Average staff turnover[1] at DEUTZ AG is very low at 0.79 per cent.

HEALTH AND SAFETY

Accident frequency A groupwide[3] accident frequency rate of less than 10 is a target that we have specified in the area of health and safety. Accident frequency is defined as the number of reportable accidents[2] per million hours worked and is known internationally as the recordable incident rate (RIR). This key indicator takes into account actual hours worked, so it includes overtime and weekend work.

A range of measures to achieve targets Ergonomics and work safety training, accident analyses and workplace audits were carried out across DEUTZ AG's Cologne-Porz site to promote the health and safety of our employees. New software for optimising movement patterns in assembly areas was introduced to provide insights into the health implications of specific movement patterns.

We put a range of measures in place to safeguard the health of our employees, including flu vaccinations, medical check-ups, sports events and campaigns run in conjunction with health insurance schemes. We also offered managers in assembly and production the opportunity to follow a multi-part training programme in health-oriented leadership.

Appropriate measures are in place to reintegrate members of staff at DEUTZ AG who have been on long-term sick leave. These measures are tailored to the individual circumstances of the employee in question.

At all locations, the senior management team is closely involved in the implementation of health-related measures through management reviews. External service providers and health insurance schemes are also involved.

[1] The figure for staff turnover only includes employees who resigned. Changes have been made to the calculation method compared with the prior year.
[2] An accident is deemed to be reportable if it results in the injured employee being absent from work for more than three calendar days. The day of the accident itself is not counted.
[3] Plants in the DEUTZ Group, excluding joint ventures.

Alignment with overarching standards In order to assess safety and the protection of its employees' health, DEUTZ AG and DEUTZ Spain have put in place a system for checking workspaces. IMS (Integrated Management System) has been introduced in Germany and OHSAS in Spain. The primary areas of focus are health, safety and the environment. The frequency with which these internal inspections take place depends on the extent and type of the risk presented by the machinery or workspace. Teams made up of experts from various disciplines carry out these workplace safety inspections in areas such as assembly and production. Any issues that are identified are documented in action plans that specify a timeframe for remedial measures to be taken.

Accident frequency The DEUTZ Group's RIR for the year under review was 15.0, which is roughly on a par with the prior year (2017: RIR of 13.4). The Group's target accident frequency rate of less than 10 was not achieved. This is primarily due to the sharp increase in the production programme and the higher number of concurrent workflows that resulted from this.

SOCIAL RESPONSIBILITY

Product responsibility is a cornerstone of our commitment to act as a good corporate citizen.

PRODUCT RESPONSIBILITY

As part of its mission, DEUTZ has set itself the target of delivering sustainability for its customers in the form of efficient, high-performance products. Against this background, we developed the E-DEUTZ strategy in 2018 and defined targets. The achievement of targets is monitored regularly and reported to the Board of Management. We also implemented further sustainability measures, which we report on below.

High recycling rate targeted DEUTZ AG has a target recycling rate of over 97 per cent for its internal combustion engines. Through its Xchange programme, DEUTZ already offers an established system that allows used engines to be returned so that they can be reconditioned in preparation for a second lifecycle. Xchange plays its part in improving sustainability, as having used engines professionally refurbished gives them an extended life. The number of Xchange engines sold increased by 16.6 per cent last year (2018: 7,533 engines, 2017: 6,463 engines).

We are helping to reduce local and global emissions through our E-DEUTZ and gas engine strategy. DEUTZ has set itself the target of generating between 5 and 10 per cent of its revenue from electric drive systems by 2022. As part of our advanced drive system strategy, we are testing and developing a range of alternative fuels that will allow our engines to run on a carbon-neutral and emission-free basis. In addition to electric drives, we are developing engines that use hydrogen and synthetic fuels made using renewable energy sources. Engines in DEUTZ AG's current product range meet US EPA Tier 4 and EU Stage IV and V, which are the world's strictest emissions standards. In 2017, DEUTZ became the first engine manufacturer in the world to be awarded an EU Stage V certificate. In 2018, in advance of EU Stage V taking effect on 1 January 2019, we manufactured and delivered the first Stage V engine.

DEUTZ customers can also run their engines on biodiesel, which is almost completely carbon neutral. All engines manufactured in 2018 that meet the EU Stage IV and US Tier 4 emissions standards have been approved for use with biodiesel. And DEUTZ is now taking biodiesel approval into consideration in all new developments and refinements of its drive systems.

Further information on the sustainability of our products can be found under 'Innovations' on page 72 of the 'Overarching topics' section.

CORPORATE SOCIAL RESPONSIBILITY

Because of the materiality of DEUTZ AG as the executive parent company, there is currently no overarching system that monitors corporate social responsibility in the Group as a whole. Our reporting therefore focuses on corporate social responsibility at DEUTZ AG. The subsidiaries are managed on an individual basis on account of different local circumstances.

Corporate social responsibility is a well-established tradition at DEUTZ AG. As a company with operations around the world, we of course shoulder our responsibilities as a corporate citizen. We have been involved in corporate citizenship projects for many years, not only in our home region in the area around Cologne but also throughout Germany and beyond.

Nurturing enthusiasm for technology The DEUTZ engine museum, which is open to the public free of charge, displays original machines from the early days of engine technology and documents the important role that DEUTZ played in the motorisation of the world. The museum continues to be popular, with more than 2,000 people visiting it last year.

DEUTZ AG is also working with investors and the City of Cologne to preserve historical features as part of the redevelopment of the former DEUTZ site in the Deutz and Mülheim areas of Cologne. A further highlight is the Motorworld Köln/Rheinland project on the site of the historic Butzweilerhof airbase in the Ossendorf district of Cologne. The role that DEUTZ played in the history of Cologne and the world is prominent in various sections of this brand-new exhibition. The site as a whole is called the Nicolaus August Otto Park, and the large event hall, which can accommodate several thousand people, is called the Four Stroke Hangar.

Playing our part in the community We support community projects in the region with our 'DEUTZ fulfils your wish' Christmas initiative. In 2018, youngsters from Kalker Kindermittagstisch wrote down their wishes on 'wish notes' and hung them on the Christmas tree in the foyer at our head office in Cologne-Porz so that DEUTZ AG employees could make their wishes come true.

At the Ulm plant, DEUTZ AG apprentices once again supported a community-based project at Easter. There were collections throughout the plant, and the money was used to fill around 100 baskets with all kinds of Easter treats and vouchers.

Integrating people from disadvantaged backgrounds DEUTZ AG also puts the principles of good corporate citizenship into practice in the apprenticeships that it runs. The Company continued to work with IN VIA and GWK to support young people and the unemployed (see 'Treatment of employees', page 67) and launched a number of new initiatives last year.

For example, two Syrian refugees were given introductory training in metalworking and parts manufacturing at DEUTZ AG in Ulm as part of a special programme designed to prepare them for a full apprenticeship.

DEUTZ AG then offered the pair a place on the Company's industrial mechanic apprenticeship scheme beginning 1 September 2018, which they both accepted.

In addition to its work in vocational training, DEUTZ also supports employees with disabilities. Further information can be found in the 'Treatment of employees' section on page 67.

DEUTZ choir represents the Company The company choir regularly creates positive publicity for the DEUTZ name through its concerts and other appearances, which range from performances for staff and customers and local concerts at the Cologne Philharmonic Hall and Cologne-Gürzenich events centre to tours to churches and concert halls in Germany and abroad. The choir also supports good causes. Donations collected from concert-goers were again distributed to a number of charities last year. These included the 'We help' charity of the Kölner Stadtanzeiger newspaper and the Kölnische Rundschau newspaper's 'Good deeds for the elderly' charity.

Building bridges between industry and the arts: a highlight of last year, and good publicity for DEUTZ, was the concert tour that visited Italy, Switzerland and Germany. The three major public concerts and the four performances held in the factories of prestigious customers were well received. The patron of the DEUTZ choir is the Chairman of the DEUTZ AG Board of Management, Dr Ing Frank Hiller. This sends a strong signal, both internally and externally, of the choir's significance for the Company.

COMPLIANCE

General compliance, corporate governance and the fight against corruption and bribery play an important role in compliance. As measures to combat bribery and corruption form an integral part of the compliance management system (CMS), these key topics are explained together.

GENERAL COMPLIANCE AND MEASURES TO COMBAT BRIBERY AND CORRUPTION

DEUTZ considers it very important that all employees adhere to the rules imposed by the law, authorities or the Company at all times and without exception. Employees are also expected to demonstrate irreproachable ethical and moral conduct in their day-to-day work and when dealing with competitors. We will always refrain from engaging in any transaction that is inconsistent with these values. The Board of Management is also fully committed to compliance with competition law and has zero tolerance for any form of corruption. It strives to act in accordance with ethical principles at all times.

The prime objective of the groupwide CMS is to prevent violations of applicable laws, rules, regulations and internal policies. To this end, employees are given help in familiarising themselves with the relevant laws and policies as well as guidance on how to apply them correctly.

Compliance organisation in place A Compliance Officer appointed by the Board of Management coordinates compliance activities within the Group. The individual business units and subsidiaries have their own compliance coordinators, who are responsible for compliance in their organisations and present structured written reports twice a year to the Compliance Officer. The Compliance Officer in turn reports to the Board of Management and Audit Committee.

As well as information on the focus of compliance activities and changes to the legal situation or compliance organisation, the reports also detail possible risks and the countermeasures in place to mitigate or eliminate these risks. The basic principles of the compliance organisation are set forth in a compliance policy.

Regular meetings are held to develop, discuss and coordinate the compliance activities that need to be initiated across the Group. The Compliance Officer invites the compliance coordinators to these meetings. The compliance activities focus on preventing corruption, tackling money laundering and complying with export regulations (including export controls). They also ensure safety in the workplace, IT and data security, corporate security and product safety. A further aim is to prevent breaches of environmental, antitrust and insider trading laws.

As and when needed, the Board of Management and the Compliance Officer take legal advice as part of their efforts to continuously improve the CMS. The internal audit department advises on all activities. The CMS is also reviewed by internal audit or by external consultants, and is monitored by the Audit Committee on behalf of the Supervisory Board.

Code of conduct sets the tone Compliance with the CMS principles is set out in the code of conduct, which provides the framework for ensuring that behaviour towards business partners and employees is fair and in compliance with the law. The code of conduct forms the basis of a structured system of policy management that is continually updated. Other policies, such as the gifts and entertainment policy, the policy on the engagement of external distributors, the anti-money laundering policy and the insider trading policy, provide employees with binding rules on specific issues relevant to their day-to-day work. Training is intended to ensure that employees are aware of the applicable laws, rules, regulations and internal policies, and that they comply with them at all times in their day-to-day work.

Whistleblowing system also available to third parties Employees can supply information or direct questions to line managers, compliance coordinators, the Compliance Officer or the managers responsible for the legal affairs or internal audit units. And since the beginning of 2017, DEUTZ AG's website has featured a whistleblowing system that is also accessible to third parties (https://www.deutz.com/en/about-us/compliance/). Any information supplied is rigorously followed up, with external support called in where necessary.

More intensive training When it comes to training its employees, DEUTZ uses not only classroom-based methods but also the established groupwide e-learning programme.

At the start of the year, all of DEUTZ's administrative employees[1] (including employees of foreign affiliates, 2,136 employees, as at 31 December 2018) are assigned training modules that they are asked to complete before the end of the year. The assigned modules (fair competition, anti-corruption, information security) are based on their individual requirements. By the end of 2018, a total of 1,998 (93.5 per cent) of all administrative employees within the Group had completed the training.

Head-office employees in the sales, procurement, research and development and administration units, as well as in the subsidiaries, also generally receive annual classroom-based training that is specifically tailored to their areas of activity.

Classroom-based training on compliance issues is provided every year for non-administrative employees, most of whom work in the plants. These employees are also given regular safety training.

In 2019, a further e-learning module on health and safety at work is being added to the training catalogue. It is to be completed by all administrative employees.

[1] Here, the term administrative employees includes all individuals employed by the DEUTZ Group as at 31 December of a particular year who are integrated into the Group's IT infrastructure, have access to a PC and speak either German or English, as the e-learning modules are available only in these languages. It excludes employees who left the Company during the year, were on parental leave or were on long-term sick leave and therefore absent for more than 50 per cent of the year.

OVERARCHING TOPICS

Customer satisfaction, innovations and supplier management are important overarching topics. Because of the materiality of DEUTZ AG as the executive parent company, there is currently no system that monitors overarching topics in the Group as a whole. Our reporting therefore focuses on DEUTZ AG.

CUSTOMER SATISFACTION

Customer satisfaction is a high priority for DEUTZ. Everything we do is focused on our customers and their needs. We measure customer satisfaction based on the success of current customer projects, and we have set up a system to monitor the sales projects in each region. The status of these projects is regularly reported to the Board of Management in a sales review with senior local managers. Customer feedback on the progress of projects forms an essential part of the report. The aim of monitoring is to identify potential obstacles, and if the same obstacles are encountered repeatedly, we can put measures in place to improve customer satisfaction. This procedure was introduced at the end of 2018. In 2019, we will include the customer projects in the targets for the sales units, thus making them measurable.

We have continued with and expanded the existing activities aimed at increasing customer satisfaction and the quality improvement projects initiated in 2017 as part of our zero-defect strategy. DEUTZ AG's quality offensive also encompasses the introduction of Lean Six Sigma as a management system. Six Sigma projects focus particularly on improving delivery reliability and increasing the speed at which customer enquiries are processed. The relevant projects were implemented last year.

In addition to quality improvements, we believe that DEUTZ's innovative modular approach will also play a part in increasing customer satisfaction. The development of efficient and sustainable drive systems is giving our customers a reliable basis for planning. Under the advanced drive systems strategy, DEUTZ is able to supply modular drive concepts that can be customised for different fuel types, power requirements and emissions standards. This means minimised capital expenditure risks and shorter implementation times for customers when they switch or upgrade their technology. We also work closely with our customers on the development of new drive technologies, including as part of the E-DEUTZ project, which was launched at the Intermat trade fair in April 2018 in Paris. It was the first time that DEUTZ had presented its expertise in electric drive systems on the public stage. DEUTZ customers and other interested parties then got to see the results of the Company's electric drive developments at first hand. At the ELECTRIP event, which was held after the trade fair, all key stakeholders were able to experience for themselves the performance of DEUTZ's electric drive systems on water and on land.

INNOVATIONS

Our aim is to position DEUTZ as a leading manufacturer of innovative drive systems. Innovations at DEUTZ AG are primarily in one of the four following areas:

1) Alternative fuels: As well as looking at liquefied petroleum gas (LPG), we are focusing on natural gas, hydrogen and fuels generated from renewable sources.

2) Hybrid and all-electric drive systems: All-electric drives and the combination of internal combustion engines and electric motors (hybridisation) are key pillars of our development work.

3) Digitalisation: There is a particular focus on innovative digital solutions that offer our customers new services (connectivity, smart services for engines).

4) Market monitoring and refinement of existing products and technologies: Our production engine technology is analysed and optimised on an ongoing basis. The objective is to generate a high level of customer satisfaction across all applications.

Centralised research and development At DEUTZ AG, most innovations originate from the central R&D department in Cologne-Porz. Our DEUTZ Corporation and Torqeedo subsidiaries are involved at an early stage in product planning so that they can actively contribute their market-specific requirements to the development and innovation process. DEUTZ Corporation focuses in particular on US emissions legislation (EPA, CARB). Torqeedo is most closely involved in the innovation process when it comes to hybridisation and electrification.

Within DEUTZ AG, the product management department is responsible for monitoring the market and for the product requirements that result from this. Members of the Board of Management are among those that attend its quarterly 'Product Boards', at which market trends and preliminary development work are discussed and other development activities are initiated and prioritised. New products are developed and made production ready with the aid of the well-established product development process (PEP). Technologies and concepts are evaluated under our preliminary development process and brought to project readiness. We carry out internal and external development work in order to achieve the Company's targets. In the case of external development work, we collaborate closely with development partners that include suppliers, universities and research institutes.

Innovation centre opens in Cologne In November 2018, we opened a new innovation centre. Located at the Cologne-Porz site, it provides DEUTZ employees with space to work on ideas, develop them into prototypes, and shape them into a project, product or investment opportunity.

The focus of the visionary facility is on joint project work, networking and brainstorming. A range of formats such as mentoring sessions, pitch training and creative workshops will support employees in defining and implementing their ideas. The DEUTZ Accelerator innovation concept will provide additional support with developing their idea and designing a business model. The latest technology in the shape of a Microsoft Surface Hub, 3D printers and augmented reality is also available for this.

In 2018, the Fraunhofer Institute for Production Technology (IPT) commended DEUTZ AG for its exemplary use of agile development methods within the innovation process. Five companies from a field of 159 received IPT's Successful Practices title and we were among them.

Torqeedo drives forward E-DEUTZ strategy Torqeedo, the company that we acquired in 2017, serves as the nucleus for the E-DEUTZ strategy, under which we are developing hybrid and all-electric drives for off-highway applications. Torqeedo's expertise in electric-powered drive systems is providing a huge boost to innovation at DEUTZ. Torqeedo also brings new products to market that consolidate and extend its competitive edge in the market for electric drives for boats.

The DEUTZ AG senior management team is closely involved in innovation activities via the 'Product Boards'. At these meetings, which are attended by representatives from product management, sales and service, the Board of Management discusses the status of preliminary development and approves suitable projects for the next stage of development. Subsidised projects are discussed by a committee below the level of the senior management team.

A wide range of innovations launched Last year, we presented a number of pioneering new developments that stemmed from our innovation activities. At the ELECTRIP event held for DEUTZ customers, we showcased our E-DEUTZ strategy by demonstrating fully functioning prototypes of customer vehicles fitted with hybrid and all-electric drives. Participants were able to test drive the vehicles to get an idea of their functionality and usability.

We are also committed to investing in the digitalisation of our service products, including the DEUTZ Connect app, a tool for remote engine diagnostics. A wide range of market and machine data is collected and analysed for this purpose. This allows us to continually increase the benefits for customers and offer made-to-measure solutions. Moreover, our new web shop has brought the DEUTZ service network online.

In product development, we are committed to applying agile methods on a more widespread basis. Our positive experiences in the field of software development, for example, are now being brought to bear in other development disciplines.

Further patents and awards received We use patents, patent applications and utility models to safeguard our expertise against unauthorised use by third parties. In 2018, DEUTZ AG submitted twelve new patent applications, ten of which were in Germany. DEUTZ AG now holds a total of 117 patents registered in Germany and 165 registered elsewhere.

In recent years, Torqeedo has won multiple accolades for its innovative products and environmental credentials. At the 2018 European Commercial Marine Awards, for example, it was recognised in the Maritime Sustainability category for its contribution to the ECOCat, a 120-passenger electro-solar ferry that has been built for use in Spain and will be powered exclusively by solar energy. The propulsion system is based on Torqeedo's Deep Blue electric motors and high-capacity batteries.

This year, we have summarised the information on ideas management at DEUTZ AG in the 'Treatment of employees' section on page 67. Further information on research and development can be found in the combined management report on page 32.

SUPPLIER MANAGEMENT

DEUTZ places great value on supplier management, as our suppliers' performance directly influences the course of our business. DEUTZ AG's overarching supplier management system[1] is designed to continually improve quality, lead times, commercial conditions and general communication with our suppliers. There is a clear focus on supplier development. As part of this quality improvement process, target defect rates are defined for each product group, communicated to the suppliers and regularly monitored, and we initiate appropriate remedial measures where necessary. Our overarching objective is to have zero defects. All new original equipment suppliers need to be approved by DEUTZ AG based on self-declarations, feasibility studies, and supplementary documents and criteria. This process usually includes a site audit. The DEUTZ Group uses only certified original equipment suppliers (certified to ISO 9001:2015 as a minimum).

Close monitoring of suppliers DEUTZ AG manages its suppliers using a 'supplier cockpit'. We use this to monitor suppliers' performance from purchasing, delivery and quality perspectives and, in the case of development partners, with regard to their research and development capabilities and their ability to innovate. Before being included in the cockpit, suppliers must first be categorised accordingly. Their results for the individual KPIs and how these change over time are used to initiate remedial measures and improve performance.

On a monthly basis, the senior management team at DEUTZ AG is provided with information about the procurement budget and other KPIs in the balanced scorecard. This monthly procurement management report contains key figures for the Board of Management, including key financials and KPIs related to quality. The Board of Management confirmed the underlying targets.

In 2018, DEUTZ AG again carried out numerous activities to ensure compliance with the international regulations pertaining to REACH, RoHS and conflict minerals. The steering committee met at least every two weeks to adopt measures in response to changes in international regulations and to initiate process improvements.

Plans in place for supplier code of conduct Compliance with environmental, social and sustainability standards throughout the supply chain is a key concern for DEUTZ AG. So in 2018, we decided to develop a code of conduct for suppliers that would specify minimum standards for environmental protection, labour, safety and integrity and thereby clearly formulate what DEUTZ AG expects of its suppliers. In 2019, DEUTZ AG will communicate this code of conduct to all global and local suppliers and run a sustainability campaign to make them more aware of DEUTZ AG's expectations and requirements.

From 2019, to ensure that the suppliers are taking account of these standards and requirements in their processes, key elements of the code of conduct are being included in the supplier self-declarations and supplier audits. The results will be documented in the digital supplier records. Once suppliers have been made aware of the code of conduct, they are required to provide confirmation of their compliance.

[1] The statements relate to direct suppliers that have a contractual relationship with DEUTZ.

In the case of suppliers from particularly critical countries, the focus will be put on qualification measures that will help these suppliers to comply with the standards. If the standards are breached, the suppliers will be requested to make improvements as a first step. If they do not comply with this demand within a reasonable period of time, the supplier relationship may be terminated.

Regular monitoring of KPIs DEUTZ met its 2018 targets for delivery quality from its external suppliers for both initial samples and full production. Particularly positive is the historically low defect rate in parts per million (ppm). The results show that the continuous improvement process (CIP) and the measures we have taken are effective.

INDEPENDENT PRACTITIONER'S REPORT ON A LIMITED ASSURANCE ENGAGEMENT ON NON-FINANCIAL REPORTING[1)]

To DEUTZ AG, Köln

We have performed a limited assurance engagement on the combined separate non-financial re-port pursuant to §§ (Articles) 289b Abs. (paragraph) 3 and 315b Abs. 3 HGB ("Handelsgesetzbuch": "German Commercial Code") of DEUTZ AG, Köln (hereinafter the "Company") for the period from 01 January to 31 December 2018 (hereinafter the "Non-financial Report").

RESPONSIBILITIES OF THE EXECUTIVE DIRECTORS

The executive directors of the Company are responsible for the preparation of the Non-financial Report in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB.

This responsibility of Company's executive directors includes the selection and application of ap-propriate methods of non-financial reporting as well as making assumptions and estimates related to individual non-financial disclosures which are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as they have considered necessary to enable the preparation of a Non-financial Report that is free from material misstatement whether due to fraud or error.

INDEPENDENCE AND QUALITY CONTROL OF THE AUDIT FIRM

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

[1)] PricewaterhouseCoopers GmbH has performed a limited assurance engagement on the German version of the combined separate non-financial report and issued an independent assurance report in German language, which is authoritative. The following text is a translation of the independent assurance report.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Standard on Quality Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis - IDW QS 1) – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

PRACTITIONER´S RESPONSIBILITY

Our responsibility is to express a limited assurance conclusion on the Non-financial Report based on the assurance engagement we have performed.

Within the scope of our engagement, we did not perform an audit on external sources of in-formation or expert opinions, referred to in the Non-financial Report.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the IAASB. This Standard requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the Company's Non-financial Report for the period from 01 January to 31 December 2018 has not been prepared, in all material aspects, in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB.

In a limited assurance engagement the assurance procedures are less in extent than for a reasonable assurance engagement, and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's judgment.

Within the scope of our assurance engagement, we performed amongst others the following assurance procedures and further activities:

- Obtaining an understanding of the structure of the sustainability organization
- Inquiries of personnel involved in the preparation of the Non-financial Report regarding the preparation process, the internal control system relating to this process and selected disclosures in the Non-financial Report
- Identification of the likely risks of material misstatement of the Non-financial Report
- Analytical evaluation of selected disclosures in the Non-financial Report
- Comparison of selected disclosures with corresponding data in the consolidated financial statements and in the group management report
- Evaluation of the presentation of the non-financial information

ASSURANCE CONCLUSION

Based on the assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the Company's Non-financial Report for the period from 01 January to 31 December 2018 has not been prepared, in all material aspects, in accordance with §§ 315b and 315c in conjunction with 289b to 289e HGB.

INTENDED USE OF THE ASSURANCE REPORT

We issue this report on the basis of the engagement agreed with the Company. The assurance engagement has been performed for purposes of the Company and the report is solely intended to inform the Company about the results of the limited assurance engagement. The report is not intended for any third parties to base any (financial) decision thereon. Our responsibility lies only with the Company. We do not assume any responsibility towards third parties.

Frankfurt, 6 March 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Nicolette Behncke	ppa. Juliane v. Clausbruch
Wirtschaftsprüfer	Wirtschaftsprüfer
German public auditor	German public auditor

2018 CONSOLIDATED FINANCIAL STATEMENTS

2018 consolidated financial statements

Notes to the consolidated financial statements

Annual financial statements in accordance with the German Commercial Code (HGB)

Miscellaneous

INCOME STATEMENT FOR THE DEUTZ GROUP

€ million

	Note	2018	2017[1]
Revenue	1	**1,778.8**	**1,479.1**
Cost of sales	2	–1,468.3	–1,222.9
Research and development costs	3	–92.0	–94.8
Selling expenses	4	–96.4	–78.8
General and administrative expenses	4	–49.3	–41.5
Other operating income	5	40.6	144.1
Other operating expenses	6	–17.7	–41.9
Write-downs of financial assets		–0.7	–0.2
Profit/loss on equity-accounted investments	7	–2.2	–0.2
Write-downs of equity-accounted investments		–11.3	0.0
Other net investment income	7	0.5	0.9
EBIT		82.0	143.8
thereof exceptional items		0.0	104.1
thereof operating profit (EBIT before exceptional items)		82.0	39.7
Interest expenses, net	8	**–1.9**	**–2.4**
thereof finance costs	8	–2.4	–3.1
Net income before income taxes		**80.1**	**141.4**
Income taxes	9	–10.2	–22.9
Net income		**69.9**	**118.5**
thereof attributable to shareholders of DEUTZ AG		69.9	118.5
thereof attributable to non-controlling interests		0.0	0.0
Earnings per share (basic/diluted, €)	10	**0.58**	**0.98**

STATEMENT OF COMPREHENSIVE INCOME FOR THE DEUTZ GROUP

€ million

	Note	2018	2017[1]
Net income		**69.9**	**118.5**
Amounts that will not be reclassified to the income statement in the future	11	–0.1	1.8
Remeasurements of defined benefit plans		–0.1	1.8
Amounts that will be reclassified to the income statement in the future if specific conditions are met	11	**–16.4**	**–4.4**
Currency translation differences		–15.1	–7.1
thereof profit/loss on equity-accounted investments		**–15.8**	**–1.6**
Effective portion of change in fair value from cash flow hedges		–1.1	2.7
Fair value of financial instruments		–0.2	0.0
Other comprehensive income, net of tax	11	**–16.5**	**–2.6**
Comprehensive income		**53.4**	**115.9**
thereof attributable to shareholders of DEUTZ AG		53.4	115.9
thereof attributable to non-controlling interests		0.0	0.0

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 84 in the notes to the consolidated financial statements for further details.

BALANCE SHEET FOR THE DEUTZ GROUP

€ million

Assets	Note	**31 Dec 2018**	**31 Dec 2017[1]**	**1 Jan 2017[1]**
Property, plant and equipment	12	283.8	273.4	286.0
Intangible assets	13	203.6	213.2	148.5
Equity-accounted investments	14	2.1	25.9	28.6
Other financial assets	15	16.7	6.8	7.5
Non-current assets (before deferred tax assets)		506.2	519.3	470.6
Deferred tax assets	16	75.9	69.2	79.9
Non-current assets		**582.1**	**588.5**	**550.5**
Inventories	17	333.5	287.0	253.1
Trade receivables	18	157.3	142.7	113.5
Other receivables and assets	18	43.2	35.8	37.3
Cash and cash equivalents	19	132.8	143.8	91.8
Current assets		**666.8**	**609.3**	**495.7**
Non-current assets classified as held for sale	20	0.4	0.4	0.4
Total assets		**1,249.3**	**1,198.2**	**1,046.6**

Equity and liabilities	Note	**31 Dec 2018**	**31 Dec 2017[1]**	**1 Jan 2017[1]**
Issued capital		309.0	309.0	309.0
Additional paid-in capital		28.8	28.8	28.8
Other reserves		–4.7	12.1	16.5
Retained earnings and accumulated income		285.8	234.2	123.7
Equity attributable to shareholders of DEUTZ AG		**618.9**	**584.1**	**478.0**
Non-controlling interests		0.2	0.2	0.0
Equity	21	**619.1**	**584.3**	**478.0**
Provisions for pensions and other post-retirement benefits	22	152.8	162.9	175.9
Deferred tax liabilities	16	0.5	0.2	0.4
Other provisions	23	36.2	36.2	38.4
Financial debt	24	19.3	28.1	44.0
Other liabilities	25	3.5	13.0	6.3
Non-current liabilities		**212.3**	**240.4**	**265.0**
Provisions for pensions and other post-retirement benefits	22	13.0	13.5	14.1
Provision for current income taxes		17.9	18.3	4.1
Other provisions	23	65.4	58.4	55.9
Financial debt	24	19.8	17.5	16.2
Trade payables	25	214.6	207.5	162.3
Other liabilities	25	87.2	58.3	51.0
Current liabilities		**417.9**	**373.5**	**303.6**
Total equity and liabilities		**1,249.3**	**1,198.2**	**1,046.6**

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 84 in the notes to the consolidated financial statements for further details.

STATEMENT OF CHANGES IN EQUITY FOR THE DEUTZ GROUP

€ million

	Issued capital 3)	Additional paid-in capital 3)	Retained earnings and accumulated income 3)	Fair value reserve 1), 2)	Currency translation reserve 1)	Equity attributable to shareholders of DEUTZ AG	Non-controlling interests 3)	Total 3)
Balance at 31 Dec 2016	**309.0**	**28.8**	**136.2**	**–2.0**	**19.1**	**491.1**	**0.0**	**491.1**
Adjustment due to correction of errors			–12.5		–0.6	–13.1		–13.1
Adjusted balance at 1 Jan 2017	**309.0**	**28.8**	**123.7**	**–2.0**	**18.5**	**478.0**	**0.0**	**478.0**
Dividend payments to shareholders			–8.5			–8.5		–8.5
Net income			118.5			118.5		118.5
Other comprehensive income			1.8	2.7	–7.1	–2.6		–2.6
Comprehensive income			120.3	2.7	–7.1	115.9	0.0	115.9
Changes to basis of consolidation						0.0	0.2	0.2
Other changes			–1.3			–1.3		–1.3
Adjusted balance at 31 Dec 2017	**309.0**	**28.8**	**234.2**	**0.7**	**11.4**	**584.1**	**0.2**	**584.3**
Balance at 31 Dec 2017	**309.0**	**28.8**	**249.4**	**0.7**	**11.1**	**599.0**	**0.2**	**599.2**
Adjustment due to correction of errors			–15.2		0.3	–14.9		–14.9
Adjusted balance at 31 Dec 2017	**309.0**	**28.8**	**234.2**	**0.7**	**11.4**	**584.1**	**0.2**	**584.3**
Change in accounting methods 4)			–0.1	–0.4		–0.5		–0.5
Adjusted balance at 1 Jan 2018	**309.0**	**28.8**	**234.1**	**0.3**	**11.4**	**583.6**	**0.2**	**583.8**
Dividend payments to shareholders			–18.1			–18.1		–18.1
Net income			69.9			69.9	0.0	69.9
Other comprehensive income			–0.1	–1.3	–15.1	–16.5	0.0	–16.5
Comprehensive income			69.8	–1.3	–15.1	53.4	0.0	53.4
Other changes			0.0			0.0		0.0
Balance at 31 Dec 2018	**309.0**	**28.8**	**285.8**	**–1.0**	**–3.7**	**618.9**	**0.2**	**619.1**

1) On the balance sheet these items are aggregated under 'Other reserves'.
2) Reserves from the measurement of cash flow hedges and reserves from the measurement of available-for-sale financial assets.
3) The items of equity are explained in Note 22 of the notes to the consolidated financial statements.
4) The adjustment of the figures relates to the change in the recognition of financial instruments stipulated by IFRS 9.

CASH FLOW STATEMENT FOR THE DEUTZ GROUP

€ million

	Note	2018	2017[1]
EBIT		**82.0**	**143.8**
Income taxes paid		–16.7	–9.6
Depreciation, amortisation and impairment of non-current assets		79.4	93.5
Gains/losses on the sale of non-current assets		0.1	–114.6
Profit/loss and impairment on equity-accounted investments		14.1	1.1
Other non-cash income and expenses		–15.8	0.0
Change in working capital		–50.4	–7.7
Change in inventories		–43.8	–27.6
Change in trade receivables		–13.4	–24.0
Change in trade payables		6.8	43.9
Change in other receivables and other current assets		–6.8	14.8
Change in provisions and other liabilities (excluding financial liabilities)		11.6	–8.6
Cash flow from operating activities		**97.5**	**112.7**
Capital expenditure on intangible assets, property, plant and equipment		–78.9	–68.3
Expenditure on investments		–11.2	–0.4
Acquisition of subsidiaries		0.0	–83.6
Proceeds from the sale of non-current assets		9.8	125.0
Cash flow from investing activities		**–80.3**	**–27.3**
Dividend payments to shareholders	21	–18.1	–8.5
Interest income		0.3	0.4
Interest expense		–3.0	–3.3
Repayment of capital contributions to non-controlling interests		0.0	–1.3
Cash receipts from borrowings		11.2	0.0
Repayments of loans	24	–18.6	–19.9
Cash flow from financing activities		**–28.2**	**–32.6**
Cash flow from operating activities		97.5	112.7
Cash flow from investing activities		–80.3	–27.3
Cash flow from financing activities		–28.2	–32.6
Change in cash and cash equivalents		**–11.0**	**52.8**
Cash and cash equivalents at 1 Jan		**143.8**	**91.8**
Change in cash and cash equivalents		–11.0	52.8
Change in cash and cash equivalents related to exchange rates		0.0	–0.8
Change in cash and cash equivalents related to the basis of consolidation		0.0	0.0
Cash and cash equivalents at 31 Dec	19	**132.8**	**143.8**

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 84 in the notes to the consolidated financial statements for further details.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

BASIS OF PRESENTATION

PARENT COMPANY

The parent company of the DEUTZ Group is DEUTZ AG. Its registered office is located at Ottostrasse 1, 51149 Cologne, Germany, and the Company is entered under no. HRB 281 in the commercial register at the local court in Cologne. The Board of Management approved these consolidated financial statements for publication by adoption of a resolution dated 18 February 2019.

DEUTZ AG shares are listed in the Deutsche Börse SDAX segment and are publicly traded on the Xetra electronic trading platform and on all German stock exchanges.

DEUTZ is one of the world's leading manufacturers of drive systems. We are an independent producer of diesel and gas engines for on-highway and off-highway applications. The business is broken down into the main application segments of Construction Equipment, Material Handling, Agricultural Machinery, Automotive, and Stationary Equipment. Comprehensive aftersales service rounds off the product range offered. The Group's activities are divided into three operating segments: DEUTZ Compact Engines, DEUTZ Customised Solutions and Other. The DEUTZ Compact Engines segment comprises liquid-cooled engines with capacities of up to 8 litres. The DEUTZ Customised Solutions segment specialises in air-cooled engines and large liquid-cooled engines with capacities of more than 8 litres. The Torqeedo subsidiary is included in the Other segment. It manufactures electric drives for boats and has extensive expertise in the electrification of drive systems. In its operating segments, DEUTZ focuses on value creation processes involving the development, design, production and sales of liquid-cooled and air-cooled engines, hybrid engines and electrified drive systems.

BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

The DEUTZ Group's consolidated financial statements prepared for the parent company DEUTZ AG are based on uniform accounting policies. The consolidated financial statements are prepared in accordance with the International Financial Reporting Standards (IFRS) and their interpretations as adopted by the European Union (EU) and are consistent with the statutory obligations applicable to publicly traded parent companies subject to disclosure requirements pursuant to section 315e (1) of the German Commercial Code (HGB) in conjunction with Article 4 of Regulation (EC) No. 1606/2002 of the European Parliament and of the Council dated 19 July 2002 concerning the application of international accounting standards, as amended (IAS Regulation).

The consolidated financial statements are generally prepared using the cost method. Specific exceptions are derivative financial instruments and other financial instruments that are measured at fair value. The consolidated financial statements are prepared in euros. Unless otherwise stated, all figures are rounded up or down to the nearest million euros.

CORRECTION OF ERRORS IN ACCORDANCE WITH IAS 8

As announced in April 2018, the carrying amounts for the DEUTZ (Dalian) Engine Co., Ltd. joint venture based in Dalian, China, were reviewed by an auditor as part of an overall review into strategic options in China. The audit firm engaged to conduct the review into strategic options informed us on 17 April 2018 that it suspected that some items on the DEUTZ Dalian balance sheet had been overstated and that the carrying amount calculated using the equity method in DEUTZ AG's consolidated financial statements may have to be adjusted as a result.

The subsequent review of the carrying amounts for DEUTZ Dalian revealed that the carrying amount calculated using the equity method would have to be written down by €23.1 million. Of this figure, €14.9 million relates to financial years prior to 2018 and, as a material error according to the definition in IAS 8, is to be applied retrospectively by adjusting the carrying amount calculated using the equity method for DEUTZ Dalian and by adjusting Group equity as at 31 December 2017 and 1 January 2017. The carrying amounts subject to correction for DEUTZ Dalian related mainly to inventories, property, plant and equipment, own development projects and provisions for warranty costs.

The following tables show the effects of the correction of errors:

Affected line items on the balance sheet as at 1 January 2017

€ million

	1 Jan 2017	Correction of errors under IAS 8	1 Jan 2017 (adjusted)
Equity-accounted investments	**41.7**	**–13.1**	**28.6**
Issued capital	309.0	0.0	309.0
Additional paid-in capital	28.8	0.0	28.8
Other reserves	17.1	–0.6	16.5
Retained earnings and accumulated income	136.2	–12.5	123.7
Non-controlling interests	0.0	0.0	0.0
Equity	**491.1**	**–13.1**	**478.0**

Affected line items on the balance sheet as at 31 December 2017

€ million

	31 Dec 2017	Correction of errors under IAS 8	31 Dec 2017 (adjusted)
Equity-accounted investments	**40.8**	**–14.9**	**25.9**
Issued capital	309.0	0.0	309.0
Additional paid-in capital	28.8	0.0	28.8
Other reserves	11.8	0.3	12.1
Retained earnings and accumulated income	249.4	–15.2	234.2
Non-controlling interests	0.2	0.0	0.2
Equity	**599.2**	**–14.9**	**584.3**

Affected line items in the income statement

€ million

	2017	Correction of errors under IAS 8	2017 (adjusted)
Profit/loss on equity-accounted investments	2.5	–2.7	–0.2
EBIT (before exceptional items)	42.4	–2.7	39.7
Net income	121.2	–2.7	118.5
Earnings per share (€)	1.00	–0.02	0.98

Affected line items in the statement of comprehensive income

€ million

	2017	Correction of errors under IAS 8	2017 (adjusted)
Currency translation differences	–8.0	0.9	–7.1
thereof profit/loss on equity-accounted investments	–2.5	0.9	–1.6

Affected line items in the cash flow statement

€ million

	2017	Correction of errors under IAS 8	2017 (adjusted)
EBIT	146.5	–2.7	143.8
Profit/loss and impairment on equity-accounted investments	–1.6	2.7	1.1

APPLICATION OF INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)

1) Amendments to accounting policies

The accounting policies on which the consolidated financial statements are based are fundamentally the same as the policies applied in 2017 with the exceptions set out below.

IFRIC 22 'Foreign Currency Transactions and Advance Consideration' The IASB published this interpretation in December 2016. IFRIC 22 clarifies that the date of a transaction, for the purpose of determining the exchange rate, is the initial recognition of the non-monetary prepayment asset or the non-monetary deferred income liability. If there are multiple payments or receipts in advance, a date of transaction is established for each payment or receipt. The interpretation comes into force for financial years commencing on or after 1 January 2018. It has not had any material impact on the DEUTZ Group's consolidated financial statements.

'Transfers of Investment Property' (Amendments to IAS 40) The amendments to IAS 40 'Investment Property' were published in December 2016. The amendments provide clarification regarding transfers to or from investment property. The amendments apply to financial years beginning on or after 1 January 2018. They have not had any impact on the DEUTZ Group's consolidated financial statements.

'Classification and Measurement of Share-based Payment Transactions' (Amendments to IFRS 2) The amendments were published in June 2016 and serve to clarify the classification and measurement of certain transactions involving share-based payments. The amendments apply to financial years beginning on or after 1 January 2018. They have not had any impact on the DEUTZ Group's consolidated financial statements.

IFRS 9 'Financial Instruments' IFRS 9 introduces new requirements for the classification and measurement of financial assets. With regard to debt instruments, the standard defines the basis for this as the contractual cash flow characteristics and the objective of the business model under which the assets are being managed. These changes result in a new system for categorising financial instruments. Essentially, a distinction has to be made between financial assets measured at amortised cost and financial assets measured at fair value. Depending on the subcategory, measurement at fair value is through profit or loss for the current period or in other comprehensive income.

IFRS 9 also sets out a new three-level impairment model based on expected losses, in which financial assets are assigned to one of three risk levels depending on their credit risk. Upon acquisition or if the credit risk is not expected to have risen significantly since initial recognition, all financial instruments are assigned to level 1. An impairment loss resulting from expected default events in the next twelve months has to be recognised on a portfolio of instruments of the same type. If the credit risk increases significantly, the financial instruments are assigned to level 2 and an impairment loss resulting from default events over the life of the financial instruments has to be recognised. If there is additional objective evidence of impairment, for example if the debtor submits an insolvency application or if their credit rating is significantly downgraded, individual financial instruments are transferred to level 3 and a specific impairment loss has to be recognised. If the financial instruments are trade receivables, lease receivables or contract assets pursuant to IFRS 15, a simplified impairment loss approach is used. Under this approach, the entire life of the financial instruments is taken as the basis for determining the losses (as is the case for level 2). Expected defaults are calculated on the basis of the current credit ratings of the relevant debtors and on the creditor's own experience.

The standard also includes new requirements for hedge accounting, with the specific aim of linking hedge accounting more closely to the risk management of entities and thus improving the transparency of the accounting treatment of hedges. The DEUTZ Group will continue to make use of the option pursuant to IFRS 9.7.2.21, thereby continuing to account for hedges in accordance with the rules in IAS 39. The new standard comes into force for financial years beginning on or after 1 January 2018. DEUTZ has applied IFRS 9 for the first time for the 2018 financial year.

DEUTZ is recognising the transition effects in its retained earnings as at 1 January 2018 resulting from initial application of the new classification and measurement rules and the new impairment model. The prior-year figures will not be restated to reflect the new rules.

Initial application of IFRS 9 led to financial information being restated as follows:

As at 1 January 2018:

- Decrease of €0.5 million in trade receivables and retained earnings
- Decrease in other reserves and increase in retained earnings of €0.4 million

The adoption of the new impairment model caused trade receivables and retained earnings to decrease by €0.5 million.

The €0.4 million decrease in other reserves is the result of the change in the accounting treatment of the units in equity funds held by DEUTZ Corporation, Atlanta, USA. Under the new IFRS 9, these are measured at fair value through profit or loss. Under IAS 39, however, they are also recognised at fair value. Despite this, the effects from changes in measurement are recognised in other comprehensive income under other reserves. The initial application of IFRS 9 resulted in cumulative effects from changes in measurement being reclassified from other reserves to retained earnings. As a result, retained earnings decreased by a total of €0.1 million.

The following tables provide a breakdown of the reconciliation of categories and carrying amounts:

1 Jan 2018	IAS 39		Reclassification to		Impairment	IFRS 9
	Measured at amortised cost		Measured at fair value	Assets not within the scope of application	Change in retained earnings	Measured at amortised cost
€ million	Loans and receivables	Available-for-sale financial assets				
Assets						
Non-current financial assets	**0.0**	**0.3**		**–0.3**		**0.0**
Current financial assets	**304.5**	**0.0**	**–6.6**		**–0.5**	**297.4**
Trade receivables	142.7	0.0	–6.6		–0.5	135.6
Other receivables and assets	18.0	0.0				18.0
Cash and cash equivalents	143.8	0.0				143.8

The reclassification of €6.6 million of trade receivables relates to receivables that have been earmarked for factoring. As these receivables are being sold, they have been reclassified to the category ‘measured at fair value through profit or loss’. There has been no transition effect as a result of this. The €0.3 million of available-for-sale non-current financial assets relates to unconsolidated investments that do not fall under the scope of IFRS 9.

1 Jan 2018	IAS 39			Reclassification		IFRS 9	
				from	to		
	Measured at fair value			Measured at amortised cost	Assets not within the scope of application	Measured at fair value	
€ million	Available-for-sale financial assets Through other comprehensive income	Derivatives designated as hedging instruments Through other comprehensive income	Held-for-trading financial assets Through profit or loss			Through other comprehensive income	Through profit or loss
Assets							
Non-current financial assets	**4.8**	**0.0**	**0.0**		**–1.7**	**1.1**	**2.0**
Current financial assets	**0.0**	**1.2**	**0.1**	**6.6**		**0.0**	**6.7**
Trade receivables	0.0	0.0	0.0	6.6		0.0	6.6
Other receivables and assets	0.0	1.2[1]	0.1			0.0	0.1
Cash and cash equivalents	0.0	0.0	0.0			0.0	0.0

[1] For the time being, the DEUTZ Group will continue to make use of the option pursuant to IFRS 9.7.2.21, thereby continuing to account for hedges in accordance with the rules in IAS 39.

The €1.7 million of available-for-sale non-current financial assets relates to unconsolidated investments that do not fall under the scope of IFRS 9. The reason for the change in the measurement of €2.0 million of non-current financial assets measured at fair value through profit or loss is that the cash flows from these financial instruments do not solely comprise interest payments and principal repayments and therefore do not meet the criteria for measurement at amortised cost under IFRS 9.

1 Jan 2018	IAS 39	Reclassification		IFRS 9
€ million		from	from	
	Assets not within the scope of application	Measured at amortised cost	Measured at fair value	Assets not within the scope of application
Assets				
Non-current financial assets	**1.7**	**0.3**	**1.7**	**3.7**
Current financial assets	**16.5**			**16.5**
Trade receivables	0.0			0.0
Other receivables and assets	16.5			16.5
Cash and cash equivalents	0.0			0.0

The following table shows the changes in the valuation allowance account as a result of the initial application of IFRS 9:

	Non-current financial assets	Trade receivables	Other receivables and assets	Total
€ million				
Balance at 31 Dec 2017	**0.0**	**3.7**	**18.0**	**21.7**
Adjustment	0.0	0.5	0.0	0.5
Balance at 1 Jan 2018	**0.0**	**4.2**	**18.0**	**22.2**
Change in 2018	0.0	–0.5	–3.3	–3.9
Balance at 31 Dec 2018	**0.0**	**3.7**	**14.7**	**18.3**

IFRS 15 'Revenue from Contracts with Customers' The IASB published IFRS 15 in May 2014. This new standard replaces IAS 11 'Construction Contracts', IAS 18 'Revenue' and the interpretations relating to them. One of the objectives of the new standard was to amalgamate the numerous requirements previously included in several standards and interpretations and to establish consistent underlying principles to be used for all categories of revenue-related transaction across all sectors. According to IFRS 15, the amount recognised as revenue is the amount expected in return for providing goods or services to customers. The point at which control over the goods or services is transferred to the customer determines the point in time at which or the period of time over which revenue is recognised. Full control can be transferred at a certain point in time or gradually over a period. The Company is applying IFRS 15 for the first time for the 2018 financial year, taking the modified retrospective approach. Under this modified approach, the cumulative effect of applying IFRS 15 for the first time is recognised as an adjustment to the opening balance of retained earnings as at the date of initial application.

As part of a groupwide project to implement IFRS 15, existing customer contracts were examined to ascertain whether they would be affected. Services such as the Xchange business and the granting of extended warranties were also specifically analysed. Finally, the delivery terms and conditions in use were examined with regard to their time of realisation and whether they contained multiple performance obligations. As had been expected in view of the business model, the analysis of existing customer contracts and the examination of the Xchange services and the granting of extended warranties did not result in transition effects.

With regard to the point of recognition, the initial application of IFRS 15 in 2018 resulted in a decrease in revenue and trade receivables of €6.0 million. As a consequence of this, similar corresponding changes were made to inventories and cost of sales. The resulting effect on net income and earnings per share was not material.

Collective standard amending various IFRSs (2014–2016) The amendments published by the IASB in December 2016 primarily serve to clarify ambiguous provisions in standards. The amendments relating to IFRS 1 and IAS 28 come into force for financial years commencing on or after 1 January 2018. Initial application of these amendments has not had any material impact on the consolidated financial statements.

2) Published standards, interpretations and amendments that have already become part of EU law but are not yet mandatory

The International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRS IC) have published the following standards and amendments to standards that have already become part of EU law via the comitology procedure. However, the application of these standards was not yet mandatory in 2018 and DEUTZ has not opted to apply these interpretations or amendments to standards before the mandatory application date.

IFRIC 23 'Uncertainty over Income Tax Treatments' The publication of IFRIC 23 in June 2017 eliminated uncertainties surrounding the income tax treatment of profits, losses, tax bases, tax credits and tax rates. An entity has to use its judgement to determine whether each tax treatment should be considered independently or together. It has to decide on a particular tax treatment after considering whether the tax authority will accept such treatment. The entity has to assume that a tax authority will have knowledge of all relevant information when it examines the amounts reported to it. If facts and circumstances change, the entity has to reassess its judgements and estimates. This interpretation applies to financial years commencing on or after 1 January 2019. It is not expected to have any material impact on the DEUTZ Group's consolidated financial statements.

'Long-term Interests in Associates and Joint Ventures' (Amendments to IAS 28) Published in October 2017, these amendments aim to clarify that IFRS 9 has to be applied to long-term interests in an associate or joint venture that form part of the net investment in this associate or joint venture but to which the equity method is not applied. The amendments come into force for reporting periods commencing on or after 1 January 2019. The initial application of these amendments is not expected to have any impact on the Group's consolidated financial statements because the Group does not have such interests.

'Prepayment Features with Negative Compensation' (Amendments to IFRS 9) In October 2017, the IASB amended IFRS 9 so that financial assets with symmetric termination rights are measured at amortised cost or at fair value through other comprehensive income. The IASB also clarified that, if a financial liability is not derecognised after being modified, the carrying amount of the liability has to be adjusted and recognised in profit or loss after the modification. The amendments apply to financial years beginning on or after 1 January 2019. The initial application of these amendments is not expected to have a material impact on the Group's consolidated financial statements.

IFRS 16 'Leases' The IASB published IFRS 16 in January 2016. This new standard replaces IAS 17 'Leases' and the interpretations relating to them (IFRIC 4, SIC 15 and SIC 27). IFRS 16 governs the recognition, measurement, presentation and disclosure of leases with the aim of ensuring that lessees and lessors provide relevant information about the impact of leases. As a result of this model, lessees must recognise assets and liabilities for all leases on the balance sheet, unless the lease term is twelve months or less or the underlying asset has a low value. DEUTZ will make use of the above options and not recognise assets and liabilities resulting from these kinds of leasing arrangements on its balance sheet. However, it is not exercising the option to recognise intangible assets because of the highly complex nature of the software contracts involved and the negligible impact on earnings. Furthermore, the new leasing standard allows the lessee to recognise right-of-use assets in an amount equivalent to the lease liabilities and to dispense with the separation of leasing and non-leasing components. DEUTZ is also making use of these options. It is electing to do so for reasons of practicality and because of the negligible impact on net income. The carrying amount of the lease liability that needs to be recognised is calculated using the incremental borrowing rate of interest applicable at the transition date. The DEUTZ Group applies incremental borrowing rates of interest specific to the currency and term of the lease; for long-term financing denominated in the domestic currency these are based on swap rates and for long-term financing denominated in a foreign currency they are based on swap curves. Because of how the Group companies are internally financed, the Group interest margin is added to the interest rates specific to the currency and term of the lease so that the discount rate applied covers the interest margin as a minimum.

The new standard comes into force for financial years beginning on or after 1 January 2019; early adoption is permitted if IFRS 15 has already been applied. DEUTZ will apply the new standard for the first time with effect from 1 January 2019 taking the modified retrospective approach. Under the modified retrospective approach, the prior-year comparative figures are not restated; instead, all adjustments may be recognised in the opening balance of retained earnings for the year of initial application. The preliminary group-wide inventory of the existing leases shows that, as at the transition date of 1 January 2019, the balance sheet increased by €38.7 million due to the recognition of the right-of-use assets and corresponding lease liabilities. We expect the transition to IFRS 16 to impact EBIT before exceptional items, one of our key performance indicators, by around €0.4 million. The transition effect is primarily attributable to the recognition of right-of-use assets attaching to leased property. The inventory identified leases with an indefinite term, most of which were property leases. For accounting purposes, these leases are assumed to have a term of 60 months, which is equivalent to the detailed planning phase of the Group financial planning process.

3) Published standards, interpretations and amendments that have not yet been adopted by the EU

The International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRS IC) have published the following standards and interpretations that have not yet been adopted by the EU and have not yet been applied by the DEUTZ Group.

'Definition of Material' (Amendments to IAS 1 and IAS 8) The amendments published by the IASB in October 2018 are intended to give a precise definition of 'material' so that the information that reaches the primary users of the financial statements is complete and unobscured. The amendments come into force for reporting periods commencing on or after 1 January 2020. They are not expected to have any impact on the DEUTZ Group's consolidated financial statements.

'Plan Amendment, Curtailment or Settlement' (Amendments to IAS 19) The amendments to IAS 19 'Employee Benefits' were published in February 2018. If a defined benefit pension plan amendment, curtailment or settlement occurs, it will be mandatory in future for the current service cost and the net interest for the remainder of the financial year to be newly determined using the actuarial assumptions used for the required remeasurement of the net liability (asset). In addition, amendments have been included to clarify the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling.

IFRS 3 (Amendments) Definition of a Business The IASB published these amendments in October 2018. They contain definitions, guidance on adoption and illustrative examples under IFRS 3 and, among other things, clarify the distinction between a business combination and an asset acquisition. The amendments are to be applied to business combinations and asset acquisitions carried out in reporting periods commencing on or after 1 January 2020.

'Sale or Contribution of Assets between an Investor and its Associate or Joint Venture' (Amendments to IFRS 10 and IAS 28) The IASB issued these amendments in September 2014. They clarify that in a transaction involving an associate or joint venture the extent of gain or loss recognition depends on whether the assets sold or contributed constitute a business as defined by IFRS 3 'Business Combinations'. The amendments have been postponed indefinitely owing to inconsistencies between the standards.

Collective standard amending various IFRSs (2015–2017) The amendments published by the IASB in December 2017 primarily serve to clarify ambiguous provisions in standards. The amendments come into force for financial years commencing on or after 1 January 2019. The initial application of these amendments is not expected to have a material impact on the Group's consolidated financial statements.

Conceptual Framework for Financial Reporting (Amendments) In March 2018, the IASB issued the revised Conceptual Framework. The amendments address elements of the financial statements as well as measurement, the reporting entity, recognition and disclosures. The amendments come into force for financial years commencing on or after 1 January 2020.

SIGNIFICANT ESTIMATES AND ASSUMPTIONS

To a certain extent, the preparation of the consolidated financial statements in accordance with IFRS requires estimates and assumptions that have an impact on the recognition, measurement and reporting of assets and liabilities, the disclosure of contingent liabilities at the balance sheet date and the reporting of income and expenses. Estimates and assumptions giving rise to a material risk in the form of adjustments to the carrying amounts of assets or liabilities over the next financial year are explained below. Adjustments to estimates are recognised in income when better knowledge becomes available.

Impairment of non-financial assets The DEUTZ Group conducts tests at each balance sheet date to determine whether there are any indications that non-financial assets may be impaired. In order to estimate the value in use, the management must estimate future cash flows expected to be derived from the asset or from the cash-generating unit and select an appropriate discount rate to determine the present value of these cash flows.

Deferred tax assets The DEUTZ Group is obliged to pay income taxes in various countries. It therefore needs to make estimates on the basis of which tax provisions and deferred taxes can be recognised. When determining the amount of deferred tax assets, the management must make judgements – which may involve material uncertainties – regarding the expected timing and amount of future taxable income as well as future tax planning strategies. DEUTZ mainly recognises deferred tax assets on losses carried forward. They are recognised for all unused tax loss carryforwards to the extent that it is probable that future taxable profit will be available against which the loss carryforwards can actually be set off. Planning forecasts over a period of five years are used to determine the future taxable profit that is likely to be available.

As at 31 December 2018, the carrying amount of deferred tax assets recognised in respect of tax loss carryforwards amounted to €70.4 million (31 December 2017: €66.8 million). Further details can be found in Note 16 on page 110.

Pension benefits The expense for defined benefit plans is determined using actuarial calculations. These actuarial calculations are based on assumptions regarding discount rates, future increases in wages and salaries, staff turnover, mortality and future increases in pensions. These estimates are subject to material uncertainty owing to the long-term nature of these plans.

Because of changes in economic and market conditions, the costs and liabilities actually incurred may differ significantly from the estimates made on the basis of actuarial assumptions. The rate of pension and salary increases, the longevity of those entitled to pension benefits and the discount rate used can have a material impact on the amount of the defined benefit obligation and, consequently, on future pension costs.

Development expenditure is capitalised in accordance with the accounting policies described below. Management makes assumptions about the amount of future cash flows expected to be generated from the development projects, the discount rates to be applied and the period over which the cash is expected to flow into the Company. As at 31 December 2018, the carrying amount of capitalised development expenditure was €108.4 million (31 December 2017: €114.9 million).

Pending or potential legal disputes DEUTZ AG and other companies in the DEUTZ Group are subject to a variety of regulations under tax, competition and patent law as well as to other legal and statutory requirements. Existing and potential legal disputes are recorded and analysed on an ongoing basis at DEUTZ; they are assessed in terms of their legal and financial impact and an appropriate amount is recognised in the risk provisions in the accounts. At present, it is not possible to predict the outcome of pending cases with any degree of certainty beyond the provisions already recognised. We do not expect them to have a significantly adverse impact on the DEUTZ Group's financial position or financial performance. The overall position as regards the legal risks facing the DEUTZ Group is explained in more detail in Note 28 on page 132.

Business combinations When acquirees are consolidated for the first time, the identifiable assets and liabilities (including contingent liabilities) are recognised at their fair value as at the date of acquisition. The measurement of intangible assets is particularly subject to uncertainties. They are measured using accepted valuation methods on the basis of estimates of future cash flows, expected growth rates and exchange rates, discount rates and useful lives.

BASIS OF CONSOLIDATION

All subsidiaries, joint ventures and associates are included in the consolidated financial statements.

Subsidiaries are all entities directly or indirectly controlled by DEUTZ AG. Subsidiaries are consolidated from the point at which the parent company acquires control. Consolidation ends when the parent company no longer has control. In addition to DEUTZ AG, the consolidated financial statements include seven German subsidiaries (2017: eight) and 14 foreign subsidiaries (2017: 14).

DEUTZ Abgastechnik GmbH i.L., Cologne, was wound up in February 2018. As the company was already in the process of being liquidated and had already ceased operations, this had no material effect on the financial position or financial performance of the Group.

Joint ventures are companies over which control is exercised jointly by DEUTZ and other entities on the basis of a contractual agreement. Associates are entities over whose business and financial policies DEUTZ AG is able to exert a significant influence but are neither subsidiaries nor joint ventures. Associates and joint ventures are both accounted for in the consolidated financial statements using the equity method. In the year under review, the consolidated financial statements included one foreign joint venture (2017: two) and, as in 2017, one foreign entity in accordance with the rules governing associates.

The stake in the joint venture DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, was sold with effect from 30 November 2018. The transaction had the following material effects on the consolidated financial statements:

Financial position

€ million	
Cash	+8.0
Other receivables	–0.3
Non-current assets classified as held for sale	–9.4
Equity	–1.7

Financial performance

€ million	
EBIT (before exceptional items)	+15.8
Net income	+14.1
Other comprehensive income	–15.8

Page 140 of the annex to the notes to the financial statements lists the shareholdings of DEUTZ AG as at 31 December 2018.

PRINCIPLES OF CONSOLIDATION

The separate financial statements of the individual entities included in the consolidated financial statements have been prepared using uniform accounting policies in accordance with the regulations on consolidation. The consolidated financial statements comprise the financial statements of DEUTZ AG and of its subsidiaries prepared each year for the twelve months ended 31 December.

The acquisition method has been used to account for business combinations since 1 January 2010. The acquisition cost is measured at the fair value of the assets transferred, the liabilities incurred or assumed (including conditional liabilities) and of the equity instruments issued at the acquisition date, irrespective of the amount of any non-controlling interests. The determined acquisition cost is then allocated to the identifiable assets and liabilities (including contingent liabilities) that were measured at their fair value as at the date of acquisition in accordance with the rules of IFRS 3. The excess of the cost of acquisition over the value of net assets, after deduction of any non-controlling interests in acquirees, is recognised as goodwill. Negative goodwill is recognised in profit or loss in the period in which the business combination takes place. For each business combination, the Group decides whether to measure the non-controlling interest in the acquiree at fair value (full goodwill method) or at the proportionate fair value of the assets acquired and the liabilities assumed. The option to measure non-controlling interests at fair value is currently not exercised. Non-controlling interests are thus recognised at their proportionate share of the net assets, disregarding the goodwill. Acquisition-related costs arising in connection with business combinations are expensed as incurred.

The acquisition method was used to account for acquisitions between the transition to accounting based on IFRS on 1 January 2005 and 31 December 2009. Under this method, the carrying amount of the investment was offset against the DEUTZ Group's proportionate share of equity in the consolidated subsidiary remeasured at fair value on the acquisition date. Transaction costs directly attributable to the acquisition constituted some of the acquisition-related costs.

Non-controlling interests are the share of net profit/loss and net assets not attributable to the DEUTZ Group. The non-controlling interests reported as at 31 December 2018 relate to Mr Glavan's holding of 25 per cent of the voting shares in IML Motoare S.r.l., of which Mr Glavan is CEO and which was included in the consolidated financial statements for the first time as at 1 October 2017. IML Motoare S.r.l. was renamed DEUTZ Romania S.r.l. in April 2018.

Income and expenses, receivables and payables, and inter-company profits and losses generated between the consolidated entities are eliminated unless they are of no material significance.

JOINT VENTURES AND ASSOCIATES

Investments in joint ventures and associates are accounted for using the equity method. Under the equity method, investments in an associate or joint venture are recognised on the balance sheet at cost plus any changes in the DEUTZ Group's share of the entity's net assets that have occurred since the acquisition. The goodwill related to the associate or joint venture is included in the carrying amount of the investment and is not amortised. The income statement includes the DEUTZ Group's share of the profit or loss generated by the associate or joint venture. Unless they are material, gains and losses on transactions between the Group and its associates or joint ventures are eliminated. Changes recognised directly in the equity of the associate or joint venture are recognised by the DEUTZ Group in the amount of its investment and, as such, are appropriately presented in the statement of changes in equity. With one exception, the financial statements of the associate and joint venture are prepared to the same balance sheet date as the financial statements for the parent. Interim financial statements have not been prepared for reasons of materiality. Where required, figures are restated in line with the uniform accounting policies throughout the DEUTZ Group.

CURRENCY TRANSLATION

The items in the financial statements of each individual entity in the DEUTZ Group are measured in the currency that corresponds to the currency of the primary economic environment in which the entity operates (functional currency). Transactions denominated in foreign currency are translated into the functional currency using the relevant exchange rates on the date of the transaction. Subsequently they are translated on every balance sheet date using the closing rate. All currency translation differences are recognised in profit or loss unless they are in connection with qualified cash flow hedges, in which case they are recognised in other comprehensive income.

With the exception of equity, balance sheet items in separate financial statements denominated in foreign currency are translated into the functional currency of the DEUTZ Group (euros) at closing rates. Income and expense items – including net income or loss – are translated at the average rates for the year. Equity – with the exception of net income or loss – is translated at the prevailing historical closing rates.

Differences arising from the translation of equity at historical rates and the translation of net income or loss at average rates for the year are reported in other comprehensive income in a separate item.

The main exchange rates used for currency translation purposes are shown in the following table (€1 translated into foreign currencies):

		Average rates		Closing rates at 31 Dec	
		2018	2017	**2018**	2017
USA	USD	1.18	1.14	1.15	1.20
China	CNY	7.82	7.66	7.88	7.80
Morocco	MAD	11.07	10.98	10.96	11.22
Australia	AUD	1.58	1.48	1.62	1.53
Russia	RUB	74.17	66.18	79.72	69.39
UK	GBP	0.89	0.88	0.89	0.89

ACCOUNTING POLICIES

Significant accounting policies used to prepare these consolidated financial statements are described below.

REVENUE RECOGNITION

Revenue generated by the sale of engines and services comprises the fair value received excluding VAT, discounts and price reductions.

Revenue and other income is recognised as follows:

Revenue from the sale of engines Revenue from the sale of engines is recognised once a DEUTZ Group entity has delivered to a customer and control has passed to the customer. Estimates of future price reductions are covered by provisions and deducted from revenue.

Revenue generated by services Revenue generated by services mainly relates to the sale of remanufactured engines (Xchange business) as well as spare parts and is recognised at the time that control passes to the customer. Revenue from maintenance work is recognised over the period of time in which the services were rendered.

Income from the awarding of engine licences and any related project business This income is either recognised over a period of time in accordance with the substance of the relevant agreements or recognised at a specific point in time once control has been transferred.

Interest income, dividends and other income Interest income is recognised pro rata using the effective interest method. Dividend income is recognised at the time the right to receive the payment arises. Other income is recognised according to contractual agreement on the transfer of risks and rewards.

BORROWING COSTS

Borrowing costs that can be directly attributed to the construction or manufacture of an asset for which a substantial period is required to bring the asset to its intended usable condition are capitalised as part of the costs of the relevant asset. All the other borrowing costs are expensed as incurred. Borrowing costs are the interest and other costs incurred by a company in connection with borrowing funds.

ADDITIONAL DISCLOSURES

In addition to the information required by IFRS, the DEUTZ Group reports a figure for EBIT adjusted for exceptional items, which it uses for internal purposes to gauge the profitability of its business. Exceptional items are defined as significant income generated or expenses incurred outside the scope of the Company's ordinary business activities that are unlikely to recur. We use this KPI internally so that we can compare the Company's operating performance over time.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is recognised at cost and, if depreciable, less any depreciation on a straight-line basis and any additional impairment losses. Cost comprises the purchase price and any directly attributable costs incurred to bring the asset to the required location and working condition.

The costs of conversion of property, plant and equipment constructed internally comprise directly attributable costs, pro rata material and production overheads as well as administrative expenses related to production or delivery of the service.

Subsequent costs are added to the carrying amount of the asset concerned as incurred, provided that the recognition criteria are satisfied. Repair and maintenance costs are expensed as incurred.

The depreciation period is based on the expected useful life of the asset. Land is not depreciated.

Straight-line depreciation is based on the following useful lives for the main asset categories:

	Useful life (years)
Buildings and grounds	15–33
Technical equipment and machines	10–15
Other equipment, furniture and fixtures	3–10

Residual carrying amounts, useful lives and depreciation methods are reviewed at the end of each year and adjusted where appropriate.

An item of property, plant or equipment is derecognised either on disposal or if no further economic benefit is expected from further use or sale of the asset. Gains or losses arising from the derecognition of the asset are calculated as the difference between the net disposal proceeds and the carrying amount of the asset and are recognised in the income statement in the period in which the asset is derecognised.

INTANGIBLE ASSETS

Goodwill

Goodwill is the difference between the cost of an acquisition and the fair value of the net assets acquired less any non-controlling interests. As goodwill has an indefinite useful life, it is not amortised. However, it must be tested for impairment at least once a year in accordance with the provisions of IAS 36. It must also be tested for impairment on an ad-hoc basis if there are any indications of impairment. Goodwill is tested for impairment at the level of the cash-generating units (CGUs). A CGU is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or other CGUs. Goodwill has to be allocated at the lowest level within the entity that is monitored for goodwill for internal management purposes. The CGUs defined in this way must not be bigger than an operating segment.

In an impairment test, the carrying amount of the goodwill is compared with the recoverable amount (higher of the fair value less costs to sell and the value in use) of the CGU in question. The recoverable amount of a CGU is calculated by determining the value in use according to the discounted cash flow (DCF) method. Value in use is calculated by discounting estimated future cash flows to their present value. The calculation uses a discount rate that reflects current market expectations in respect of the time value of money and the risks inherent in the CGU. The cash flows used in the calculation are derived and extrapolated from operational planning (five-year period).

For information on the allocation of goodwill to the Group's operating segments, see Note 13 'Intangible assets'.

Miscellaneous intangible assets

Miscellaneous intangible assets are measured at cost. The cost of purchase or conversion includes directly attributable costs. The cost of conversion also includes a proportion of overheads and borrowing costs for long-term projects provided the recognition criteria are met. In subsequent periods, intangible assets are reported at cost less amortisation on a straight-line basis and any additional impairment losses. Investment grants from customers are deducted from cost. The useful lives of both purchased and internally generated intangible assets are limited. The amortisation expense and impairment losses are reported in the income statement accordingly.

The following principles are applied:

Internally generated intangible assets The accounting treatment of internally generated intangible assets is based on an implemented development process with defined milestones. During this process, the development costs for the products are capitalised provided that:

- they are technically and commercially feasible,
- a future economic benefit is likely,
- there is the intention to complete their development and sufficient resources are available to do so, and
- the costs of development can be reliably determined.

The review of whether these criteria are met takes place in connection with the achievement of defined milestones in the development process. Development projects at DEUTZ relate almost exclusively to the development of new engine series. The fact that these development projects are technically feasible and will actually be completed is borne out by a multitude of evidence from the past. Until this point, the development and research costs incurred are recognised in the income statement in the period in which they are incurred. As a rule, completed development projects are amortised on a straight-line basis over the expected production cycle of eight to ten years.

As at 31 December 2018, the material, completed development projects had the following remaining useful lives:

Engine series 2.9	10 years
Engine series 3.6	8 years
Engine series 4.1	7 years
Engine series 6.1	7 years
Engine series 7.8	7 years
Engine series 12.0/16.0	1 year

The useful lives and amortisation methods for completed development projects are reviewed at every year-end, if not more frequently. If any changes in their useful lives are required, they are treated as changes in accounting estimates. A significantly longer production cycle is anticipated for the 2.9 and 3.6 engine series because of a new estimate of when stricter emissions legislation will be introduced for the off-road segment in the USA and the expected increase in unit sales in this region. Consequently, the useful life of the 2.9 series was extended from the original nine years to 15.5 years and the useful life of the 3.6 series was extended from the original nine years to 15 years as at 31 December 2018. At the same time, the amortisation method for the two series was adjusted for 2018 onwards, from the straight-line method to the declining-balance method, to reflect their expected usefulness over the remaining product lifecycle. The revised estimates for the two series will have the following overall impact on amortisation over the entire residual life:

Financial year	(–) Decrease/ (+) increase in amortisation	(–) Decrease/ (+) increase in deferred tax income	(–) Decrease/ (+) increase in net income
	€ million	€ million	€ million
2019	–5.4	–1.7	3.7
2020	–5.2	–1.7	3.5
2021	0.8	0.2	–0.6
2022	2.0	0.6	–1.4
2023	2.7	0.8	–1.9
2024	2.1	0.7	–1.4
2025	1.5	0.5	–1.0
2026	0.9	0.3	–0.6
2027	0.4	0.1	–0.3
2028	0.2	0.1	–0.1

Other intangible assets These are measured at amortised cost and amortised on a straight-line basis over their estimated useful life of three to ten years.

Gains or losses arising from the derecognition of intangible assets are the difference between the net disposal proceeds and the carrying amount of the asset and are recognised in the income statement in the period in which the asset is derecognised.

IMPAIRMENT OF NON-FINANCIAL ASSETS

At each balance sheet date the DEUTZ Group carries out tests to establish whether there are any indications that an asset may be impaired. An impairment test is carried out at least once a year on intangible assets that are not yet available for use.

Impairment is determined by comparing the carrying amount with the recoverable amount. The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs to sell and its value in use. If future cash inflows cannot be allocated to an individual asset separately from cash flows generated independently by other assets, the impairment test is applied to the cash-generating unit that includes the asset concerned. When impairment tests are conducted, assets are aggregated into cash-generating units at the lowest-possible level at which cash inflows can largely be independently identified.

Value in use is calculated by discounting estimated future cash flows to their present value. The calculation uses a discount rate that reflects current market expectations in respect of the time value of money and the risks inherent in the asset or cash-generating unit. The cash flows used in the calculation are derived and extrapolated from operational planning (five-year period). If the reasons for previously recognised impairment losses no longer exist, these impairment losses are reversed.

In 2018, lower unit sales forecasts gave rise to indications of impairment ('trigger events') on some property, plant and equipment and some completed internally generated intangible assets. The impairment tests carried out identified a need to recognise impairment losses on two completed development projects. For further details, see Note 12 in these notes to the consolidated financial statements.

The estimates and assumptions used in the impairment tests are based on projections, which by their nature are subject to uncertainty, particularly with regard to future prices and volumes. Adjustments to the estimates made, for example due to unexpectedly poor economic conditions, could result in an impairment loss, especially in the case of individual engine series.

GOVERNMENT GRANTS

Government grants are recognised when there is sufficient certainty that the associated conditions will be fulfilled and the grants will actually be awarded. The DEUTZ Group deducts government grants relating to purchases of non-current assets from the cost of the respective asset. The amount of depreciation and amortisation is based on the cost of purchase after deduction of such grants. In the case of an interest-free government loan that has been received, the value of the interest benefit has been quantified in accordance with the provisions in IFRS 9. The loan has been measured at fair value and the interest benefit recognised as deferred income.

INCOME TAXES

Deferred taxes Deferred taxes are recognised using the liability method for temporary differences between the carrying amount of an asset or a liability in the consolidated balance sheet and its tax base as at the reporting date as well as for tax loss and interest carryforwards.

Deferred tax assets are recognised to the extent that sufficient future taxable income is likely to be generated over the planning period against which the deductible temporary differences and the as yet unused tax loss carryforwards can be offset.

Deferred tax liabilities that arise from temporary differences in connection with investments in subsidiaries, joint ventures and associates are always recognised unless the timing of the reversal of the temporary differences can be controlled and it is unlikely that the temporary differences will reverse in the foreseeable future.

Deferred taxes relating to items recognised in other comprehensive income are likewise recognised in other comprehensive income and not in the income statement.

Deferred tax assets and liabilities are netted if the DEUTZ Group is entitled to have the current tax assets offset against tax liabilities and if the deferred taxes relate to income taxes levied by the same tax authority.

Deferred taxes are recognised at the rates anticipated on recognition of the asset or liability. The anticipated tax rate is the rate that has already been enacted or announced at the balance sheet date, provided announcement of the tax rate has the substantive effect of actual enactment.

Current tax expense Current income taxes for the current period and for previous periods are recognised at the amount that is expected to be paid to (or recovered from) the tax authorities or has already been paid. The tax amount is calculated on the basis of tax rates and tax legislation enacted or substantively enacted as at the relevant balance sheet date.

INVENTORIES

Inventories are measured at the lower of cost and net realisable value. Net realisable value is the estimated selling price achievable in the ordinary course of business less estimated costs still to be incurred.

The cost of raw materials and consumables as well as bought-in and spare parts is calculated using weighted average purchase prices.

Work in progress and finished goods are measured at the cost of conversion, which includes production materials and production wages as well as a proportion of material and production overheads.

Additional write-downs are applied to cover risks resulting from inventories' period of storage and impaired usability as well as contract-related losses.

NON-CURRENT ASSETS CLASSIFIED AS HELD FOR SALE

Non-current assets are classified as 'held for sale' and recognised at the lower of their carrying amount and their fair value less costs to sell if their carrying amount essentially derives from their sale rather than from their continued use.

FINANCIAL ASSETS

In the DEUTZ Group, financial assets within the meaning of IFRS 9 can be in any of the following categories and are classified accordingly:

- Financial assets measured at fair value through profit or loss,
- Financial assets measured at fair value through other comprehensive income, or
- Financial assets measured at amortised cost

On initial recognition, financial assets are measured at fair value. In the case of financial assets other than those classified as at fair value through profit or loss, transaction costs directly attributable to the acquisition of the assets are also included.

Financial assets are classified in one of the measurement categories on initial recognition. Assets may be reclassified if this is permitted and necessary.

Except in the case of held-for-trading financial assets, all regular way purchases and sales of financial assets are recognised on the settlement date, i.e. the date on which the asset is delivered to or by DEUTZ. Held-for-trading financial assets are recognised on the trade date, i.e. the date on which the DEUTZ Group enters into the obligation to buy or sell the asset. Regular way purchases and sales are purchases or sales of financial assets that provide for the delivery of the asset within a period determined by market regulations or conventions.

1. Financial assets measured at fair value through profit or loss In the DEUTZ Group, the group of financial assets measured at fair value through profit or loss includes held-for-trading financial assets. Since the 2018 financial year, when it became mandatory to apply IFRS 9, equity instruments purchased for the purposes of trading and trade receivables earmarked for factoring have also been allocated to this category. Details of the reconciliation of measurement categories under IAS 39 to measurement categories under IFRS 9 can be found on page 86 et seq. of these notes to the financial statements.

Derivatives, including separately recognised embedded derivatives, are classified as held for trading unless they are derivatives designated as hedging instruments and are determined to be effective. Gains and losses on financial assets held for trading are recognised in the income statement. At the time the DEUTZ Group first becomes a party to a contract, it determines whether an embedded derivative needs to be accounted for separately from the host contract. This decision is only reassessed if there is a substantial amendment to the terms of the contract and this amendment results in a significant change to the cash flows that would otherwise have been derived from the contract.

2. Financial assets measured at fair value through other comprehensive income Financial assets measured at fair value through other comprehensive income include debt instruments that are held either for sale or in order to collect the contractual cash flows. The contractual cash flows must consist solely of principal repayments and interest payments and accrue at specified intervals. At the time of disposal, the changes in fair value recognised in other comprehensive income must be reclassified to the income statement. Non-current securities that do not constitute equity instruments are allocated to this category in the DEUTZ Group. Details of the reconciliation of measurement categories under IAS 39 to measurement categories under IFRS 9 can be found on page 86 et seq. of these notes to the financial statements. Equity instruments can also be subsumed under this category provided that they have not been purchased for trading purposes. In this instance, however, the changes in fair value recognised in other comprehensive income do not need to be reclassified to the income statement at the time of disposal. The DEUTZ Group did not hold any of these financial instruments in the reporting period.

3. Financial assets measured at amortised cost This group includes financial assets that are held for the purposes of collecting contractual cash flows. The contractual cash flows must consist solely of principal repayments and interest payments on outstanding repayment amounts. In the DEUTZ Group, this category covers all receivables and financial assets that are not intended for disposal. Details of the reconciliation of measurement categories under IAS 39 to measurement categories under IFRS 9 can be found on page 86 et seq. of these notes to the financial statements. The assets are measured using the effective interest method less any impairment losses. A gain or loss is recognised in profit or loss when these financial instruments are derecognised or written down, and through the amortisation process.

IMPAIRMENT OF FINANCIAL ASSETS

For all financial debt instruments, with the exception of financial assets measured at fair value through profit or loss, a loss allowance is recognised on the date the asset is initially recognised that is equivalent to the expected loss from default events over the next twelve months. At every subsequent balance sheet date, the financial assets are subjected to an impairment test to establish whether there are any indications of impairment (for example, substantial financial difficulties on the part of the debtor, significant probability of insolvency proceedings against the debtor, the disappearance of an active market for the financial asset, significant changes in the technological, economic, legal and/or market environment in which the issuer operates, a sustained fall in the fair value of the financial asset below amortised cost). In the event of a significant increase in credit risk, the loss allowance is adjusted to reflect the losses expected over the term to maturity or a write-down is recognised in the event of default of the financial asset if there are objective indications of impairment.

1. Financial assets measured at amortised cost Expected credit losses reflect the difference between the contractually agreed cash flows and those that are actually anticipated. They are recognised in the income statement as an impairment loss in a valuation allowance account. However, the gross carrying amount continues to be used to determine the interest income. If there are objective indications that financial assets measured at amortised cost are permanently impaired, the loss allowance is offset against the gross carrying amount of the financial asset. Following this partial write-down, the amortised cost is used to determine the interest income.

The loss allowance for trade receivables is calculated immediately over the entire term of the financial instrument. The allowance for other receivables and assets that are subject to low credit risk is recognised upon initial recognition of the asset for a period covering the subsequent twelve months.

If the amount of this impairment loss is found to be lower in subsequent reporting periods and this decrease can be attributed objectively to factors occurring after the recognition of the impairment loss, the previously recognised impairment loss is reversed. However, the new carrying amount of the asset must not exceed what the amortised cost would have been at the time the impairment loss is reversed if the impairment loss had not been recognised. The reversal of the impairment loss is recognised in the income statement.

2. Financial assets measured at fair value through other comprehensive income The impairment of debt instruments measured at fair value through other comprehensive income is recognised in the relevant period and reduces the loss resulting from measurement at fair value that would otherwise be recognised in other comprehensive income.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash on hand, short-term deposits with an original term of up to three months, and credit balances held with banks.

FINANCIAL LIABILITIES

In the DEUTZ Group, financial liabilities within the meaning of IFRS 9 can be in either of the following categories and are classified accordingly:

- Financial liabilities measured at fair value through profit or loss, or
- Other financial liabilities.

Financial liabilities measured at fair value through profit or loss In the DEUTZ Group, the group of financial liabilities measured at fair value through profit or loss includes held-for-trading financial liabilities. To date, the DEUTZ Group has not made use of the option to designate financial liabilities as at fair value through profit or loss on initial recognition.

Derivatives, including separately recognised embedded derivatives, are classified as held for trading unless they are derivatives designated as hedging instruments and are determined to be effective. If the fair value of these derivatives is negative, they are recognised under financial liabilities. Gains and losses on financial liabilities held for trading are recognised in the income statement.

Other financial liabilities in the DEUTZ Group for the most part comprise the following:

- Financial debt (liabilities to banks),
- Trade payables and
- Other liabilities.

Other financial liabilities are classified as current unless the DEUTZ Group does not have the right to settle the liability until at least twelve months after the balance sheet date.

Other financial liabilities are initially recognised at their fair value including transaction costs. They are subsequently measured at amortised cost using the effective interest method.

DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGES

DEUTZ only uses derivative financial instruments (interest-rate and currency derivatives) for hedging purposes as part of its business operations, in particular to reduce foreign currency risk in forecast transactions involving foreign currencies and to reduce interest-rate risk through the use of interest-rate swaps.

Derivatives are initially recognised at their fair value on the day they are entered into and are subsequently measured at the fair value prevailing at the time. The fair value of derivatives corresponds to the present value of estimated future cash flows. The fair value of currency forwards is based on the forward exchange rate as at the balance sheet date.

Changes in the fair value of non-hedging derivatives are immediately recognised in the income statement.

Cash flow hedges Forecast transactions (cash flows) in foreign currency and interest-rate risk are hedged using cash flow hedges. The effective portion of the changes in the fair value of derivatives designated as cash flow hedges is recognised in other comprehensive income. The ineffective portion of the changes in fair value is reported in the income statement under other income or other expenses.

The changes in fair value reported in the reserve for cash flow hedges are reclassified to the income statement in the period in which the hedged item is recognised in income.

The market values of derivatives designated as cash flow hedges are stated in Note 26. Changes in the cash flow hedge reserve are reported under a separate item in other comprehensive income (fair value reserve).

PROVISIONS FOR PENSIONS AND OTHER POST-RETIREMENT BENEFITS

The occupational pension scheme offered by the DEUTZ Group takes account of the relevant legislation in various countries and the benefits that each company provides for its staff.

Occupational pensions take the form of defined benefit pension plans, which are funded by the recognition of pension provisions. Besides entitlements to an employer-funded pension, employees in Germany can build up an employee-funded pension by participating in a deferred compensation plan. In the UK (branch of DEUTZ AG), there is an employer-funded pension plan and the option of building up an employee-funded pension by participating in a deferred compensation plan. There are also employer-funded pension plans at DEUTZ Corporation, Atlanta (USA), at DEUTZ FRANCE S.A.S., Gennevilliers (France), at DEUTZ Italy S.r.l. and at Service Center Milan S.r.l.

The Group's liabilities arising from employer-funded defined benefit pension plans are calculated separately for each plan using actuarial principles. First, the pension benefits vested in earlier periods and in the current period are estimated. The next step is to discount these benefits using the projected unit credit method. The resulting present value represents the defined benefit obligation. The fair value of the plan asset is then deducted from the defined benefit obligation to determine the net liability to be reported on the balance sheet.

The interest rate used to discount the estimated pension benefits is determined using the yields available in the market on each valuation date for investment-grade, fixed-income corporate paper. The currency and terms to maturity of the underlying corporate paper match the currency and predicted duration of the post-retirement pension liabilities to be met.

The net interest cost is calculated by multiplying the net liability at the beginning of the reporting period by the interest rate used to discount the pension obligations at the beginning of the period.

The effects of the revaluation include the actuarial gains and losses on the valuation of the gross defined benefit obligation and the difference between the actual return on plan assets and the typical return on plan assets assumed at the beginning of the period when calculating the net interest cost.

While the revaluation effects are recognised in other comprehensive income, the net interest cost and the current service cost are reported as gains or losses in the reporting period. Net interest cost is reported in operating profit.

The calculation of the individual cost components in the net liability to be reported on the balance sheet on each reporting date is based on a report by a qualified actuary.

In the case of the employee-funded deferred compensation plan, the Company has taken out a reinsurance policy with a life insurance company based on the amount of salary contribution and undertakes to pay a pension based on the guaranteed capital that has been underwritten. The present value of the benefit obligation corresponds to the fair value of the entitlements to reinsurance cover on the basis of the asset values calculated by the insurer. For the purposes of recognition on the balance sheet, the present value of the benefit obligation is offset against the fair value of the entitlements to reinsurance cover in an equal amount.

As well as defined benefit pension plans, there are also defined contribution pension plans (e.g. direct insurance policies). The mandatory contributions are immediately recognised as staff costs. In this case, the recognition of provisions is not required because the DEUTZ Group has no obligation apart from the obligation to pay premiums.

OTHER PROVISIONS

Other provisions are recognised if there are legal or constructive obligations towards third parties that arise from past events and are likely to result in cash outflows. Furthermore, it must be possible to estimate the obligation reliably. Provisions are recognised at their settlement value calculated at the balance sheet date and take account of projected cost increases. Non-current provisions are discounted. Provisions for warranty obligations are recognised when products are sold or when new warranties are initiated. The measurement of potential warranty liabilities is based primarily on historical experience.

CONTINGENT LIABILITIES

Contingent liabilities are potential obligations that arise from past events and whose existence will only be confirmed by the occurrence of one or more uncertain future events that, however, are beyond the control of the DEUTZ Group. Furthermore, present obligations may constitute contingent liabilities if it is not probable that an outflow of resources will be required to settle the obligation, or a sufficiently reliable estimate of the amount of the obligation cannot be made.

NOTES TO THE INCOME STATEMENT

1. REVENUE

Breakdown of revenue by application segment and by timing of recognition in 2018

€ million

	DEUTZ Compact Engines	DEUTZ Customised Solutions	Other	Consolidation	Total
Construction Equipment	512.1	33.4			**545.5**
Material Handling	361.2	11.9			**373.1**
Automotive	27.1	28.5			**55.6**
Agricultural Machinery	255.3	5.8			**261.1**
Stationary Equipment	132.9	33.4			**166.3**
Service	194.3	135.6			**329.9**
Miscellaneous/Marine	1.1	22.6	26.8	–3.2	**47.3**
Total	**1,484.0**	**271.2**	**26.8**	**–3.2**	**1,778.8**
thereof at a point in time	1,479.9	262.6	26.8	–3.2	**1,766.1**
thereof over a period of time	4.1	8.6	0.0	0.0	**12.7**

Breakdown of revenue by application segment and by timing of recognition in 2017

€ million

	DEUTZ Compact Engines	DEUTZ Customised Solutions	Other	Consolidation	Total
Construction Equipment	407.2	30.2			**437.4**
Material Handling	254.6	11.0			**265.6**
Automotive	26.8	29.3			**56.1**
Agricultural Machinery	226.2	4.3			**230.5**
Stationary Equipment	121.6	30.4			**152.0**
Service	186.0	123.2			**309.2**
Miscellaneous/Marine	5.1	19.5	3.7	0.0	**28.3**
Total	**1,227.5**	**247.9**	**3.7**	**0.0**	**1,479.1**
thereof at a point in time	1,224.7	241.8	3.7	0.0	**1,470.2**
thereof over a period of time	2.8	6.1	0.0	0.0	**8.9**

Breakdown of revenue by region in 2018

€ million

	DEUTZ Compact Engines	DEUTZ Cus-tomised Solutions	Other	Consoli-dation	Total
Europe/Middle East/Africa	1,093.6	169.5	17.5	–3.2	**1,277.4**
Americas	279.1	51.0	7.7	0.0	**337.8**
Asia-Pacific	111.3	50.7	1.6	0.0	**163.6**
Total	1,484.0	271.2	26.8	–3.2	**1,778.8**

Breakdown of revenue by region in 2017

€ million

	DEUTZ Compact Engines	DEUTZ Cus-tomised Solutions	Other	Consoli-dation	Total
Europe/Middle East/Africa	911.7	150.5	1.3	0.0	**1,063.5**
Americas	225.5	40.7	1.9	0.0	**268.1**
Asia-Pacific	90.3	56.7	0.5	0.0	**147.5**
Total	1,227.5	247.9	3.7	0.0	**1,479.1**

The Group primarily generates revenue from the sale of engines and spare parts (service) to manufacturers of applications and to dealers. The revenue is recognised when control of the products is transferred to the purchaser and no unfulfilled obligations remain. This is usually deemed to have occurred when the products have been delivered or when the shipping documents have passed to the purchaser, whichever is the earlier. At this point in time, the opportunities and risks are transferred to the purchaser and the obligation to pay the purchase price is created.

Retrospective volume discounts that are based on total revenue for the financial year are often agreed with major customers for the sale of engines and spare parts. Revenue from these sales is recognised in the amount specified in the contract less the estimated volume discount. The provision is estimated mainly on the basis of the sales that are expected to be generated from the customer (most likely amount), a figure which is periodically updated. The provision is recognised as a contract liability under other liabilities. No significant financing components are involved as payment terms in line with market practice are usually agreed with the customer. A provision for guarantees is recognised to cover the Group's obligation to repair or replace defective products in accordance with standard guarantee conditions.

When a remanufactured engine is sold (Xchange business), the customer is invoiced for the remanufactured engine and for a deposit for their old reconditionable engine. The revenue for the remanufactured engine is recognised at the point at which control is transferred. This is usually deemed to have occurred when the products have been delivered or when the shipping documents have passed to the purchaser, whichever is the earlier. At this point in time, the opportunities and risks are transferred to the purchaser and the obligation to pay the purchase price is created. The purchase price received for the deposit is recognised as a contract liability until the obligation to take back the reconditionable old engine expires.

In the reporting period, revenue of €1.9 million was recognised that, at the beginning of the period, had been included in the balance of contract liabilities.

As part of its service business, the Group also carries out maintenance work. The revenue generated from this is recognised in the reporting period in which the services are rendered. As the services are usually rendered within a very short period of time, however, any revenue accrued at the end of the reporting period for services that have been rendered but not yet invoiced is not material.

2. COST OF SALES

The cost of sales comprises the following cost items:

€ million	2018	2017
Cost of materials	1,040.8	857.7
Staff costs	208.1	175.7
Depreciation and amortisation on property, plant and equipment and intangible assets (excl. R&D)	38.3	40.9
Other cost of sales items	181.1	148.6
Total	**1,468.3**	**1,222.9**

3. RESEARCH AND DEVELOPMENT COSTS

The table below gives a breakdown of research and development costs:

€ million	2018	2017
Cost of materials	21.1	17.4
Staff costs	43.3	34.1
Depreciation, amortisation and impairment	35.6	48.0
Own work capitalised and reimbursements	–18.6	–13.7
Other research and development costs	10.6	9.0
Total	**92.0**	**94.8**

The figure for depreciation, amortisation and impairment in the reporting year includes impairment losses recognised on capitalised development expenditure of €2.3 million (2017: €8.8 million). The impairment losses relate to completed development projects and are attributable to revised sales expectations.

4. SELLING EXPENSES AND GENERAL AND ADMINISTRATIVE EXPENSES

Selling expenses amounted to €96.4 million in the year under review (2017: €78.8 million). General and administrative expenses came to €49.3 million (2017: €41.5 million). Both the selling expenses and the general and administrative expenses predominantly consisted of staff costs. The respective amounts were €64.5 million and €35.2 million (2017: €55.5 million and €32.3 million).

5. OTHER OPERATING INCOME

€ million	2018	2017
Income from the disposal of non-current assets	15.6	114.7
Income from recharged costs and services	9.1	8.4
Foreign currency gains	9.7	4.8
Income from the reversal of provisions	2.7	2.1
Income from the measurement of derivatives	0.7	1.1
Income from the derecognition of liabilities	0.5	0.2
Sundry other income	2.3	12.8
Total	**40.6**	**144.1**

Income from the disposal of non-current assets in the reporting period relates to the sale of the stake in the joint venture DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, and the resulting reclassification of the cumulative currency translation differences from other comprehensive income to the income statement for 2018. In 2017, other operating income had mainly included the proceeds from the disposal of the land occupied by our former Cologne-Deutz site. The fall in sundry other income is attributable to the €10.5 million gain in the prior year relating to the disposal of the building lease of our subsidiary Ad. Strüver KG for a plot of land in Hamburg.

6. OTHER OPERATING EXPENSES

€ million	2018	2017
Foreign currency losses	5.6	11.4
Expenses for pensions and other post-employment benefits	3.5	3.8
Other expenses from the adjustment of provisions	2.3	1.2
Other cost of fees, contributions and advice	2.1	2.7
Rental and lease expenses	1.4	0.8
Expenses in connection with the measurement of derivatives	0.9	0.6
Expenses in connection with the disposal of non-current assets	0.0	15.8
Transaction costs resulting from the acquisition of companies	0.0	4.7
Sundry other expenses	1.9	0.9
Total	**17.7**	**41.9**

Other operating expenses decreased mainly because in the prior year they had included expenses resulting from the disposal of the land occupied by our former Cologne-Deutz site and the transaction costs resulting from the acquisition of shares in the companies Torqeedo GmbH, Gilching, and DEUTZ Italy S.r.l, Milan (formerly IML Motori S.r.l.).

7. PROFIT/LOSS ON EQUITY-ACCOUNTED INVESTMENTS AND OTHER INVESTMENT INCOME

€ million	2018	2017[1]	2017
Profit/loss on equity-accounted investments			
Income from equity-accounted investments	0.6	0.6	2.5
Expenses relating to equity-accounted investments	–2.8	–0.8	0.0
Total	**–2.2**	**–0.2**	**2.5**
Write-downs of equity-accounted investments	**–11.3**	**0.0**	**0.0**
Other net investment income	**0.5**	**0.9**	**0.9**
Total	**–13.0**	**0.7**	**3.4**

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

Income from equity-accounted investments consisted of DEUTZ AG's share in the profits of its associate D.D. Power Holdings (Pty), South Africa. The expenses relating to equity-accounted investments are attributable to the share of the loss of the joint venture DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, up to 30 June 2018 when the shares were classified as held for sale.

Because of the write-downs carried out and the intention to dispose of the stake in DEUTZ (Dalian) Engine Co., Ltd., the carrying amount for the shares as at 30 June 2018, calculated using the equity method, was tested for impairment in accordance with IAS 36 and written down by €11.3 million to the recoverable amount of €9.7 million. The recoverable amount was based on the anticipated sale proceeds. The recoverable amount was calculated in accordance with the third of the three levels of the IFRS 13 measurement hierarchy. The shares in DEUTZ Dalian had been assigned to the DEUTZ Compact Engines segment.

As in the previous year, other net investment income mainly related to profits transferred by DEUTZ Sicherheit GmbH, Cologne.

8. INTEREST EXPENSES, NET

€ million	2018	2017
Interest income on credit balances with banks	0.1	0.1
Other interest income	0.4	0.6
Interest income	**0.5**	**0.7**
Interest paid on liabilities to banks	–1.4	–1.9
Interest paid on sales of receivables	–0.9	–0.8
Other interest expense and similar charges	–0.1	–0.4
Interest expense and similar charges (finance costs)	**–2.4**	**–3.1**
Interest expenses, net	**–1.9**	**–2.4**

In 2018, borrowing costs of €0.6 million were capitalised (2017: €0.5 million).

9. TAXES

Income taxes The following table gives a breakdown of income taxes:

€ million	2018	2017
Current tax expense	16.0	23.3
thereof unrelated to the reporting period	–0.6	2.2
Deferred tax income	–5.8	–0.4
thereof from temporary differences	–2.2	0.8
thereof from loss carryforwards	–3.6	–1.2
Total tax expense	**10.2**	**22.9**

The current income tax expenses of €16.0 million predominantly related to additions to provisions for anticipated tax payments on current income generated by Group companies in 2018.

The deferred tax income included income of €2.2 million arising from temporary differences (2017: tax expense of €0.8 million). This resulted, in particular, from the reduction of deferred tax liabilities in connection with the capitalisation of development expenditure under IFRS.

There are no income tax implications for DEUTZ AG arising from the distribution of dividends to shareholders by DEUTZ AG.

The tax reconciliation table shows the reconciliation from anticipated income taxes to effective taxes as shown in the income statement. Effective income taxes include current and deferred taxes. The applicable tax rate is 31.54 per cent (2017: 31.65 per cent) comprising corporation tax at 15 per cent, the solidarity surcharge (5.50 per cent of the corporation tax) and trade tax at 15.71 per cent based on an average assessment rate.

€ million	2018	2017
Net income before income taxes	**80.1**	**144.1**
Anticipated tax expense (+)/ income (–)	25.2	45.6
Effect from trade tax add-backs and deductions	0.2	0.2
Differing tax rates	0.2	0.8
Changes arising from the recognition of deferred taxes on loss carryforwards and on temporary differences and the utilisation of loss carryforwards	–14.5	–24.8
Effect of non-deductible expenses	1.1	1.0
Effect of consolidation adjustments	–0.4	2.0
Effect of partnership's supplementary tax accounts	0.0	–0.4
Share of profit (loss) of equity-accounted investments	–0.4	–0.5
Effect of tax-exempt income	–0.9	–0.7
Effect of potential dividend distributions	0.1	0.2
Effects not related to the reporting period		
Prior-year tax payments	–0.6	2.2
Deferred taxes resulting from prior-year adjustments	0.3	–2.7
Other	–0.1	0.0
Effective tax expense (+)/ income (–)	**10.2**	**22.9**
Effective tax rate (%)	12.7	15.9

The change arising from the recognition of deferred taxes on loss carryforwards and on temporary differences and the utilisation of loss carryforwards was largely attributable to the utilisation of loss carryforwards in the reporting year.

10. EARNINGS PER SHARE

Earnings per share is calculated in accordance with IAS 33. The DEUTZ Group calculates basic earnings per share by dividing the net income attributable to its shares by the weighted average number of shares outstanding.

There were no dilutive effects in 2018 or 2017 because there are no exercisable options to convert financial instruments with equity components.

	2018	2017[1]
Net income attributable to shareholders of the DEUTZ Group (€ million)	69.9	118.5
Weighted average number of shares outstanding (€ thousand)	120,862	120,862
Earnings per share (€)	**0.58**	**0.98**

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

NOTES TO THE STATEMENT OF COMPREHENSIVE INCOME

11. OTHER COMPREHENSIVE INCOME

Other comprehensive income comprises the elements of the statement of comprehensive income not reported in the income statement. The taxes resulting from other comprehensive income are shown in the following table:

€ million	2018			2017 (adjusted)		
	Before taxes	Taxes	After taxes	Before taxes	Taxes	After taxes
Amounts that will not be reclassified to the income statement in the future	**–0.1**	**0.0**	**–0.1**	**2.6**	**–0.8**	**1.8**
Remeasurements of defined benefit plans	–0.1	0.0	–0.2	2.6	–0.8	1.8
Amounts that will be reclassified to the income statement in the future if specific conditions are met	**–17.0**	**0.6**	**–16.4**	**–3.1**	**–1.3**	**–4.4**
Currency translation differences	–15.1	0.0	–15.1	–7.1	0.0	–7.1
thereof profit/loss on equity-accounted investments	–15.8	0.0	–15.8	–1.6	0.0	–1.6
Effective portion of change in fair value from cash flow hedges	–1.7	0.6	–1.1	4.0	–1.3	2.7
Fair value of financial instruments	–0.2	0.0	–0.2	0.0	0.0	0.0
Other comprehensive income	**–17.2**	**0.6**	**–16.5**	**–0.5**	**–2.1**	**–2.6**

The prior-year figures have been adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 84 in the notes to the consolidated financial statements for further details.

In 2018, losses totalling €0.9 million on cash flow hedges (2017: gains of €0.5 million) recognised in other comprehensive income during the year (prior to the inclusion of deferred taxes) were reclassified to other operating expenses or other operating income in the consolidated income statement.

NOTES TO THE BALANCE SHEET

12. PROPERTY, PLANT AND EQUIPMENT

Gross figures Cost of purchase/conversion	Land, leasehold rights and buildings	Technical equipment and machines	Other equipment, furniture and fixtures	Advances paid and construction in progress	Total
€ million					
Balance at 1 Jan 2018	**215.9**	**511.8**	**256.3**	**13.6**	**997.6**
Currency translation differences	0.1	0.3	0.2	0.0	0.6
Additions	2.5	8.4	27.2	19.5	57.6
Investment grants	0.0	–1.1	–1.7	0.0	–2.8
Disposals	–0.7	–2.2	–3.6	0.0	–6.5
Changes to basis of consolidation	0.0	0.0	0.0	0.0	0.0
Reclassifications	0.2	3.0	7.4	–11.1	–0.5
Balance at 31 Dec 2018	**218.0**	**520.2**	**285.8**	**22.0**	**1,046.0**

Gross figures Depreciation and impairment	Land, leasehold rights and buildings	Technical equipment and machines	Other equipment, furniture and fixtures	Advances paid and construction in progress	Total
€ million					
Balance at 1 Jan 2018	**97.7**	**418.6**	**207.9**	**0.0**	**724.2**
Currency translation differences	0.1	0.2	0.1	0.0	0.4
Depreciation	5.6	18.8	19.0	0.0	43.4
Impairment	0.0	0.2	0.4	0.0	0.6
Disposals	–0.7	–2.1	–3.6	0.0	–6.4
Reclassifications	0.0	0.0	0.0	0.0	0.0
Balance at 31 Dec 2018	**102.7**	**435.7**	**223.8**	**0.0**	**762.2**
Net carrying amount at 31 Dec 2018	**115.3**	**84.5**	**62.0**	**22.0**	**283.8**

Gross figures Cost of purchase/conversion	Land, leasehold rights and buildings	Technical equipment and machines	Other equipment, furniture and fixtures	Advances paid and construction in progress	Total
€ million					
Balance at 1 Jan 2017	**218.6**	**521.9**	**248.2**	**9.1**	**997.8**
Currency translation differences	–0.2	–0.9	–0.5	–0.1	–1.7
Additions	2.8	8.9	15.4	10.9	38.0
Investment grants	0.0	–3.1	0.0	0.0	–3.1
Disposals	–5.7	–22.8	–8.1	–0.1	–36.7
Changes to basis of consolidation	0.4	1.6	1.2	0.1	3.3
Reclassifications	0.0	6.2	0.1	–6.3	0.0
Balance at 31 Dec 2017	**215.9**	**511.8**	**256.3**	**13.6**	**997.6**

Gross figures Depreciation and impairment	Land, leasehold rights and buildings	Technical equipment and machines	Other equipment, furniture and fixtures	Advances paid and construction in progress	Total
€ million					
Balance at 1 Jan 2017	**94.1**	**419.2**	**198.5**	**0.0**	**711.8**
Currency translation differences	–0.1	–0.6	–0.4	0.0	–1.1
Depreciation	5.3	22.5	17.7	0.0	45.5
Impairment	0.0	0.0	0.0	0.0	0.0
Disposals	–1.6	–22.5	–7.9	0.0	–32.0
Reclassifications	0.0	0.0	0.0	0.0	0.0
Balance at 31 Dec 2017	**97.7**	**418.6**	**207.9**	**0.0**	**724.2**
Net carrying amount at 31 Dec 2017	**118.2**	**93.2**	**48.4**	**13.6**	**273.4**

Additions to property, plant and equipment mainly related to a change in supplier, the relocation of the 2011 engine series from Cologne-Porz to Ulm and the new TCD 2.2 engine series. New and more efficient testing equipment and replacement machinery were also purchased.

Government grants at our Spanish subsidiary were deducted from the cost of purchasing the property, plant and equipment. In 2018, additional subsidies of €1.1 million were granted in connection with capital expenditure on property, plant and equipment. Total government grants recognised as at 31 December 2018 amounted to €4.2 million (31 December 2017: €4.0 million). In 2018, grants of €0.9 million (2017: €0.5 million) were reclassified to the income statement (as a reduction of the depreciation expense).

Purchase commitments for property, plant and equipment are described on page 132.

13. INTANGIBLE ASSETS

		Internally generated intangible assets			
Gross figures Cost of purchase/conversion	Goodwill	Completed	In development	Other intangible assets	Total
€ million					
Balance at 1 Jan 2018	**48.0**	**411.7**	**25.7**	**169.6**	**655.0**
Currency translation differences	0.0	0.0	0.0	0.2	0.2
Additions	0.0	0.0	21.0	4.4	25.4
Investment grants	0.0	0.0	0.0	–0.1	–0.1
Disposals	0.0	0.0	0.0	–10.0	–10.0
Changes to basis of consolidation	0.0	0.0	0.0	0.0	0.0
Reclassifications	0.0	0.0	0.5	0.0	0.5
Balance at 31 Dec 2018	**48.0**	**411.7**	**47.2**	**164.1**	**671.0**

Gross figures Amortisation and impairment	Goodwill	Internally generated intangible assets: Completed	Internally generated intangible assets: In development	Other intangible assets	Total
€ million					
Balance at 1 Jan 2018	**0.0**	**313.7**	**8.8**	**119.3**	**441.8**
Currency translation differences	0.0	0.0	0.0	0.0	0.0
Amortisation	0.0	25.7	0.0	7.3	33.0
Impairment	0.0	2.3	0.0	0.1	2.4
Disposals	0.0	0.0	0.0	–9.8	–9.8
Reclassifications	0.0	0.0	0.0	0.0	0.0
Balance at 31 Dec 2018	**0.0**	**341.7**	**8.8**	**116.9**	**467.4**
Net carrying amount at 31 Dec 2018	**48.0**	**70.0**	**38.4**	**47.2**	**203.6**

Gross figures Cost of purchase/conversion	Goodwill	Internally generated intangible assets: Completed	Internally generated intangible assets: In development	Other intangible assets	Total
€ million					
Balance at 1 Jan 2017	**0.0**	**411.7**	**13.1**	**123.6**	**548.4**
Currency translation differences	0.0	0.0	0.0	–0.7	–0.7
Additions	0.0	0.0	17.5	19.8	37.3
Investment grants	0.0	0.0	0.0	0.0	0.0
Disposals	0.0	0.0	–4.9	–0.5	–5.4
Changes to basis of consolidation	48.0	0.0	0.0	27.4	75.4
Reclassifications	0.0	0.0	0.0	0.0	0.0
Balance at 31 Dec 2017	**48.0**	**411.7**	**25.7**	**169.6**	**655.0**

Gross figures Amortisation and impairment	Goodwill	Internally generated intangible assets: Completed	Internally generated intangible assets: In development	Other intangible assets	Total
€ million					
Balance at 1 Jan 2017	**0.0**	**280.1**	**4.9**	**114.9**	**399.9**
Currency translation differences	0.0	0.0	0.0	–0.7	–0.7
Amortisation	0.0	33.6	0.0	5.6	39.2
Impairment	0.0	0.0	8.8	0.0	8.8
Disposals	0.0	0.0	–4.9	–0.5	–5.4
Reclassifications	0.0	0.0	0.0	0.0	0.0
Balance at 31 Dec 2017	**0.0**	**313.7**	**8.8**	**119.3**	**441.8**
Net carrying amount at 31 Dec 2017	**48.0**	**98.0**	**16.9**	**50.3**	**213.2**

Other intangible assets mainly comprise grants for tool costs, rights and licences, purchased development services and software. The additions to other intangible assets mainly resulted from the purchase of software.

Under internally generated intangible assets, the additions largely relate to the capitalisation of development expenditure relating to the development of new engines and the refinement of existing models.

The impairment of completed intangible assets in 2018 relates to the capitalised development expenditure on two engine series that are already in production and are the result of changes in market forecasts. The impairment testing of these assets was carried out at the level of the cash-generating units that represent the engine series. The recoverable amounts determined on the basis of the values in use of these cash-generating units amounted to €28.5 million and €11.2 million respectively. The impairment loss recognised amounted to €2.3 million in 2018, of which €1.9 million is attributable to the DEUTZ Compact Engines segment and €0.4 million to the DEUTZ Customised Solutions segment. The respective pre-tax discount rates underlying the calculation were 9.4 per cent and 7.9 per cent.

Goodwill

The following table shows the allocation of goodwill to the Group's business units:

€ million				
DEUTZ Compact Engines		DEUTZ Customised Solutions	Other	Total
Product line <4 litres	Product line 4 to 8 litres		Torqeedo	
39.7	0.0	0.0	8.3	48.0

The goodwill results from the acquisitions of the Torqeedo and DEUTZ Italy (formerly IML Motori S.r.l.) groups of companies in 2017.

The impairment testing of the goodwill was carried out at the end of 2018 by an expert third party. To this end, the business units 'product line <4 litres' and 'Torqeedo' were identified as the cash-generating units to which goodwill has been allocated. The recoverable amounts of these business units were then offset against the carrying amounts of the business units including the allocated goodwill. The recoverable amount of a business unit is calculated by determining the value in use according to the discounted cash flow (DCF) method. Value in use was calculated by discounting estimated future cash flows to their present value. The calculation uses a discount rate that reflects current market expectations in respect of the time value of money and the risks inherent in the cash-generating unit. The cash flows used in the calculation were derived from the financial plan approved by senior management, which covers a five-year period. The cash flows beyond this period of five years (or six years including a transition year for the 'product line <4 litres' business unit, were extrapolated based on a growth rate of 1.0 per cent.

'Product line <4 litres' business unit:

In the planning period, total revenue in the 'product line <4 litres' business unit is generated mainly through the sale of diesel engines with capacities of less than 4 litres, which are the main products, and through spare parts business (service). Whereas in the initial years of the detailed planning period, revenue growth will continue to be influenced by the introduction in Europe of the new Stage V emissions standard for diesel engines, the anticipated increase in revenue in the final two years of the planning period will be attributable to rising sales of hybrid and electric motors (E-DEUTZ). The planning is based both on market data from the Power System Research Database (PSR) and on a management estimate that is particularly focused on the potential of the E-DEUTZ business. Our revenue planning has considered not only the anticipated performance of the market for diesel engines in the application segments that are important to us (average growth of approximately 2.5 per cent in the period 2019 to 2023), but also global construction volumes and the trends in the construction industry in which our major customers operate (average growth of construction volume of approximately 4.9 per cent in the period 2019 to 2023). The construction industry is among those switching from diesel engines to electric motors because of the increasing regulation of emissions.

On the cost side, management is assuming that it will be possible to make additional savings in manufacturing costs per unit. This will be the result of economies of scale and an anticipated shift in the sales mix from more powerful to less powerful engine types. Moreover, the use of a new assembly line from 2020 is expected to significantly reduce material and production overheads. In its planning, management is assuming that the ratio of net working capital to revenue will remain stable.

In order to determine a sustainable level of revenue and earnings, the detailed planning phase was extended by a transition year (2024) on the basis of market analyses. The average revenue and the average EBITDA margins for the years 2018 to 2023 were used to determine a sustainable level of revenue and the relevant EBITDA margin for the transition year.

The pre-tax cost of capital used for discounting is 10.8 per cent. The discount rate is based on a risk-free interest rate of 1.0 per cent and a market risk premium of 7.0 per cent. In addition, the beta factor, the cost of debt and the capital structure were determined using a peer group specific to the business unit.

The impairment test carried out for the 'product line <4 litres' business unit verified the impairment of the goodwill allocated to this business unit.

'Torqeedo' business unit:

The market for electric motors in the automotive industry is in a phase of expansion characterised by high growth rates. Technological innovations and stricter emissions standards mean that electric motors are increasingly being chosen over traditional internal combustion engines. The UK-based market research company LMC Automotive Ltd. forecasts average growth rates of around 32 per cent for the period 2019 to 2023. Because of the possibility of certain electric motor technologies making the leap from the automotive sector to the marine industry, which in some cases has already happened, particularly in the case of batteries, Torqeedo's management is working on the basis that a similar trend will soon emerge in the marine sector. The assumptions on which the budget figures are based for the 'Torqeedo' business unit therefore include fast-rising demand for electric motors and hybrid drives. Torqeedo's management also expects strong revenue growth from the expansion of the business with ferries and water taxies. Cities in the EMEA and Asia regions that are built close to water are a particular focus here. Overall, the average growth rate of 22.8 per cent budgeted by Torqeedo's management for the years 2019 to 2023 remains well below the forecast made by LMC Automotive for the automotive industry.

On the cost side, management is assuming that manufacturing costs per unit will fall. In particular, this is because the bulk of the capital expenditure on workforce expansion and infrastructure has largely been made. Management also expects further economies of scale to be reaped from the optimisation and standardisation of the production processes and rising learning curves. In its planning, management is assuming that the ratio of net working capital to revenue will fall sharply. This will primarily be achieved by means of improved inventory management. Moreover, Torqeedo previously focused on being able to deliver at any time rather than on optimising inventory management, which meant that higher levels of stock had to be kept on hand.

The pre-tax cost of capital used for discounting is 13.2 per cent. The discount rate is based on a risk-free interest rate of 1.0 per cent and a market risk premium of 7.0 per cent. In addition, the beta factor, the cost of debt and the capital structure were determined using a peer group specific to the business unit.

The impairment test carried out for the 'Torqeedo' business unit verified the impairment of the goodwill allocated to this business unit. A change in the material assumptions that is possible in the view of management would have the following impact on the recoverable amount of the 'Torqeedo' cash-generating unit:

Sensitivity analysis of recoverable amount – 'Torqeedo' CGU

Change in recoverable amount		Change in growth rate Terminal value (percentage points)		
€ million		**–0.5**	**0.0**	**0.5**
	1.0	–7.6	–6.2	–4.6
WACC change (percentage points)	**0.0**	–1.9	0.0	2.1
	–1.0	5.2	7.7	10.5

Excess/shortfall compared with the carrying amount of the CGU		Change in growth rate Terminal value (percentage points)		
€ million		**–0.5**	**0.0**	**0.5**
	1.0	–4.0	–2.6	–1.0
WACC change (percentage points)	**0.0**	1.7	3.6	5.7
	–1.0	8.8	11.3	14.1

Intangible assets with an indefinite useful life

Other intangible assets include the carrying amount of €7.0 million for the 'Torqeedo' brand purchased as part of the acquisition of the Torqeedo group of companies. Management continues to consider the 'Torqeedo' brand to have an indefinite useful life as there are no indications that the brand will be withdrawn. The intention is for the products made by the Torqeedo group of companies to carry on being marketed under the 'Torqeedo' brand.

14. EQUITY-ACCOUNTED INVESTMENTS

The shares held by the DEUTZ Group in associates and joint ventures, none of which are listed companies, are as follows:

€ million	2018	2017
1 Jan	**25.9**	**41.7**
Additions	0.0	0.0
Pro-rata profit/loss on equity-accounted investments	–2.2	2.5
Disposals	0.0	0.0
Impairment	–11.3	0.0
Other changes arising from measurement using the equity method	–10.3	–3.4
31 Dec	**2.1**	**40.8**
Correction of errors under IAS 8	0.0	–14.9
31 Dec (adjusted)	**2.1**	**25.9**

The impairment relates to the adjustment of the carrying amount of the DEUTZ Dalian shares calculated using the equity method. Other changes arising from measurement using the equity method mainly comprise the reclassification, with effect from 30 June 2018, of the carrying amount of €9.7 million for the shares in DEUTZ Dalian to non-current assets classified as held for sale. The shares were sold to the joint venture partner FAW with effect from 30 November 2018.

A summary of further financial information about associates and joint ventures is provided in Note 27 ‘Interests in other entities’.

15. OTHER FINANCIAL ASSETS (NON-CURRENT)

€ million	31 Dec 2018	31 Dec 2017
Equity investments	1.3	2.0
Non-current securities	2.8	3.1
Cost of borrowing	1.0	1.2
Other	11.6	0.5
Total	**16.7**	**6.8**

Equity investments

This item mainly related to the carrying amounts of the investments in DEUTZ Engine (Shandong) Co., Ltd., which is not operational, and DEUTZ Engines (India) Private Limited, Pune, India. For reasons of materiality, these companies are not consolidated.

Non-current securities

This line item on the balance sheet includes securities in the form of equities and bonds. The securities are used to hedge the pension obligations of the Group company DEUTZ Corporation, Atlanta, USA.

Cost of borrowing

The cost of borrowing directly associated with the working capital facility is accounted for as a non-current asset and is recognised in the income statement in instalments over the capital commitment period. The financial debt (including the pro rata cost of borrowing) is recognised when the working capital facility is drawn down as a loan and is subsequently measured using the effective interest method.

Other

Other financial assets contains a loan of €11.2 million that was granted in connection with the change of ownership for the Neue Halberg-Guss GmbH business. Financial support was provided for the change of ownership at this supplier in order to secure the supply of cast parts for DEUTZ’s own engine production. The loan granted has a nominal value of €13.8 million and interest is charged at an annual rate of 3.0 per cent. As at 31 December 2018, the loan was recognised at fair value through profit or loss in an amount of €11.2 million on the basis of the contractual agreement. Measurement as at 31 December 2018 was carried out with the aid of a net present value method. The estimated future cash flows were discounted to their present value using a discount rate of 10.0 per cent that reflects the prevailing market forecasts of the time value of the money and management’s assessment of the specific credit risk. The inputs used in the measurement correspond to level 3 of the IFRS 13 measurement hierarchy.

The difference of €2.6 million between the amount loaned (€13.8 million) and the calculated present value (€11.2 million) resulting from initial measurement at fair value was recognised in operating profit for the reporting period.

16. DEFERRED TAXES, CURRENT TAX ASSETS AND LIABILITIES

At the balance sheet date, DEUTZ AG had unutilised tax losses carried forward of €786.7 million for corporation tax (2017: €833.9 million) and €901.5 million for trade tax (2017: €949.4 million). The figures disclosed in 2017 for tax loss carryforwards (corporation tax: €832.0 million; trade tax: €947.6 million) were restated as a result of tax audits for previous years.

Further tax loss carryforwards were also available to international companies in the Group.

The following table gives a breakdown of the deferred tax assets and liabilities and the current tax assets and liabilities reported on the balance sheet:

€ million	31 Dec 2018	31 Dec 2017
Non-current		
Deferred tax assets	75.9	69.2
Deferred tax liabilities	0.5	0.2
Current		
Current tax assets	2.0	1.5
Provision for income taxes	17.9	18.3
Income tax liabilities	0.8	0.6

In 2018, the deferred tax assets net of deferred tax liabilities amounted to €75.9 million. They were largely the result of capitalising deferred tax assets on tax losses carried forward and of temporary differences, particularly those between the carrying amount of provisions for pensions and other post-retirement benefits in the consolidated balance sheet and their tax base in the financial statements of DEUTZ AG. Deferred tax assets from items recognised in other comprehensive income amounted to

€21.2 million for provisions for pensions and other post-retirement benefits and €0.3 million for measurement of cash flow hedges and interest rate derivatives.

The following table shows the breakdown of deferred tax assets and liabilities:

€ million	31 Dec 2018		31 Dec 2017	
	Assets	**Liabilities**	Assets	Liabilities
Intangible assets	0.0	41.5	0.0	44.9
Property, plant and equipment	1.7	1.2	2.0	2.3
Equity-accounted investments and financial assets	0.0	0.0	0.0	0.0
Inventories	7.8	0.0	10.3	0.0
Receivables and other assets	6.7	0.0	3.8	0.0
Pensions	21.5	0.0	23.2	0.0
Other liabilities	12.7	2.7	10.9	0.8
Tax loss carryforwards	70.4	0.0	66.8	0.0
Deferred taxes (gross)	**120.8**	**45.4**	**117.0**	**48.0**
Netting	44.9	44.9	47.8	47.8
Deferred taxes (net)	**75.9**	**0.5**	**69.2**	**0.2**

The tax asset in excess of deferred tax liabilities – for which tax planning indicates sufficient taxable profit will be available in future – amounted to €75.9 million (31 December 2017: €69.2 million).

The increase in deferred taxes in respect of temporary differences, which was recognised in other comprehensive income, was €0.6 million at 31 December 2018 (31 December 2017: decrease of €11.1 million) and largely resulted from changes inthe fair value of cash flow hedges.

As at 31 December 2018, the DEUTZ Group had not recognised any deferred tax liabilities on temporary differences of €12.8 million (31 December 2017: €16.6 million) in respect of taxes on untransferred profits from subsidiaries, associates or joint ventures because the timing of the reversal of the differences can be controlled or the sums are mostly tax exempt and no material impact on taxes is expected in the near future.

Deferred tax assets are only recognised to the extent that sufficient future taxable income is likely to be generated over a certain planning period against which the as yet unused tax loss carryforwards can be offset. Consequently, as well as tax loss carryforwards on which deferred taxes have been recognised, there are loss carryforwards for which deferred taxes have not been recognised because the losses cannot be utilised. The following table shows the amounts and expiry dates of the tax loss carryforwards on which deferred taxes have not been recognised:

Loss carryforwards on which deferred taxes have not been recognised

€ million	**31 Dec 2018**	31 Dec 2017
Corporation tax/solidarity surcharge	637.4	686.3
Trade tax	733.4	793.9

Thereof: expiry periods for German and international loss carryforwards

€ million	**31 Dec 2018**	31 Dec 2017
Up to 5 years	0.0	0.0
6 to 9 years	0.0	0.0
Indefinite		
Corporation tax/solidarity surcharge	637.4	686.3
Trade tax	733.4	793.9

The figures disclosed in 2017 for loss carryforwards on which deferred taxes had not been recognised in full (corporation tax: €684.3 million, trade tax: €792.1 million) were restated, mainly as a result of changes owing to tax audits for previous years.

17. INVENTORIES

€ million	**31 Dec 2018**	31 Dec 2017
Raw materials, consumables, bought-in parts and spare parts	182.0	143.5
Work in progress	46.0	42.2
Finished goods	105.5	101.3
Total	**333.5**	**287.0**

Write-downs on raw materials, bought-in parts and spare parts totalled €2.3 million in the reporting year (2017: €2.8 million). As at 31 December 2018, the carrying amount of inventories written down to net realisable value was €72.5 million (31 December 2017: €83.0 million).

The following table shows the change in the valuation allowance account for inventories:

€ million	**2018**	2017
1 Jan	**39.4**	**37.0**
Changes	3.7	2.4
31 Dec	**43.1**	**39.4**

18. RECEIVABLES AND OTHER ASSETS

€ million	**31 Dec 2018**	31 Dec 2017
Trade receivables	161.0	146.4
Less write-downs	–3.7	–3.7
Trade receivables (net)	**157.3**	**142.7**
Other receivables and assets		
Receivables arising from other taxes	15.5	9.9
Receivables remaining after sale of receivables	3.9	3.1
Receivables arising from investment grants	2.7	2.7
Receivables due from investments	0.1	1.8
thereof trade receivables	0.1	1.8
thereof other receivables	0.0	0.0
Receivables arising from income tax assets	2.0	1.5
Derivative financial instruments	0.0	1.3
Advances paid	5.2	0.3
Sundry other receivables	13.8	15.2
Total	**43.2**	**35.8**

As at 31 December 2018, the volume of receivables sold under factoring agreements was €142.4 million (31 December 2017: €117.8 million). Essentially, all the opportunities and risks connected with title to the receivables that were sold were transferred to the factor. While the entire credit risk was transferred, a risk of late payment remains, but it is not material so the receivables were not reported in the consolidated financial statements of DEUTZ AG. The remaining exposure in respect of the receivables that have been assigned is largely limited to the administration and collection of these receivables. As at 31 December 2018, the Group had access to factoring lines totalling €225.0 million (31 December 2017: €170.0 million). They are revolving lines. In 2018, interest expense of €0.9 million (2017: €0.8 million) was recognised in connection with the sale of receivables.

As at 31 December 2018, the receivables sold were offset by receivables amounting to €3.9 million due from one factor (31 December 2017: €3.1 million). The fair value of these receivables was also €3.9 million (31 December 2017: €3.1 million). The risk arising from the factoring transaction was the credit risk of the factor, which was lower than the credit risk of the original debtors. The maximum downside risk as at 31 December 2018 was limited to the amount receivable of €3.9 million (31 December 2017: €3.1 million).

Trade receivables amounting to €3.7 million were written down as at 31 December 2018 (31 December 2017: €3.7 million). The table showing the change in the valuation account can be found in Note 26 on page 123.

If other receivables or assets are found to be impaired, a direct write-down is applied to the relevant carrying amounts. Total impairment losses of €14.7 million were recognised on other receivables and assets as at 31 December 2018 (31 December 2017: €18.0 million). The table showing the change in the valuation account can be found in Note 26 on page 124.

As at 31 December 2018, there were no contract assets arising from contracts with customers.

19. CASH AND CASH EQUIVALENTS

As at 31 December 2018, cash and cash equivalents including cash on hand, short-term deposits and credit balances with banks amounted to €132.8 million (31 December 2017: €143.8 million). There were no access restrictions, as had also been the case in the previous year.

20. NON-CURRENT ASSETS CLASSIFIED AS HELD FOR SALE

The non-current assets classified as held for sale as at 31 December 2018 related to the parts of the land and buildings at our former Cologne-Deutz site that had not yet been sold. These assets are allocated to the Other segment.

21. EQUITY

€ million	**31 Dec 2018**	31 Dec 2017
Issued capital	309.0	309.0
Additional paid-in capital	28.8	28.8
Other reserves	–4.7	12.1
Retained earnings and accumulated income	285.8	234.2
Equity attributable to the shareholders of the parent	618.9	584.1
Non-controlling interests	0.2	0.2
Total	**619.1**	**584.3**

Issued capital

At the end of 2018, the issued capital (share capital) of DEUTZ AG amounted to €308,978,241.98 (unchanged on the end of 2017) and was divided into 120,861,783 no-par-value bearer shares (also unchanged).

Additional paid-in capital

The additional paid-in capital contains premiums and contributions from shareholders as well as the equity component of compound financial instruments such as non-interest-bearing convertible profit-sharing rights and low-interest-bearing convertible bonds. The value of the conversion right linked to previous profit-sharing rights and bonds was recognised in equity on the issue date at fair value less pro rata transaction costs, taking account of deferred taxes.

No such compound financial instruments were in issue, either in 2018 or in 2017.

Other reserves

Currency translation Translation differences allocated to the shareholders of DEUTZ AG arising from the translation of equity at historical rates and the translation of the net income or loss at average rates for the year are reported under accumulated other comprehensive income/loss. In the year under review, this item reduced other comprehensive income by €15.1 million, primarily due of the disposal of the stake in DEUTZ Dalian (2017: other comprehensive income reduced by €7.1 million)[1]. The cumulative loss on translation differences recognised in other reserves amounted to €3.7 million at the end of 2018 (31 December 2017: gain of €11.4 million recognised[1]).

Fair value reserve This reserve is used for the recognition of changes in the fair value of available-for-sale financial instruments. That portion of the gain or loss on a cash flow hedging instrument determined to be an effective hedge is also recognised in the fair value reserve.

Retained earnings and accumulated income

This item includes DEUTZ AG's legal reserve of €4.5 million (31 December 2017: €4.5 million).

Non-controlling interests

The non-controlling interests relate to Mr Glavan's 25 per cent stake in the subsidiary DEUTZ Romania S.r.l., Galati, Romania (formerly IML Motoare S.r.l.), which was included in the consolidated financial statements of DEUTZ AG for the first time as at 1 October 2017. DEUTZ AG has an indirect interest in this company through DEUTZ Italy S.r.l.

Dividend

According to the German Stock Corporation Act (AktG), the dividend is paid from the accumulated income reported in the annual financial statements of DEUTZ AG prepared in accordance with the German Commercial Code (HGB). In 2018, DEUTZ AG distributed a dividend of €18.1 million to its shareholders (€0.15 per share) from the accumulated income reported as at 31 December 2017.

The Board of Management proposes using €18.1 million of the accumulated income reported by DEUTZ AG as at 31 December 2018 to pay a dividend of €0.15 per no-par-value share.

Authorised capital

The Board of Management is authorised, subject to the consent of the Supervisory Board, to increase the issued capital of the Company on or before 25 April 2023 on one or more occasions in instalments 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 (authorised 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) 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 authorised, 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.

22. PROVISIONS FOR PENSIONS AND OTHER POST-RETIREMENT BENEFITS

DEUTZ AG has both defined contribution plans and defined benefit plans for its employees.

Defined contribution plans

Employees in Germany receive statutory social insurance benefits for which contributions are paid as part of income. At DEUTZ, there are also further direct insurance policies that are financed by employees. These plans are treated as defined contribution plans because the Company has no obligation beyond the payment of contributions to private insurers. Ongoing contribution payments are reported as an expense for the period concerned.

The employer's contribution to the German statutory pension insurance scheme in 2018 came to €18.1 million (2017: €16.1 million). In addition, a further €2.1 million (2017: €2.1 million) was paid for pension and direct insurance policies in connection with deferred compensation.

Defined benefit plans

The DEUTZ Group maintains several defined benefit pension plans in Germany and abroad. The largest pension plans are in Germany and the UK. Together, they accounted for more than 95 per cent of defined benefit obligations and 100 per cent of plan assets (2017: 99 per cent), as was the case in 2017.

In all, there are four defined benefit pension plans in Germany. While three of the plans are employer funded, the fourth is a deferred compensation plan. As a rule, the employer-funded pension plans comprise a general employee retirement pension for life, a disability pension and a surviving dependants' pension. The level of the monthly pension paid under the employer-funded pension plans is based on earned income and years of service in the DEUTZ Group. Since the pension plans were frozen in 1995, employees can no longer acquire any further employer-funded pension entitlements. In the case of the deferred compensation plan, the Company has taken out a reinsurance policy with a life insurance company based on the amount of salary contribution and undertakes to pay a pension based on the guaranteed capital that has been underwritten. In Germany, occupational pension schemes are governed by the Occupational Pensions Act

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

(BetrAVG), according to which the DEUTZ Group has sole responsibility for meeting the requirements of defined benefit pension plans. The normal retirement age is 67.

The existing defined benefit plan in the UK entitles pension beneficiaries to a pension which depends on the level of their basic salary and the number of eligible years of service. However, since the pension plans were frozen in 2016, no employees can now acquire any further employer-funded pension entitlements. The retirement age is between 62 and 65. The annual pension paid is between 1/55 and 1/60 of the highest basic salary received in the final five years of service for each eligible year of service. The pension plan is primarily funded by converting pension beneficiaries' basic salary and employer contributions into plan assets. The DEUTZ Group undertakes to compensate for any shortfall in the scheme. Every year, the amount for which the Company is liable is determined with reference to a report by an independent pensions actuary.

According to legislation in the UK, the pension plan, including the plan assets, must be administered by independent trustees. The investment policy for the pension plan specifies that 50 per cent of the accumulated plan assets must be invested in equity instruments and 50 per cent in debt instruments. This investment strategy is specifically intended to counteract capital market risk and the associated risk of mismatches between the Company's payment obligations arising from the pension plan on the one hand and the plan assets on the other.

In connection with the defined benefit pension plans, the Group is exposed to capital market risk arising from its investment of the plan's assets in addition to general actuarial risks such as interest-rate risk, the risk of rising annuity rates and longevity risk.

Funded status of pension plans

€ million	**2018**	2017
Pension plans in Germany		
Present value of defined benefit obligation	160.5	170.1
Fair value of plan assets	5.9	5.0
Deficit (net liability)	**154.6**	**165.1**
Pension plans in the UK		
Present value of defined benefit obligation	25.9	28.6
Fair value of plan assets	21.4	23.8
Deficit (net liability)	**4.5**	**4.8**
Other pension plans		
Present value of defined benefit obligation	6.7	6.9
Fair value of plan assets	0.0	0.4
Deficit (net liability)	**6.7**	**6.5**
Total		
Present value of defined benefit obligation	193.1	205.6
Fair value of plan assets	27.3	29.2
Deficit (net liability)	**165.8**	**176.4**

The following table shows the breakdown of separate groups to which the pension plans in Germany and the UK have obligations to pay benefits:

Breakdown of defined benefit obligation by beneficiary

€ million		
Pension plans in Germany	**2018**	2017
Active members	10.7	10.4
Deferred members	6.9	8.3
Pensioners	142.9	151.4
Present value of defined benefit obligation	**160.5**	**170.1**
Pension plans in the UK		
Active members	0.0	0.0
Deferred members	12.7	15.5
Pensioners	13.2	13.1
Present value of defined benefit obligation	**25.9**	**28.6**

The change in the net liability for defined benefit pension plans is shown in the table below:

Change in the net liability for defined benefit pension plans

€ million	**2018**	2017
Net liability as at 1 Jan	**176.4**	**190.0**
Changes to basis of consolidation	0.0	0.9
Amounts recognised in the income statement	2.6	3.0
Amounts recognised in other comprehensive income	0.1	–2.7
Employer contributions	–0.4	–0.4
Pension benefits paid	–13.2	–13.5
Effects of changes in foreign exchange rates	0.1	–0.9
Other	0.2	0.0
Net liability as at 31 Dec	**165.8**	**176.4**

The following table shows the change in the present value of the defined benefit obligation:

Change in present value of defined benefit obligation

€ million	2018	2017
Defined benefit obligation as at 1 Jan	**205.6**	**217.8**
Changes to basis of consolidation	0.0	1.3
Service cost	0.0	0.0
Employee contributions	0.1	0.1
Interest expense	2.9	3.6
Unrecognised past service cost	0.3	0.0
Remeasurements	–1.4	–1.1
thereof: experience adjustments	–1.3	–2.3
thereof: actuarial (gains)/losses arising from changes in biometric assumptions	1.8	0.5
thereof: actuarial (gains)/losses arising from changes in financial assumptions	–1.9	0.7
Effects of changes in foreign exchange rates	–0.1	–1.7
Pension benefits paid	–14.9	–14.4
Other	0.6	0.0
Defined benefit obligation as at 31 Dec	**193.1**	**205.6**

At 31 December 2018, the weighted average life of the bulk of the defined benefit obligation was 9.3 years (31 December 2017: 9.6 years).

The following two tables show the change in the fair value of the plan assets and the breakdown of the plan assets:

Change in fair value of plan assets

€ million	2018	2017
Fair value of plan assets at 1 Jan	**29.2**	**27.8**
Employer contributions	**0.4**	**0.4**
Employee contributions	0.1	0.1
Interest income	0.6	0.6
Return on (+)/expenses (–) from plan assets (excl. interest income)	–1.5	1.6
Pensions paid from plan assets	–1.7	–0.9
Currency translation differences	–0.2	–0.8
Other	0.4	0.4
Fair value of plan assets at 31 Dec	**27.3**	**29.2**

Breakdown of plan assets

€ million	2018	2017
Cash and cash equivalents	**0.0**	**0.0**
Equity instruments (by region)		
UK	3.1	3.6
Europe (excl. UK)	1.8	2.1
North America	2.3	2.6
Japan	0.9	1.1
Asia-Pacific	0.9	1.1
Other	1.3	1.4
	10.4	11.9
Debt instruments		
Government bonds	3.7	4.0
Corporate bonds	7.3	7.9
	11.0	11.9
Reinsurance policies	5.9	5.4
Total	**27.3**	**29.2**

Market prices were available for all the equity and debt instruments because they are traded in active markets.

The breakdown of the portions of the net pension cost recognised in current income and expense for 2018 and 2017 is as follows:

Net pension cost

€ million	2018	2017
Unrecognised past service cost	0.3	0.0
Net interest cost	2.3	3.0
Total	**2.6**	**3.0**

The actual expenses from plan assets in 2018 amounted to €0.9 million (2017: return on plan assets of €2.1 million).

The measurement of pension obligations is based on actuaries' reports. The tables below show the main actuarial assumptions underlying the calculations for the defined benefit obligation as at the balance sheet date. The discount rates and pension increases are reported in the form of weighted averages.

Actuarial assumptions

%	2018	2017
Discount rate		
Germany	1.30	1.29
UK	2.90	2.50
Rate of pension increase		
Germany	1.75	1.75
UK	2.00	2.00

Mortality tables

Germany	Heubeck 2018G mortality tables
UK	S1 YoB (standard mortality tables for self-administered plans taking into account future changes in mortality)

The following sensitivity analysis for each material actuarial assumption as at the balance sheet date shows the impact that potential changes in the assumptions at the relevant balance sheet date would have on the defined benefit obligations in Germany and the UK.

Sensitivity analysis

2018	Impact on defined benefit obligation of:	
€ million		
	0.50% rise	0.50% fall
in discount rate		
Germany	–6.8	7.5
UK	2.5	–2.5
in rate of pension increase		
Germany	7.4	–7.3
UK	2.0	–1.8

Sensitivity analysis

2017	Impact on defined benefit obligation of:	
€ million		
	0.50% rise	0.50% fall
in discount rate		
Germany	–7.4	8.1
UK	–2.7	2.7
in rate of pension increase		
Germany	7.9	–7.4
UK	2.3	–2.0

Furthermore, we also believe it is possible that the life expectancy of eligible DEUTZ employees will change. If the life expectancy of eligible DEUTZ employees had increased by one year, the increases in the defined benefit obligation arising from the pension plans in Germany and the UK as at 31 December 2018 would have been €15.4 million and €0.8 million respectively (31 December 2017: €15.7 million and €0.8 million respectively).

The sensitivity calculations are based on the average duration of the pension obligations calculated as at 30 November 2018. In order to highlight the impact on the present value of the defined benefit obligations calculated as at 31 December 2018 separately, the calculations were carried out for each of the actuarial parameters deemed to be material and capable of changing.

Future cash flows

For 2019, the DEUTZ Group forecasts that its payments into pension plans will amount to €0.4 million (2018: €0.4 million). The following table shows the expected future benefit payments arising from defined benefit obligations:

Expected benefit payments

€ million	31 Dec 2018
2019	14.7
2020	14.2
2021	13.8
2022	13.2
2023	12.7
2024–2028	55.9

Expected benefit payments

€ million	31 Dec 2017
2018	14.1
2019	13.7
2020	13.1
2021	12.4
2022	11.9
2023–2027	51.3

23. OTHER PROVISIONS

The following table gives a breakdown of other provisions:

€ million	2018			2017		
	Total	**Residual term of up to 1 year**	**Residual term of more than 1 year**	Total	Residual term of up to 1 year	Residual term of more than 1 year
Warranties	59.3	37.6	21.7	55.0	33.4	21.6
Obligations to employees	27.3	17.8	9.5	21.5	12.2	9.3
Restructuring	3.1	0.2	2.9	3.9	1.1	2.8
Onerous contracts	1.6	1.6	0.0	4.1	4.1	0.0
Other	10.3	8.2	2.1	10.1	7.6	2.5
Total	**101.6**	**65.4**	**36.2**	**94.6**	**58.4**	**36.2**

Other provisions are recognised at their settlement value calculated as at the balance sheet date and take account of projected cost increases. Non-current provisions are discounted at a rate of 2.5 per cent (31 December 2017: 2.5 per cent).

Other provisions cover all identifiable risks and other contingent liabilities. The main items are the cost of warranties and potential risks, provisions for restructuring and provisions for obligations to employees and onerous contracts. The provisions for restructuring relate to our decision to optimise our network of sites.

The following table shows the changes to other provisions in 2018:

€ million	Warranties	Obligations to employees	Restructuring	Onerous contracts	Other	**Total**
1 Jan 2018	**55.0**	**21.5**	**3.9**	**4.1**	**10.1**	**94.6**
Additions	8.0	22.4	0.0	0.0	2.2	32.6
Currency translation differences	0.1	0.0	0.0	0.0	0.1	0.2
Amounts utilised	–2.1	–15.4	–0.9	0.0	–1.8	–20.2
Reversals	–2.2	–1.2	0.0	–2.5	–0.3	–6.2
Accrued interest/effect of changes in interest rates	0.5	0.0	0.1	0.0	0.0	0.6
31 Dec 2018	**59.3**	**27.3**	**3.1**	**1.6**	**10.3**	**101.6**

24. FINANCIAL DEBT

€ million	31 Dec 2018				31 Dec 2017			
	Total	**Residual term of up to 1 year**	**Residual term 1–5 years**	**Residual term >5 years**	Total	Residual term of up to 1 year	Residual term 1–5 years	Residual term >5 years
Liabilities to banks	37.8	19.6	17.4	0.8	44.1	17.3	26.2	0.6
Other financial debt	1.3	0.2	0.9	0.2	1.5	0.2	0.9	0.4
Total	**39.1**	**19.8**	**18.3**	**1.0**	**45.6**	**17.5**	**27.1**	**1.0**

Liabilities to banks

Liabilities to banks include a loan from the European Investment Bank with a remaining balance of €25.2 million. This unsecured loan is repayable in instalments until July 2020.

The syndicated working capital facility had not been drawn down as at 31 December 2018. This revolving line of credit for a total of €160 million provided by a consortium of banks is a floating-rate facility and is also unsecured. In 2018, its term was extended to June 2023.

As part of the contractual terms for both loans, DEUTZ is obliged to comply with certain financial covenants (ratio of financial debt to equity and ratio of financial debt to EBITDA).

Banco Bilbao Vizcaya Argentaria has also granted loans via our Spanish subsidiary; they have a total remaining balance of €11.4 million. The interest rates on the loans are 1.33 per cent and 0.65 per cent respectively. Because the loans have been used for capital expenditure in Spain, finance costs up to an interest rate of 3.0 per cent and 1.0 per cent respectively are reimbursed by the Spanish government as part of a subsidy programme.

Finally, a financial liability of MAD 17.5 million (Moroccan dirhams) existed as at 31 December 2018 through our subsidiary Nlle Ste MAGIDEUTZ S.A., Casablanca, Morocco, in respect of a property leasing agreement with the leasing company WAFABAIL. Translated into the reporting currency, this financial debt amounted to €1.6 million.

Other financial debt

Other financial debt comprises an interest-free government loan.

The fair value of financial debt is described in Note 26 on page 128.

The weighted average interest rates (after hedging) of the financial debt are:

%	**31 Dec 2018**	31 Dec 2017
Liabilities to banks	2.22	2.83
Other financial debt	0.00	0.00

As in 2017, all current financial debt was denominated in euros. Of the non-current financial debt, €1.6 million was denominated in Moroccan dirhams and the remainder in euros.

The level of financial debt changed as follows over the course of 2018:

€ million	1 Jan 2018	Cash changes	Non-cash changes: Acquisition of companies	Non-cash changes: Exchange rate effects	Non-cash changes: Fair value changes	Non-cash changes: Other changes	31 Dec 2018
Non-current financial debt							
Liabilities to banks	26.8	6.0				–14.6	18.2
Other financial debt	1.3					–0.2	1.1
Total non-current financial debt	**28.1**	**6.0**	**0.0**	**0.0**	**0.0**	**–14.8**	**19.3**
Total current financial debt							
Current financial debt							
Liabilities to banks	17.3	–13.5				15.8	19.6
Other financial debt	0.2	–0.2				0.2	0.2
Current financial debt	**17.5**	**–13.7**	**0.0**	**0.0**	**0.0**	**16.0**	**19.8**
Total financial debt	**45.6**	**–7.7**	**0.0**	**0.0**	**0.0**	**1.2**	**39.1**

25. TRADE PAYABLES AND OTHER LIABILITIES

€ million	31 Dec 2018	31 Dec 2017
Trade payables	**214.6**	**207.5**
Other liabilities		
Personnel-related liabilities	16.3	14.9
Price reduction liabilities	11.2	12.4
Advances received	12.3	7.8
Liabilities to investments	3.2	3.1
Liabilities arising from other taxes	3.6	3.0
Liabilities arising from income taxes	0.8	0.6
Derivative financial instruments	0.9	0.3
Sundry other liabilities	42.4	29.2
Total	**90.7**	**71.3**

The liabilities from derivative financial instruments resulted from the marking to market of derivatives used to hedge currency and interest-rate risks.

The sundry other liabilities include interest benefits of €0.6 million derived from a loan from the European Investment Bank (31 December 2017: €0.8 million). The loan was initially recognised at fair value and is reported as non-current and current financial debt.

The other liabilities include current contract liabilities arising from contracts with customers:

€ million	31 Dec 2018	31 Dec 2017
Liabilities from discounts granted	11.2	12.4
Advances received	6.5	2.0
Total	**17.7**	**14.4**

The changes in advances received in the reporting period are mainly attributable to the higher volume of business.

In the reporting period, revenue of €1.9 million was recognised that, at the beginning of the reporting period, had been included as advances received in the balance of contract liabilities.

The Company had no significant unfulfilled performance obligations as at the reporting date.

NOTES TO THE CASH FLOW STATEMENT

For the purposes of the consolidated cash flow statement, cash and cash equivalents comprise cash on hand, short-term deposits and credit balances held with banks.

Dividend income of €0.6 million was included in cash flow from operating activities (2017: €0.9 million).

The cash flow from financing activities included the dividend paid to the shareholders of DEUTZ AG for 2017, amounting to €18.1 million.

Cash and cash equivalents had fallen by €11.0 million to €132.8 million at the end of 2018 (31 December 2017: €143.8 million).

SEGMENT REPORTING

The following table provides an overview of the segments in the DEUTZ Group for 2018 and 2017.

2018	DEUTZ Compact Engines	DEUTZ Customised Solutions	Other	**Total segments**	Consoli-dation	**DEUTZ Group**
€ million						
External revenue	1,484.0	270.7	24.1	**1,778.8**	0.0	**1,778.8**
Intersegment revenue	0.0	0.5	2.7	**3.2**	–3.2	**0.0**
Total revenue	**1,484.0**	**271.2**	**26.8**	**1,782.0**	**–3.2**	**1,778.8**
Depreciation and amortisation	64.3	8.8	3.3	**76.4**	0.0	**76.4**
Impairment of property, plant and equipment and intangible assets	3.0	0.0	0.0	**3.0**	0.0	**3.0**
Profit/loss on equity-accounted investments	–2.2	0.0	0.0	**–2.2**	0.0	**–2.2**
Write-downs of equity-accounted investments	–11.0	0.0	0.0	–11.0	0.0	–11.0
Income from the reversal of provisions	2.3	0.2	0.2	**2.7**	0.0	**2.7**
Operating profit/loss (EBIT before exceptional items)	63.2	32.9	–14.1	**82.0**	0.0	**82.0**

2017	DEUTZ Compact Engines	DEUTZ Customised Solutions	Other	**Total segments**	Consoli-dation	**DEUTZ Group**
€ million						
External revenue	1,227.5	247.9	3.7	**1,479.1**	0.0	**1,479.1**
Intersegment revenue	0.0	0.0	0.0	**0.0**	0.0	**0.0**
Total revenue	**1,227.5**	**247.9**	**3.7**	**1,479.1**	**0.0**	**1,479.1**
Depreciation and amortisation	74.3	9.7	0.7	**84.7**	0.0	**84.7**
Write-downs of equity-accounted investments	8.8	0.0	0.0	**8.8**	0.0	**8.8**
Profit/loss on equity-accounted investments	–0.2[1]	0.0	0.0	**–0.2**[1]	0.0	**–0.2**[1]
Income from the reversal of provisions	1.0	1.1	0.0	**2.1**	0.0	**2.1**
Operating profit/loss (EBIT before exceptional items)	19.8[1]	24.5	–4.6	**39.7**[1]	0.0	**39.7**[1]

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

Reconciliation from overall profit of the segments to net income

€ million	**2018**	2017[1]
Overall profit of the segments	**82.0**	**39.7**
Consolidation	0.0	0.0
Operating profit (EBIT before exceptional items)	**82.0**	**39.7**
Exceptional items	0.0	104.1
EBIT	**82.0**	**143.8**
Net interest expense	–1.9	–2.4
Net income before income taxes	**80.1**	**141.4**
Income taxes	–10.2	–22.9
Net income	**69.9**	**118.5**

[1] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture.

External segment reporting is based on intragroup corporate management and internal financial reporting and, in line with the nature of the products and services offered, covers the following reportable operating segments:

DEUTZ Compact Engines This segment comprises new business and the servicing of liquid-cooled engines with capacities of up to 8 litres.

DEUTZ Customised Solutions This segment focuses on air-cooled engines and large liquid-cooled engines with capacities exceeding 8 litres. It also includes customer-specific solutions (gensets) and service. A key component of the service business is the supply of reconditioned exchange parts and engines.

Other This segment includes the business with electric and hybrid drive systems for marine applications, which is operated under the Torqeedo brand. It also contains operations that do not belong in any other segment.

Consolidation Where relevant, the consolidation table also shows the elimination of intercompany relationships between the segments. Intercompany revenue of €3.2 million was eliminated in the reporting year. There were no such eliminations in 2017.

The designation of a business area as an operating segment is based on internal reporting by segment regularly used by the Board of Management to monitor performance and allocate resources. When the DEUTZ Compact Engines reporting segment was defined, the operating segments ‘product line <4 litres’ and ‘product line 4 to 8 litres’ were grouped together to form the ‘DEUTZ Compact Engines’ reportable segment due to their similar economic characteristics and the aggregation criteria in IFRS 8.12. The product programme of the ‘product line <4 litres’ comprises new business and the servicing of liquid-cooled engines with capacities of up to 4 litres. The ‘product line 4 to 8 litres’ also consists of new business plus the servicing of liquid-cooled engines with capacities of 4 to 8 litres. The economic characteristics of the two product lines were deemed to be similar on the basis of their future levels of return on revenue.

The measurement principles applied to the DEUTZ Group’s segment reporting are based on the IFRS principles applied in the consolidated financial statements. The Board of Management, in its capacity as the senior decision-making body, assesses the performance of the segments in terms of their operating profit (EBIT before exceptional items). If entities included in the consolidated financial statements using the equity method are directly attributable to a particular segment, the relevant share of the net income or loss for the period is reported under that segment. Finance costs, financial income and income taxes are reported for the DEUTZ Group as a whole and are not allocated to individual operating segments. External revenue constitutes the revenue that the segments generate from their customers. Revenue generated between segments – where relevant – is reported as intersegment revenue. Transfers between segments are reported at fair value.

Information about products and services

€ million	**2018**	2017
Engines	1,289.7	1,041.5
Service	194.3	186.0
DEUTZ Compact Engines	**1,484.0**	**1,227.5**
Engines	135.6	124.7
Service	135.6	123.2
DEUTZ Customised Solutions	**271.2**	**247.9**
Engines	26.8	3.7
Other	**26.8**	**3.7**
Consolidation	–3.2	0.0
Total	**1,778.8**	**1,479.1**

Geographical information about external revenue

€ million	**2018**	2017
Germany	**340.5**	**284.3**
Outside Germany	**1,438.3**	**1,194.8**
Rest of Europe	884.4	725.5
Middle East	20.5	18.7
Africa	32.0	35.0
Americas	337.8	268.1
Asia-Pacific	163.6	147.5
Total	**1,778.8**	**1,479.1**

Of the European countries outside Germany, Switzerland accounted for €199.6 million in the reporting year (2017: €176.9 million), Sweden for €125.0 million (2017: €117.9 million) and France for €126.7 million (2017: €95.1 million).

The above information is presented according to customer location. Only one customer accounted for at least 10 per cent of our total revenue in 2018 (2017: two customers). The revenue from this customer amounted to €304.6 million (2017: €270.6 million and €155.5 million respectively) and was reported predominantly in the DEUTZ Compact Engines segment.

Geographical information about non-current assets

€ million	**31 Dec 2018**	31 Dec 2017
Germany	451.3	447.3
Outside Germany	38.2	80.1
Total	**489.5**	**527.4**

The non-current assets comprise property, plant and equipment, goodwill, miscellaneous intangible assets and equity-accounted investments. They are presented by location of the consolidated entity.

OTHER INFORMATION

26. FINANCIAL RISK MANAGEMENT AND ADDITIONAL INFORMATION ON CAPITAL MANAGEMENT

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. Information about the principles of risk management with regard to financial instruments can be found in the risk report on pages 57 to 62 of the DEUTZ Group's combined management report.

Liquidity risk

Prudent liquidity management includes holding a sufficient reserve of cash and cash equivalents, ensuring the option of obtaining funding through bank loans and the ability to issue short-term and long-term capital market instruments. Because the business environment is constantly changing, the treasury department aims to ensure that it has sufficient unused credit lines at its disposal at all times.

The management of liquidity risk in the DEUTZ Group has a number of components: annual planning with interim updates, rolling four-week planning updated weekly and monthly planning updated monthly up to the end of the financial year. Liquidity risk is also assessed in the regular meetings of the Finance Committee.

In order to ensure sufficient liquidity, DEUTZ has at its disposal a syndicated, revolving cash credit line amounting to €160 million that runs until June 2023 and two long-term amortising loans with a total remaining balance of €25.2 million. These are being repaid in equal instalments between July 2014 and July 2020. As part of the loan agreements, the Company is required to comply with certain covenants.

The liquidity analysis also provides information about contractually agreed interest payments and capital repayments in connection with financial liabilities as at the balance sheet date. As far as the utilisation of revolving credit facilities was concerned, it was assumed that the amounts already drawn down by the balance sheet date would continue to apply until the facilities expire.

31 Dec 2018	2019 cash payments	2020–2023 cash payments	> 2023 cash payments	**Total**
€ million				
Primary financial instruments	**–303.4**	**–19.9**	**0.0**	**–323.3**
Derivative financial instruments	**–1.6**	**0.0**	**0.0**	**–1.6**
Currency derivatives				
thereof settled gross: cash payments	–39.1	0.0	0.0	–39.1
thereof settled gross: cash receipts	37.6	0.0	0.0	37.6
Interest rate derivatives				
Presentation of net cash flow	–0.1	0.0	0.0	–0.1

31 Dec 2017	2018 cash payments	2019–2022 cash payments	> 2022 cash payments	**Total**
€ million				
Primary financial instruments	**–283.4**	**–13.9**	**0.0**	**–297.3**
Derivative financial instruments	**–0.3**	**–0.3**	**0.0**	**–0.6**
Currency derivatives				
thereof settled gross: cash payments	0.0	0.0	0.0	0.0
thereof settled gross: cash receipts	0.0	0.0	0.0	0.0
Interest rate derivatives				
Presentation of net cash flow	–0.3	–0.3	0.0	–0.6

Credit risk

The credit risk arises in relation to cash and cash equivalents, to the contractual cash flows from debt instruments measured at amortised cost, at fair value through other comprehensive income and at fair value through profit or loss, and to derivatives with a positive market value.

There are no significant concentrations of potential credit risk in the DEUTZ Group. With regard to cash and cash equivalents, DEUTZ works only with selected banks with at least an investment-grade rating. The risk from bad debts is restricted by constant monitoring and regular analysis of receivables and their breakdown. Receivables are to a large extent covered by credit insurance. Further measures, such as guarantees and creditworthiness checks, are used to protect against credit risk. The Group has also put in place procedures and guidelines to ensure that products and services are only sold to customers who have a satisfactory payment record. The maximum credit risk exposure is limited to the carrying amount in the case of trade receivables and other financial assets such as cash and cash equivalents, available-for-sale financial assets and derivative financial instruments. Credit risk in connection with financial instruments is limited by careful selection of counterparties.

The bulk of the DEUTZ Group's trade receivables are insured with the EULER HERMES Group. There is usually an obligation to the trade credit insurance association (WKV) or, where applicable, the German government's export credit guarantee scheme (APG) to meet defaults on the receivables unless they are secured by letters of credit confirmed by a bank or similar instruments. DEUTZ does not produce any standardised credit rating for its customers itself but usually sets the maximum customer exposure in accordance with the level of cover provided by the credit insurance agency. In addition, we have received collateral in the form of payment guarantees amounting to €0.2 million (31 December 2017: €0.1 million) for foreign trade receivables.

Impairment of financial assets

The new model of expected credit losses is applied to the following types of financial assets in the Group:

- Trade receivables
- Debt instruments measured at amortised cost, and
- Debt instruments measured at fair value through other comprehensive income

Although cash and cash equivalents are also subject to the impairment rules of IFRS 9, the identified impairment loss was negligible.

1. Trade receivables

The Group applies the simplified approach in line with IFRS 9 to calculate the expected credit losses. Under this approach, the lifetime expected credit losses are calculated for all unsold trade receivables measured at amortised cost. Expected losses on receivables not sold under factoring agreements and not insured are calculated using the current external credit ratings of the relevant debtors, taking into account the Group's own experience. The individual receivables are initially assigned to one of two categories on the basis of defined criteria such as credit rating or age structure. For category 1 receivables, which according to the defined criteria have a lower credit risk, the default rates assigned to the credit ratings are used to calculate the expected losses. Category 2 receivables have a higher level of risk according to the criteria and a specific value adjustment is recognised.

Impairment losses on trade receivables that were identified using this method were as follows:

31 Dec 2018	Category 1	Category 2	**Total**
€ million			
Gross carrying amount of trade receivables	137.8	7.5	**145.3**
Impairment	0.8	2.9	**3.7**

The following tables show the changes in impairment losses on trade receivables in 2018 and 2017:

€ million	
31 Dec 2017 – calculated in accordance with IAS 39	3.7
Adjustment via retained earnings	0.5
1 Jan 2018 – calculated in accordance with IFRS 9	4.2
Additions	1.3
Utilised	–0.8
Reversals	–1.0
31 Dec 2018	3.7

€ million	
1 Jan 2017	4.5
Changes to basis of consolidation	0.3
Additions	0.2
Utilised	–0.7
Reversals	–0.6
31 Dec 2017	3.7

Trade receivables are derecognised when it is reasonable to assume that they are no longer realisable. A debtor refusing to agree a repayment plan with the Group or a debtor filing for insolvency are among the indicators that a receivable is unlikely to be realised.

Impairment losses on trade receivables are recognised in operating profit for the current period under 'write-downs of financial assets'. The same line item is used to recognise amounts received in subsequent periods that had previously been written down.

2. Debt instruments measured at amortised cost

Debt instruments measured at amortised cost comprise current individual items such as receivables due from factoring companies for receivables remaining after the sale of receivables or receivables due from suppliers as a result of discounts or bonuses. The receivables are tested for impairment on an individual basis. A debtor refusing to agree a repayment plan with the Group or a debtor filing for insolvency are among the indicators that a receivable is unlikely to be realised. The volume of such debt instruments was very small as at 31 December 2018 and the risk of non-performance was very low, because the issuer is always able to meet its contractual payment obligations at short notice. The impairment loss identified in the reporting period was therefore insignificant. The existing impairment losses relate to receivables of €14.8 million due from investments as a result of older items (31 December 2017: €19.8 million).

The following tables shows the changes in impairment losses on debt instruments measured at amortised cost in 2018 and 2017:

€ million	Level 1	Level 3
31 Dec 2017 – calculated in accordance with IAS 39	**0.0**	**18.0**
Adjustment via retained earnings	0.0	0.0
1 Jan 2018 – calculated in accordance with IFRS 9	0.0	18.0
Additions	0.0	0.0
Utilised	0.0	–3.3
Reversals	0.0	0.0
31 Dec 2018	**0.0**	**14.7**

€ million	Level 1	Level 3
1 Jan 2017	**0.0**	**17.6**
Additions	0.0	0.4
Utilised	0.0	0.0
Reversals	0.0	0.0
31 Dec 2017	**0.0**	**18.0**

The gross carrying amounts of debt instruments assigned to Level 1 amounted to €14.3 million as at 31 December 2018 (31 December 2017: €16.2 million) and showed no signs of increased credit risk. The gross carrying amounts of debt instruments assigned to Level 3 amounted to €14.8 million as at 31 December 2018 (31 December 2017: €19.8 million), almost all of which (€14.7 million) was written down (31 December 2017: €18.0 million).

3. Debt instruments measured at fair value through other comprehensive income

The assets referred to here are units in a fund that is invested in exchange-traded debt instruments. Because their credit risk is classified as low, the calculation of the impairment loss is limited to the expected twelve-month credit losses. Management considers the criterion of 'low credit risk' to be met in the case of direct or indirect investments in exchange-traded debt instruments that, as a minimum, have an investment-grade credit rating. The volume of such debt instruments was very small as at 31 December 2018 and the credit risk was low. The impairment loss identified was therefore insignificant.

Financial assets measured at fair value through profit or loss

The DEUTZ Group is also exposed to credit risk arising from debt instruments measured at fair value through profit or loss. These relate on the one hand to a loan granted to a supplier and on the other to trade receivables that have been earmarked for factoring. At the end of the reporting period, the maximum credit risk of the loan granted was limited to the debt instrument's carrying amount of €11.2 million (2017: €0.0 million), while the maximum credit risk of the trade receivables earmarked for factoring was limited to the carrying amount of €15.7 million.

Currency risk

The DEUTZ Group operates internationally and, consequently, is exposed to currency risk arising from fluctuating exchange rates, principally US dollar exchange rates. Exchange-rate risks are monitored under a centralised currency management system and mitigated by the use of hedging transactions. The treasury department uses hedges, primarily currency forwards, to hedge currency risk emanating from the net position of estimated future cash flows in foreign currency. Between 50 per cent and 80 per cent of the net positions anticipated in the budget for the year are usually hedged.

DEUTZ also takes specific action to increase the volume of purchasing in US dollars; this enables the Company to counteract currency risk arising from sales invoiced in US dollars by creating a natural hedge. Risks arising from the translation of financial statements of subsidiaries prepared in currencies other than the euro are not hedged.

Currency sensitivity analysis

The following tables illustrate the sensitivity – from a Group perspective – to a 10 per cent rise or fall in the euro against the different currencies. The sensitivity analysis only takes into account outstanding monetary positions denominated in foreign currency and adjusts the period-end translation of those amounts to reflect a 10 per cent change in the exchange rate. The positions involved include currency forward contracts that form part of an effective cash flow hedge, the purpose of which is to hedge fluctuations in foreign-currency payments and receipts caused by changes in exchange rates. Because hedging transactions are measured at fair value, changes in the exchange rates for the currencies underlying these transactions have an impact on the hedging reserve in other comprehensive income. Other positions involved are currency forward contracts that are no longer used as hedges. Changes in the exchange rates for the currencies underlying these financial instruments result in gains or losses due to restating these instruments at their fair value. Primary instruments (trade receivables and trade payables) denominated in foreign currency and outstanding as at the balance sheet date are also included in the sensitivity analysis. Changes in the exchange rates for the currencies underlying these items result in gains or losses when they are marked to market.

The following tables show the impact on net income and on equity if the euro rises or falls by 10 per cent against relevant foreign currencies.

Cash payments and receipts are shown as net amounts under ‘notional amounts’.

Euro rises by 10 per cent

€ million **2018**	Notional amounts	Impact on net income	Notional amounts	Impact on equity
USD	96.8	–8.0	52.7	5.0
CNY	15.9	–1.4	0.0	0.0
MAD	9.2	–0.8	0.0	0.0

€ million 2017	Notional amounts	Impact on net income	Notional amounts	Impact on equity
USD	78.5	–6.3	31.6	2.8
CNY	8.2	–0.7	0.0	0.0
MAD	9.0	–0.8	0.0	0.0

Euro falls by 10 per cent

€ million **2018**	Notional amounts	Impact on net income	Notional amounts	Impact on equity
USD	96.8	9.7	52.7	–5.1
CNY	15.9	1.8	0.0	0.0
MAD	9.2	1.0	0.0	0.0

€ million 2017	Notional amounts	Impact on net income	Notional amounts	Impact on equity
USD	78.5	7.7	31.6	–3.4
CNY	8.2	0.9	0.0	0.0
MAD	9.0	1.0	0.0	0.0

Interest-rate risk and sensitivity analysis

The DEUTZ Group is exposed to risk from interest rate changes, primarily in relation to floating-rate loans and other debt. As at 31 December 2018, there were no material loans or other debt exposed to interest-rate risk. The floating-rate loan from the European Investment Bank outstanding on the balance sheet date, which had a remaining balance of €12.6 million, was hedged using interest-rate swaps that form part of an effective cash flow hedge. Because hedging transactions are measured at fair value, changes in interest rates have an impact on the hedging reserve in other comprehensive income. The following tables show the impact of the interest-rate swaps on other comprehensive income if market interest rates rise or fall by 100 basis points.

Interest rates rise by 100 basis points

€ million **2018**	Notional amounts	Impact on equity
	12.6	0.1

€ million 2017	Notional amounts	Impact on equity
	19.8	0.2

Interest rates fall by 100 basis points

€ million **2018**	Notional amounts	Impact on equity
	12.6	–0.1

€ million 2017	Notional amounts	Impact on equity
	19.8	–0.2

Capital management

The DEUTZ Group manages its capital with the primary objective of supporting business operations and ensuring the continued existence of the Company as a going concern over the long term. A healthy financial structure is necessary to assure the required flexibility in the provision of financial resources. At present, no credit rating has been set for DEUTZ. However, the DEUTZ Group is endeavouring to achieve a balance-sheet structure that meets the requirements for an investment-grade rating. Capital management therefore extends to both equity and debt.

DEUTZ is not subject to capital requirements under its Statutes. However, it is under an obligation towards the banks from which it has obtained loans to ensure that its ratio of net financial debt to equity does not exceed a certain level. This external requirement has been integrated into capital management and was met at all times.

As at the balance sheet date, the net financial position (cash and cash equivalents less interest-bearing financial debt) was €93.7 million, which equated to a year-on-year fall of €4.5 million (31 December 2017: €98.2 million). In addition to the net financial position, free cash flow (defined as cash flow from operating activities and investing activities less interest payments) is an essential part of active capital management and is used as a key figure to show changes in the liquidity situation. The free cash flow from continuing operations was €14.5 million in 2018 (2017: €82.5 million).

The equity ratio is another indicator used by the DEUTZ Group to monitor its capital. This indicator reflects the ratio of total assets to Group equity as reported on the consolidated balance sheet. As at 31 December 2018, the equity ratio for the DEUTZ Group was 49.6 per cent (31 December 2017: 48.8 per cent) and therefore remained at a high level and met all internal targets in full.

Financial instruments

The following tables show the carrying amounts of the individual financial assets and liabilities for each separate category of financial instrument, reconciled to the corresponding balance sheet item.

Financial instruments (assets)

31 Dec 2018	**Measured at amortised cost**	**Measured at fair value**		**Assets not within the scope of IAS 9**	
€ million		Through other comprehensive income	Through profit or loss	Carrying amount	**Carrying amount on the balance sheet**
Non-current financial assets	**0.0**	**1.2**	**12.8**	**2.7**	**16.7**
Current financial assets	**288.8**	**0.0**	**15.7**	**28.8**	**333.3**
Trade receivables	141.6	0.0	15.7	0.0	157.3
Other receivables and assets	14.4	0.0	0.0	28.8	43.2
Cash and cash equivalents	132.8	0.0	0.0	0.0	132.8

Financial instruments (assets)

31 Dec 2017	**Measured at amortised cost**		**Measured at fair value**			**Assets not within the scope of IAS 39**	
€ million	Loans and receivables	Available-for-sale financial assets	Available-for-sale financial assets	Derivatives designated as hedging instruments (recognised as other comprehensive income/loss)	Held-for-trading financial assets	Carrying amount	**Carrying amount on the balance sheet**
Non-current financial assets	**0.0**	**0.3**	**4.8**	**0.0**	**0.0**	**1.7**	**6.8**
Current financial assets	**304.5**	**0.0**	**0.0**	**1.2**	**0.1**	**16.5**	**322.3**
Trade receivables	142.7	0.0	0.0	0.0	0.0	0.0	142.7
Other receivables and assets	18.0	0.0	0.0	1.2	0.1	16.5	35.8
Cash and cash equivalents	143.8	0.0	0.0	0.0	0.0	0.0	143.8

Financial instruments (liabilities)

31 Dec 2018	**Measured at amortised cost**	**Measured at fair value**		**Liabilities not within the scope of IFRS 9**	
€ million	Financial liabilities	Derivatives designated as hedging instruments (recognised as other comprehensive income/loss)	Held-for-trading financial assets	Carrying amount	**Carrying amount on the balance sheet**
Non-current financial liabilities	**20.4**	**0.1**	**0.0**	**2.3**	**22.8**
Financial debt	17.7	0.0	0.0	1.6	19.3
Other liabilities	2.7	0.1	0.0	0.7	3.5
Current financial liabilities	302.3	0.7	0.1	18.5	321.6
Financial debt	19.8	0.0	0.0	0.0	19.8
Trade payables	214.6	0.0	0.0	0.0	214.6
Other liabilities	67.9	0.7	0.1	18.5	87.2

Financial instruments (liabilities)

31 Dec 2017	**Measured at amortised cost**	**Measured at fair value**		**Liabilities not within the scope of IFRS 39**	
€ million	Financial liabilities	Derivatives designated as hedging instruments (recognised as other comprehensive income/loss)	Held-for-trading financial assets	Carrying amount	**Carrying amount on the balance sheet**
Non-current financial liabilities	**38.8**	**0.3**	**0.0**	**2.0**	**41.1**
Financial debt	27.1	0.0	0.0	1.0	28.1
Other liabilities	11.7	0.3	0.0	1.0	13.0
Current financial liabilities	268.6	0.0	0.0	14.7	283.3
Financial debt	17.5	0.0	0.0	0.0	17.5
Trade payables	207.5	0.0	0.0	0.0	207.5
Other liabilities	43.6	0.0	0.0	14.7	58.3

The following table shows the carrying amounts and fair values of all financial instruments included in the consolidated financial statements that fall within the scope of IFRS 7 'Financial Instruments: Disclosures' and that are not reported at fair value.

	31 Dec 2018		31 Dec 2017	
€ million	**Carrying amount**	**Fair value**	Carrying amount	Fair value
Financial assets				
Available-for-sale financial assets measured at cost	0.0	–	0.3	–
Trade receivables	141.6	141.6	142.7	142.7
Other receivables and assets	14.4	14.4	20.7	20.7
Cash and cash equivalents	132.8	132.8	143.8	143.8
Financial liabilities				
Financial debt – liabilities to banks	37.5	38.3	45.6	47.6
Trade payables	214.6	214.6	207.5	207.5
Other liabilities	70.6	70.6	55.3	55.3

In the case of cash and cash equivalents, trade receivables, trade payables and other current financial assets and liabilities (due within one year), the carrying amounts are virtually the same as the fair values owing to the short residual maturity.

The fair value of non-current financial assets and liabilities is computed by discounting estimated future cash flows using arm's length discount rates and taking into account our own credit risk and that of our counterparties based on credit ratings and exchange rates on the balance sheet date.

The following table shows the classification in the IFRS 13 measurement hierarchy of the fair values as at the balance sheet date of financial assets and liabilities that were measured at fair value in the consolidated financial statements, or for which a fair value was disclosed in the notes to the financial statements:

31 Dec 2018

€ million	Carrying amount	Fair value	Level 1	Level 2	Level 3
Financial assets					
Loan granted	11.2	11.2	0.0	0.0	11.2
Securities – recognised through other comprehensive income	1.2	1.2	1.2	0.0	0.0
Securities – recognised through profit or loss	1.6	1.6	1.2	0.0	0.0
Trade receivables	15.7	15.7	0.0	0.0	15.7
Financial liabilities					
Interest-rate swaps	0.1	0.1	0.0	0.1	0.0
Currency forwards – designated as hedging instruments	0.7	0.7	0.0	0.7	0.0
Currency forwards – held for trading	0.1	0.1	0.0	0.1	0.0
Financial debt	37.5	38.3	0.0	0.0	38.3

31 Dec 2017

€ million	Carrying amount	Fair value	Level 1	Level 2	Level 3
Financial assets					
Securities	3.1	3.1	3.1	0.0	0.0
Currency forwards	1.3	1.3	0.0	1.3	0.0
Available-for-sale financial assets measured at fair value	1.7	1.7	0.0	0.0	1.7
Financial liabilities					
Interest-rate swaps	0.3	0.3	0.0	0.3	0.0
Financial debt	45.6	47.6	0.0	0.0	47.6

Level 1: Measurement is based on the price of identical assets or liabilities in active markets.
Level 2: Measurement is based on the price of a similar instrument in active markets/measurement using a method in which all the critical input factors are based on observable market data.
Level 3: Measurement using a method in which critical input factors are not based on observable market data.

The loan granted, which is recognised at fair value, has a nominal value of €13.8 million and interest is charged at an annual rate of 3.0 per cent. As at 31 December 2018, the loan was recognised at fair value through profit or loss in an amount of €11.2 million on the basis of the contractual agreement. Measurement as at 31 December 2018 was carried out with the aid of a net present value method. The estimated future cash flows were discounted to their present value using a discount rate of 10.0 per cent that reflects the prevailing market forecasts of the time value of the money and management's assessment of the specific credit risk. The negative difference of €2.6 million between the fair value recognised for the loan and its nominal value was recorded in operating profit for the current period.

The fair value of securities is derived from prices in active markets.

The trade receivables recognised at fair value relate to receivables that are sold as part of the existing factoring agreements. The receivables are transferred to the factoring companies at their nominal value. The fair value of the receivables corresponds to the sale price and therefore the nominal value of the receivables. The main influencing factor on the fair value of the receivables is credit risk. However, this is deemed to be negligible given that they are being sold to the factoring company.

The fair value of derivative financial instruments (currency forwards and interest-rate swaps) is calculated over the remaining term of the instrument using current exchange rates, market interest rates and yield curves and taking into account our own credit risk and that of our counterparties. The disclosures are based on valuations by banks.

Net gains and losses on financial instruments

Net gains or losses recognised in the income statement are broken down by measurement category in IFRS 9 as follows:

	Measured at fair value		**Measured at amortised cost**	
2018	Financial assets	**Financial liabilities**	Financial assets	**Financial liabilities**
€ million				
Net gains/losses	0.0	–0.5	3.7	–1.2

	Measured at fair value		**Measured at amortised cost**	
2017	Financial assets	**Financial liabilities**	Financial assets	**Financial liabilities**
€ million				
Net gains/losses	0.0	0.2	–6.6	–1.6

The net gains or losses for each measurement category primarily comprise gains and losses recognised in profit or loss resulting from the measurement of financial instruments at fair value, currency translation of financial instrument carrying amounts, impairment losses and/or reversal of impairment losses on financial instruments and interest income and expense.

In the reporting period, unrealised losses of €0.2 million on financial investments measured at fair value through other comprehensive income were reported in other comprehensive income (2017: –). As had been the case in 2017, no material realised gains or losses were reclassified from other comprehensive income to the income statement in 2018.

Total interest income and interest expense

In 2018, interest income of €0.5 million (2017: €0.7 million) and interest expense of €1.4 million (2017: €1.9 million) were attributable to financial assets and financial liabilities that were not measured at fair value through profit or loss. Financial assets measured at amortised cost accounted for €0.5 million of the interest income.

Hedging

Cash flow hedging As at 31 December 2018, there were currency futures and interest-rate swaps which were classified as hedging instruments. Interest-rate swaps are used to hedge the interest-rate risk associated with floating-rate loans. Currency futures are used to hedge the currency risk arising from forecast transactions in foreign currencies.

Unrealised losses of €1.7 million on cash flow hedges were recognised in other comprehensive income in 2018 (2017: gains of €4.0 million), taking into account deferred tax assets of €0.6 million (2017: deferred tax liabilities of €1.3 million). These changes in fair value represent the effective portion of the hedge. In 2018, prior to the inclusion of deferred taxes, losses of €0.9 million (2017: gains of €0.5 million) recognised in other comprehensive income during the year were reclassified to other operating income or expenses in the consolidated income statement. There was no hedging ineffectiveness requiring reclassification from the reserve for cash flow hedges to the income statement in the year under review. Hedges relating to foreign-currency transactions in the operating business are expected to be unwound within the next twelve months and those relating to future interest-rate risks are expected to be unwound within a period of one and a half years. The associated gains that have been recognised in other comprehensive income will be reclassified to the income statement.

Derivative financial instruments

The following derivative financial instruments were reported as at the balance sheet date:

€ million	**Notional amounts 2018**	Notional amounts 2017	**Fair value 2018**	Fair value 2017
Currency forwards				
not used as hedges	4.6	4.8	–0.1	0.1
used as cash flow hedges	52.7	31.6	–0.7	1.2
Interest-rate swaps				
used as cash flow hedges	12.6	19.8	–0.2	–0.4

Currency forwards used as cash flow hedges

€ million	2018	2017
Carrying amount (other liabilities/other receivables and assets)	–0.7	1.2
Notional amount	52.7	31.6
Date of maturity	15 Jan 2019–15 Jan 2020	16 Jan 2018–16 Jan 2019
Hedge ratio	1:1	1:1
Change in fair value in the reporting period	–0.7	1.2
Change in value of the hedged item used to determine hedge effectiveness	0.7	–1.2
Average hedged rate for 2018	US$ 1.1809: €1	US$ 1.1703: €1

Interest-rate swaps used as cash flow hedges

€ million	2018	2017
Carrying amount (other liabilities)	–0.1	–0.3
Notional amount	12.6	19.8
Date of maturity	5 July 2020	5 July 2020
Hedge ratio	1:1	1:1
Change in the fair value of outstanding hedging instruments in the reporting period	0.2	0.4
Change in value of the hedged item used to determine hedge effectiveness	–0.2	–0.4
Weighted average hedged rate for 2018	1.11%	1.11%

Netting

Netting agreements with financial institutions covering derivatives exist within the DEUTZ Group. In accordance with these master agreements, amounts in the same currency relating to outstanding transactions owed by each counterparty on a specific settlement date are aggregated into a net amount.

As at 31 December 2017, there were also netting agreements with customers that permit the DEUTZ Group to net receivables and liabilities with each other that are in the same currency.

The following table shows the financial assets and liabilities that are subject to netting agreements:

31 Dec 2018	Gross amounts	Figures netted on the balance sheet	Net amounts reported on the balance sheet	Related amounts not netted on the balance sheet	Potential net amounts
€ million					
Financial liabilities					
Derivative financial instruments	0.1	0.0	0.1	0.0	0.1

31 Dec 2017	Gross amounts	Figures netted on the balance sheet	Net amounts reported on the balance sheet	Related amounts not netted on the balance sheet	Potential net amounts
€ million					
Financial liabilities					
Other liabilities	1.5	0.8	0.7	0.0	0.7
Derivative financial instruments	0.1	0.0	0.1	0.0	0.1

27. INTERESTS IN OTHER ENTITIES

As well as the parent company DEUTZ AG, the consolidated financial statements for 2018 included 21 subsidiaries, one joint venture and one associate. The joint venture is DEUTZ AGCO Motores S.A., Haedo, Argentina. This company has ceased operations and is scheduled to be wound up in 2019. Provisions were recognised to cover possible costs arising from the liquidation of the company. The shares in the joint venture DEUTZ (Dalian) Engine Co., Ltd., Dalian, China, were sold with effect from 30 November 2018.

Subsidiaries and non-controlling interests

Due to the indirect investment in DEUTZ Romania S.r.l, Galati, Romania, (formerly IML Motoare S.r.l.), the 25 per cent of the voting shares in DEUTZ Romania S.r.l. attributable to Mr Glavan (CEO of DEUTZ Romania S.r.l.) are shown as non-controlling interests. These amounted to €0.2 million as at 31 December 2018 (31 December 2017: €0.2 million) and are therefore regarded as not material.

Non-material associates

A summary of financial information is shown below for the Group's interest in D. D. Power Holdings (Pty) Ltd., Elandsfontein, South Africa, which is classified as a non-material associate. The company has a different financial year (ending on 30 November). Annual financial statements for the year ended 31 December have not been prepared for reasons of materiality.

€ million	**2018**	2017
Carrying amount of interests	**2.1**	**2.4**
Group's share of:		
Profit from continuing operations	0.6	0.6
Other comprehensive income	0.0	0.0
Net income	**0.6**	**0.6**

28. CONTINGENT LIABILITIES

Contingent liabilities

The DEUTZ Group's contingent liabilities as at the balance sheet date were as follows:

€ million	**31 Dec 2018**	31 Dec 2017
Guarantee liabilities	0.1	0.1
Warranty liabilities	1.7	1.1
Total	**1.8**	**1.2**

Other financial obligations

The following table shows the notional amounts and due dates of other financial obligations:

€ million	**31 Dec 2018**	31 Dec 2017
due in less than 1 year	15.7	11.8
due in 1 to 5 years	26.5	20.3
due in more than 5 years	0.2	0.3
Total	**42.4**	**32.4**

The above obligations largely relate to rental agreements and leases on real estate, movable assets and financial obligations in connection with IT services. Obligations under rental agreements and leases were partly offset by receivables of €5 thousand (2017: €5 thousand) from sub-leases. In 2018, the cost of rentals and leases for real estate and movable assets totalled €13.2 million (2017: €9.7 million).

Commitments to purchase property, plant and equipment and intangible assets amounted to €48.1 million as at 31 December 2018 (31 December 2017: €34.7 million) and commitments to purchase inventories amounted to €130.2 million (31 December 2017: €112.7 million).

Legal disputes

DEUTZ AG and other companies in the DEUTZ Group are involved in a number of legal disputes, claims for damages and arbitration proceedings that could have an impact on the Group's financial position.

Financial provision has been made to cover litigation risks facing the respective Group companies if the event in question occurred before the balance sheet date, an obligation is probable and the amount of the obligation can be determined with a sufficient degree of reliability.

We do not expect the above risks to have a significantly adverse long-term impact on the DEUTZ Group's financial position or financial performance beyond the financial provision already made.

29. RELATED PARTY DISCLOSURES

In addition to its consolidated subsidiaries, the DEUTZ Group maintains relationships with related parties.

These include the business relationships between the DEUTZ Group and entities in which it holds significant investments.

Related parties also include the Supervisory Board and the Board of Management.

The following table shows the volume of material goods and services either provided for or received from entities in which the DEUTZ Group holds significant investments:

€ million	Goods and services provided		Other expenses for services received		Receivables 31 Dec		Payables 31 Dec	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	**2017**
Associates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Joint ventures	4.7	7.5	0.0	0.0	0.0	1.4	0.0	0.0
Other investments	0.7	0.6	4.7	4.7	0.1	0.1	3.2	3.1
Total	**5.4**	**8.1**	**4.7**	**4.7**	**0.1**	**1.5**	**3.2**	**3.1**

The goods supplied and services rendered to joint ventures are largely attributable to goods supplied to our Chinese joint venture DEUTZ (Dalian) Engine Co., Ltd up to the point that it was deconsolidated.

Receivables due from joint ventures amounting to €4.0 million (31 December 2017: €3.8 million) had been written off in full as at 31 December 2018; the expense in 2018 amounted to €0.2 million (2017: €0.1 million). As at 31 December 2018, impairment losses of €10.7 million (31 December 2017: €14.3 million) had been recognised on €10.8 million (31 December 2017: €14.4 million) of the Company's receivables due from other investments. No expense resulted from this in the reporting year (31 December 2017: expense of €0.8 million).

Of these receivables, €6.8 million related to loans granted by DEUTZ (31 December 2017: €6.8 million) on which impairment losses of €6.8 million had been recognised (31 December 2017: €6.8 million). Taken together, neither the interest and similar income nor the interest expense and similar charges arising from the interest paid on these loans are material.

The following payments were made to the Supervisory Board and the Board of Management as related parties of the DEUTZ Group.

€ million	Supervisory Board		Board of Management	
	2018	2017	**2018**	2017
Short-term remuneration[1]	1.5	1.2	3.6	3.8
Other long-term benefits	0.0	0.0	0.8	1.0
Share-based remuneration[2]	–0.4	0.2	0.0	0.1

[1] The current remuneration for members of the Supervisory Board includes both remuneration for their work as Supervisory Board members and the regular salaries of the salaried employee representatives.

[2] The disclosure of share-based remuneration corresponds with the expense (+) or income (–) recognised in the operating profit in 2018 from the changes in provisions made for distributed virtual share options.

30. EVENTS AFTER THE REPORTING PERIOD

No events occurred after 31 December 2018 that had a material impact on the financial position or financial performance of the DEUTZ Group.

31. SHARE-BASED REMUNERATION PROGRAMMES

Between 2007 and 2018, DEUTZ AG launched long-term incentive plans as long-term components of remuneration. Under these long-term incentive plans, virtual stock options are issued to reward management for its sustained contribution to the Company's success.

General description of the incentive plans of DEUTZ AG

Under DEUTZ AG's incentive plans, virtual options are issued on shares in DEUTZ AG. The Company decides at its discretion who is eligible to participate in the plans. However, only members of the DEUTZ Group's senior management and members of the Supervisory Board of DEUTZ AG may be considered for inclusion. It is at the discretion of the Company to decide how many options are granted.

By the balance sheet date, the following long-term incentive plans (LTI) that were still in existence, with the number of options shown, had been granted free of charge:

Incentive plan	Date of grant	Number of options
LTI no. V	1 June 2011	280,000
LTI no. VI	1 August 2012	270,000
LTI no. VII	1 July 2013	260,000
LTI no. VIII	1 September 2014	320,000
LTI BoM 2015	1 January 2015	125,657
LTI no. IX	1 June 2015	320,000
LTI BoM 2016	1 January 2016	147,577
LTI no. X	1 September 2016	340,000
LTI BoM 2017	1 January 2017	102,926
LTI no. XI	1 September 2017	320,000
LTI BoM 2018	1 January and 1 March 2018	54,530 and 19,789
LTI no. XII	1 September 2018	322,501

A total of 450,479 of these options had been granted to current and former members of the DEUTZ AG Board of Management.

Information on the exercise of options

One of the fundamental requirements for exercising options is that the option holders themselves invest in the Company at a ratio of one share per ten options, or one share per 20 options in the case of the LTI BoM 2015 to 2018. The absolute earliest that options can be exercised is four years after the date of grant (vesting period) and then only within four years from the end of the vesting period and only within ten days from the date of publication of quarterly financial statements. However, options under the LTI BoM 2015 to 2018 are exercised automatically four years after the date of grant. The Company may delay the start of the exercise window for the options or accelerate the exercise and vesting periods, but cannot change the exercise or vesting periods of the options relating to the LTI BoM 2015 to 2018.

Furthermore, options may only be exercised:

- if the market price of DEUTZ AG shares has risen by at least 30 per cent relative to the reference price (dividend distributions by DEUTZ AG must be taken into consideration, i.e. for the purposes of calculating the performance target, the total gross dividend distribution up to the exercise date must be added to the DEUTZ AG share price), or
- if, in the period starting from the grant date of the option and ending on the date of exercise, DEUTZ AG shares outperform the Prime Industrial Performance Index – or any future index that replaces the Prime Industrial Performance Index – by at least 30 per cent, or
- in the case of the LTI BoM 2015 to 2018, if, in the period starting from the grant date of the option and ending on the date of exercise, DEUTZ AG shares outperform the MDAX – or any future index that replaces the MDAX – by at least 10 percentage points.

A request to exercise options must be submitted to the Company in writing.

The following specific terms and conditions apply to the incentive plans still in existence:

Incentive plan	Earliest or automatic exercise date	Reference price
LTI no. V	1 June 2015	€6.10
LTI no. VI	1 August 2016	€3.89
LTI no. VII	1 July 2017	€4.45
LTI no. VIII	1 September 2018	€5.37
LTI BoM 2015	1 January 2019	€3.82
LTI no. IX	1 June 2019	€4.40
LTI BoM 2016	1 January 2020	€3.42
LTI no. X	1 September 2020	€3.94
LTI BoM 2017	1 January 2021	€4.91
LTI no. XI	1 September 2021	€6.66
LTI BoM 2018	1 January 2022 and 1 March 2022	€7.03 and €7.58
LTI no. XII	1 September 2022	€7.15

When an option is exercised, the beneficiary receives a cash payment in the amount of the difference between the DEUTZ AG share price on the exercise date and the reference price at the time the option was granted. Under the LTI BoM 2015 to 2018, however, beneficiaries receive a cash payment equivalent to the average closing price of DEUTZ AG shares on the 60 trading days prior to the end of the vesting period up to a maximum of 1.5 times the reference price. No beneficiary receives shares in the Company.

The following table shows the changes to the number of outstanding options in 2018:

Incentive plan	Outstanding options at 1 Jan	Options granted	Options exercised	Options expired	Outstanding options at 31 Dec
LTI no. IV	50,000	0	0	–50,000	0
LTI no. V	230,000	0	–200,000	0	30,000
LTI no. VI	85,000	0	–35,000	0	50,000
LTI no. VII	132,000	0	–80,500	–1,500	50,000
LTI BoM 2014	72,389	0	0	–72,389	0
LTI no. VIII	240,000	0	–89,000	–20,000	131,000
LTI BoM 2015	125,657	0	0	0	125,657
LTI no. IX	260,000	0	0	–40,000	220,000
LTI BoM 2016	147,577	0	0	0	147,577
LTI no. X	300,000	0	0	–50,000	250,000
LTI BoM 2017	102,926	0	0	0	102,926
LTI no. XI	320,000	0	0	–60,000	260,000
LTI BoM 2018	0	74,319	0	0	74,319
LTI no. XII	0	322,501	0	0	322,501
Total	**2,065,549**	**396,820**	**–404,500**	**–293,889**	**1,763,980**

Notes on the fair value of options

Because the virtual options are cash-based instruments rather than equity-based instruments, the Company is obliged to recognise a provision, the amount of which is derived from the fair value of the virtual options at the grant date and apportioned pro rata over the vesting period.

An option pricing model using the Black-Scholes formula was used to ascertain the fair value. The model factors in the aforementioned exercise prices, the term and the value of the underlying asset (DEUTZ AG shares).

LTI no. V

The risk-free interest rate (3.25 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in mid-2011. The assumed volatility (51.35 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €6.82 on 1 June 2011. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI no. VI

The risk-free interest rate (1.75 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in mid-2012. The assumed volatility (57.30 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €3.07 on 1 August 2012. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI no. VII

The risk-free interest rate (1.75 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in mid-2013. The assumed volatility (54.18 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €4.77 on 1 July 2013. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI no. VIII

The risk-free interest rate (0.63 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in the second half of 2014. The assumed volatility (57.72 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €4.52 on 1 September 2014. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI BoM 2015

The risk-free interest rate (0.1 per cent) used in the calculation is based on German Federal notes and German Federal Treasury notes issued at the start of 2015. The assumed volatility (45.34 per cent) is based on the average value for call options on DEUTZ AG shares available on the market as at 1 January 2015. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €4.24 on 1 January 2015. As the options are automatically exercised at the end of the vesting period, the provision for the options that are not yet vested was calculated on the basis of the vesting period.

LTI no. IX

The risk-free interest rate (0.63 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in the second half of 2015. The assumed volatility (58.58 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €5.24 on 1 June 2015. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI BoM 2016

The risk-free interest rate (0.1 per cent) used in the calculation is based on German Federal notes and German Federal Treasury notes issued at the start of 2016. The assumed volatility (49.71 per cent) is based on the average value for call options on DEUTZ AG shares available on the market as at 1 January 2016. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €3.535 on 1 January 2016. As the options are automatically exercised at the end of the vesting period, the provision for the options that are not yet vested was calculated on the basis of the vesting period.

LTI no. X

The risk-free interest rate (0.0 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in the second half of 2016. The assumed volatility (44.30 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €4.00 on 1 September 2016. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI BoM 2017

The risk-free interest rate (0.1 per cent) used in the calculation is based on German Federal notes and German Federal Treasury notes issued at the start of 2017. The assumed volatility (41.39 per cent) is based on the average value for call options on DEUTZ AG shares available on the market as at 1 January 2017. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €5.473 on 1 January 2017. As the options are automatically exercised at the end of the vesting period, the provision for the options that are not yet vested was calculated on the basis of the vesting period.

LTI no. XI

The risk-free interest rate (0.0 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in the second half of 2017. The assumed volatility (39.50 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €6.51 on 1 September 2017. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

LTI BoM 2018

The risk-free interest rate (0.1 per cent) used in the calculation is based on German Federal notes and German Federal Treasury notes issued in mid-2018. The assumed volatility (43.92 per cent) is based on the average value for call options on DEUTZ AG shares available on the market as at 30 June 2018. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €7.57 on 1 January 2018 and €7.35 on 1 March 2018. As the options are automatically exercised at the end of the vesting period, the provision for the options that are not yet vested was calculated on the basis of the vesting period.

LTI no. XII

The risk-free interest rate (0.0 per cent) used in the calculation is based on German government bonds with terms of up to ten years issued in the second half of 2018. The assumed volatility (47.90 per cent) is based on the average value for call options on DEUTZ AG shares available on the market at the end of the year. It is assumed that no option holders leave the Company.

The calculation on the grant date was based on the DEUTZ AG share price of €7.59 on 1 September 2018. It was also assumed that employees would tend to exercise options at the earliest possible date. Consequently, the provisions were calculated on the basis of the vesting period.

In accordance with the requirement for the fair value of options to be recalculated on each balance sheet date, a calculation was carried out on the basis of the DEUTZ AG share price of €5.15 on 31 December 2018 (31 December 2017: €7.58), which resulted in income of €472 thousand in 2018 (2017: expense of €2,019 thousand). A total provision of €2,728 thousand was recognised at the end of 2018 (31 December 2017: €4,988 thousand). The amount is broken down as follows:

Incentive plan	31 Dec 2018 € thousand	31 Dec 2017 € thousand
LTI no. IV	0	164
LTI no. V	11	604
LTI no. VI	102	377
LTI no. VII	102	570
LTI BoM 2014	0	549
LTI no. VIII	279	525
LTI BoM 2015	720	540
LTI no. IX	228	619
LTI BoM 2016	568	379
LTI no. X	253	402
LTI BoM 2017	265	190
LTI no. XI	74	69
LTI BoM 2018	91	0
LTI no. XII	35	0
Total	**2,728**	**4,988**

Of the total income in 2018 and the total provisions as at 31 December 2018, the sum attributable to members of the Board of Management and Supervisory Board of DEUTZ AG was €379 thousand (2017: expenses of €363 thousand) and €1,326 thousand (31 December 2017: expenses of €2,383 thousand) respectively.

The options granted had the following intrinsic values, provided the vesting conditions were met:

Incentive plan	Intrinsic value per option, provided the vesting conditions are met (€)	
	31 Dec 2018	31 Dec 2017
LTI no. V	0.00	0.00
LTI no. VI	1.25	3.69
LTI no. VII	0.00	3.13
LTI no. VIII	0.00	2.21
LTI BoM 2015	0.00	5.73
LTI no. IX	0.00	3.18
LTI BoM 2016	5.13	5.13
LTI no. X	1.20	3.64
LTI BoM 2017	0.00	7.37
LTI no. XI	0.00	0.00
LTI BoM 2018	0.00 and 0.00	0.00
LTI no. XII	0.00	0.00

32. STAFF COSTS

€ million	**2018**	2017
Wages	138.8	116.5
Salaries	156.4	131.7
Social security contributions	54.0	46.4
Net interest cost for provisions for pensions and other post-retirement benefits	2.3	3.0
Cost of post-employment benefits and other long-term benefits	2.0	1.6
Cost of severance payments/ personnel restructuring	1.1	2.2
Total	**354.6**	**301.4**

The following table shows the breakdown of staff costs by functional area:

€ million	2018	2017
Cost of sales	208.1	175.7
Research and development costs	43.3	34.1
Selling expenses	64.5	55.5
Administrative expenses	35.2	32.3
Other operating expenses	3.5	3.8
Total	**354.6**	**301.4**

The average number of employees during the year is given in the section about disclosures under German accounting standards in Note 33.

DISCLOSURES UNDER GERMAN ACCOUNTING STANDARDS

33. AVERAGE NUMBER OF EMPLOYEES DURING THE YEAR (PURSUANT TO SECTION 314 (1) NO. 4 HGB)

	2018	2017
Non-salaried employees	2,634	2,298
Salaried employees	1,757	1,492
	4,391	**3,790**
Trainees	79	70
Total	**4,470**	**3,860**

34. CORPORATE GOVERNANCE

In December 2018, the Board of Management and the Supervisory Board of DEUTZ AG issued a declaration of conformity with the recommendations of the German Corporate Governance Code government commission pursuant to section 161 AktG and made this declaration permanently and publicly available on the Company's website (https://www.deutz.com/en/investor-relations/corporate-governance/declaration-of-conformity/).

35. AUDITORS' FEES

The total fees reported for auditing the consolidated financial statements for 2017 and 2018 are broken down as follows:

€ thousand	2018	2017
Auditing	662	541
Other attestation services	67	53
Total	**729**	**594**

The fees for auditing services essentially consisted of the fees for the audit of the consolidated financial statements, the review of the interim financial statements for the six months to 30 June, the audit of DEUTZ AG's annual financial statements and the services rendered in relation to an enforcement procedure in 2018. The fees for auditing services also included fees for the audit of the annual financial statements of Torqeedo GmbH. The fees for other attestation services primarily related to the audit of the declaration of completeness in respect of sales packaging pursuant to the German Packaging Ordinance (VerpackV), the audit of the non-financial report and the audit of compliance with key financials.

36. TOTAL REMUNERATION FOR THE BOARD OF MANAGEMENT, FORMER BOARD OF MANAGEMENT MEMBERS AND THE SUPERVISORY BOARD

Board of Management

The total remuneration for the Board of Management of DEUTZ AG in 2018 was €4,979 thousand (2017: €5,318 thousand). This consisted of short-term employee benefits of €3,603 thousand (2017: €3,746 thousand), other long-term benefits of €843 thousand (2017: €1,009 thousand) and share-based long-term benefits as part of the long-term incentive plans amounting to €533 thousand (2017: €563 thousand).

Further details about the remuneration system for members of the Board of Management and details of individual remuneration can be found in the 'Remuneration report' section of the 2018 combined management report.

Remuneration for former members of the Board of Management or their surviving dependants amounted to €1,379 thousand (2017: €1,431 thousand) for DEUTZ AG and the Group. Provisions of €13,374 thousand (31 December 2017: €13,855 thousand) have been recognised to cover pension obligations to former members of the Board of Management.

Supervisory Board

The total remuneration for the Supervisory Board of DEUTZ AG in 2018 was €859 thousand (2017: €634 thousand). In addition, the employee representatives on the Supervisory Board who are also employees of the DEUTZ Group received normal salaries in line with their employment contracts. The level of their salaries represented appropriate remuneration for corresponding functions and tasks in the Group.

Further details about the Supervisory Board remuneration system and details of individual remuneration can be found in the 'Remuneration report' section of the 2018 combined management report.

Advances and loans to members of the Board of Management and the Supervisory Board

As at 31 December 2018, there were no outstanding advances or loans to any members of the Board of Management or the Supervisory Board, nor had any guarantees or other warranties been issued in favour of any such persons.

37. DISCLOSURES UNDER THE GERMAN SECURITIES TRADING ACT (WPHG)

The German Securities Trading Act (WpHG) obliges investors whose share of voting rights in listed companies reaches certain thresholds to notify the company accordingly. DEUTZ AG had received the following voting right notifications as at 31 December 2018:

On 15 February 2018, pursuant to section 33 (1) WpHG, Union Investment Privatfonds GmbH, Frankfurt am Main, Germany, notified us that its voting share in our Company had exceeded the 5 per cent threshold on 14 February 2018 and amounted to 5.09 per cent (6,153,713 voting rights) on that date. Pursuant to section 34 WpHG, 5.09 per cent (6,153,713 voting rights) are attributable to it.

On 24 April 2018, pursuant to section 33 (1) WpHG, the Ministry of Finance on behalf of the State of Norway, Oslo, Norway, notified us that its voting share in our Company had not exceeded the 5 per cent threshold on 23 April 2018 and amounted to 4.99 per cent (6,035,865 voting rights) on that date. Pursuant to section 34 WpHG, 4.99 per cent (6,035,865 voting rights) are attributable to it. The voting rights attributable to it are held by the following company under its control, whose voting share in DEUTZ AG is 3 per cent or more: Norges Bank (the Central Bank of Norway).

On 25 April 2018, pursuant to section 33 (1) WpHG, the Ministry of Finance on behalf of the State of Norway, Oslo, Norway, notified us that its voting share in our Company had exceeded the 5 per cent threshold on 24 April 2018 and amounted to 5.0001 per cent (6,043,205 voting rights) on that date. Pursuant to section 34 WpHG, 5.0001 per cent (6,043,205 voting rights) are attributable to it. The voting rights attributable to it are held by the following company under its control, whose voting share in DEUTZ AG is 3 per cent or more: Norges Bank (the Central Bank of Norway).

On 24 May 2018, pursuant to section 33 (1) WpHG, Morgan Stanley, Wilmington, Delaware, United States of America, notified us that its voting share in our Company had exceeded the 3 per cent threshold on 18 May 2018 and amounted to 3.07 per cent (3,710,343 voting rights) on that date.

On 4 June 2018, pursuant to section 33 (1) WpHG, Morgan Stanley, Wilmington, Delaware, United States of America, notified us that its voting share in our Company had fallen below the 3 per cent threshold on 29 May 2018 and amounted to 2.97 per cent (3,586,902 voting rights) on that date.

On 11 December 2018, pursuant to section 33 (1) WpHG, Dimensional Holdings Inc., Austin, Texas, United States of America, notified us that its voting share in our Company had exceeded the 5 per cent threshold on 10 December 2018 and amounted to 5.004 per cent (6,047,961 voting rights) on that date.

Exemption options pursuant to sections 264 (3) and 291 HGB

The subsidiary Torqeedo GmbH is exercising the exemption rules pursuant to section 264 (3) HGB and will therefore neither publish its annual financial statements for 2018 nor prepare a management report and notes to the financial statements.

38. SUPERVISORY BOARD AND BOARD OF MANAGEMENT

Information on the members of the Supervisory Board and the Board of Management, including non-executive directorships held at other companies, is given in a separate list on pages 142 et seq.

Cologne, 18 February 2019

DEUTZ Aktiengesellschaft

The Board of Management

Dr Ing Frank Hiller
Chairman

Dr Andreas Strecker

Michael Wellenzohn

SHAREHOLDINGS OF DEUTZ AG

As at 31 December 2018

Ref. no.	Name and registered office of the company	Held via	Holding (%)	Equity (€ thousand)	Net income (€ thousand)
1	DEUTZ AG, Cologne			642,721	31,869
Consolidated companies in Germany					
2	Ad. Strüver KG (GmbH & Co.), Hamburg[1]	5	94.0	8,289	–300
3	DEUTZ Amerika Holding GmbH[1,2]	1	100.0	92,274	0
4	DEUTZ Asien Verwaltungs GmbH, Cologne[1,2]	1	100.0	16,125	0
5	DEUTZ Beteiligung GmbH, Cologne[1]	1	100.0	24	–20
6	Deutz-Mülheim Grundstücksgesellschaft mbH, Cologne[1]	4	100.0	43	5,144
7	Torqeedo GmbH, Gilchingen[1,2]	1	100.0	31,838	–2,370
8	Unterstützungsgesellschaft mbH der DEUTZ Aktiengesellschaft, Cologne[1]	1	100.0	–1,761	155
Consolidated companies outside Germany					
9	DEUTZ Asia-Pacific (Pte) Ltd., Singapore (Singapore)[1]	1	100.0	9,535	2,470
10	Deutz Australia (Pty) Ltd., Braeside (Australia)[1]	1	100.0	6,316	459
11	DEUTZ (Beijing) Engine Co., Ltd., Beijing (China)[1]	1	100.0	4,961	619
12	DEUTZ Corporation, Atlanta (USA)[1]	3	100.0	34,117	5,847
13	DEUTZ FRANCE S.A.S., Gennevilliers (France)[1]	1	100.0	11,117	1,885
14	DEUTZ Italy S.r.l., Milan (Italy)[1]	1	100.0	10,894	1,685
15	DEUTZ Spain S.A., Zafra (Spain)[1]	1	100.0	30,853	611
16	DEUTZ (SHANGHAI) INTERNATIONAL TRADE Co., Ltd., Shanghai (China)[1]	1	100.0	155	–484
17	DEUTZ Romania S.r.l., Galati (Romania)[1] (formerly IML Motoare S.r.l.)	14	75.0	789	103
18	NIle Ste MAGIDEUTZ S.A., Casablanca (Morocco)[1]	13	100.0	4,002	–362
19	OOO DEUTZ Vostok, Moscow (Russia)[1]	1	100.0	2,669	1,327
20	Service Center Milan S.r.l., Milan (Italy)[1]	14	100.0	505	–74
21	Torqeedo Inc., Illinois (USA)[1]	7	100.0	–6,209	–1,116
22	Torqeedo Asia-Pacific Ltd., Bangkok (Thailand)[1]	7	100.0	–415	–450
23	D. D. Power Holdings (Pty) Ltd., Elandsfontein (South Africa)[3,4]	1	30.0	7,544	1,855
24	DEUTZ AGCO MOTORES S.A., Haedo (Argentina)[3,7]	1	50.0	854	–598

[1] Equity and net income in accordance with the annual financial statements prepared for consolidation purposes.
[2] Profit-and-loss transfer agreement with DEUTZ AG.
[3] Consolidated using the equity method.
[4] Figures as at 30 November 2018.
[5] Figures as at 31 December 2016.
[6] Figures as at 31 March 2018 measured using exchange rate as at 31 December 2018.
[7] Figures as at 31 December 2017.

SHAREHOLDINGS OF DEUTZ AG

As at 31 December 2018

Ref. no.	Name and registered office of the company	Held via	Holding (%)	Equity (€ thousand)	Net income (€ thousand)
Unconsolidated companies in Germany					
25	DEUTZ Sicherheit Gesellschaft für Industrieservice mbH, Cologne[2]	1	100.0	26	0
26	Feld & Hahn GmbH i. L., Cologne[2]	1	100.0	455	0
Unconsolidated companies outside Germany					
27	DEUTZ Engine (Shandong) Co. Ltd. i. L., Linyi (China)[5] (in liquidation)	4	70.0	5,033	–1,865
28	AROTRIOS S.A., Nea Filadelfia (Greece)	1	100.0	–	–
29	DEUTZ DO BRASIL LTDA., São Paulo (Brazil)	1	100.0	522	114
30	DEUTZ ENGINEERING druzba za projektiraje, proizvodnjo in trgovino d.o.o., Maribor (Slovenia)	1	100.0	182	80
31	DEUTZ Engines (India) Private Limited, Pune (India)[6]	1	100.0	409	66
32	DEUTZ UK LTD, Cannock (UK)	1	100.0	176	4

[1] Equity and net income in accordance with the annual financial statements prepared for consolidation purposes.
[2] Profit-and-loss transfer agreement with DEUTZ AG.
[3] Consolidated using the equity method.
[4] Figures as at 30 November 2018.
[5] Figures as at 31 December 2016.
[6] Figures as at 31 March 2018 measured using exchange rate as at 31 December 2018.
[7] Figures as at 31 December 2017.

SUPERVISORY BOARD

Hans-Georg Härter
Chairman
(until 31 December 2018)
Proprietor of HGH-Consulting
a) Knorr-Bremse AG, Munich, Germany (until 31 August 2018)
b) Unterfränkische Überlandzentrale Lülsfeld eG, Lülsfeld, wGermany
(until 30 September 2018)
Klingelnberg AG, Zurich, Switzerland
Faurecia S.A., Paris, France
Bain Capital L.P., Boston, USA

Dr Ing Bernd Bohr
(since 26 April 2018)
Chairman since 1 January 2019
Freelance management consultant
a) Ottobock SE & Co. KGaA, Duderstadt, Germany
b) Ottobock Management SE, Duderstadt, Germany

Werner Scherer[1)]
Deputy Chairman
(until 26 April 2018)
Chairman of the Works Council of the Cologne joint operation of DEUTZ AG,
Cologne, Germany (until 28 February 2018)
Chairman of the General Works Council of DEUTZ AG,
Cologne, Germany (until 30 June 2018)

Corinna Töpfer-Hartung[1)]
Deputy Chairwoman (since 26 April 2018)
Chairwoman of the Works Council of the Cologne joint operation of DEUTZ AG, Cologne, Germany
(since 1 March 2018)
Chairwoman of the General Works Council of DEUTZ AG, Cologne, Germany
(since 1 July 2018)

Sophie Albrecht
(since 26 April 2018)
Businesswoman
b) Liebherr-International AG, Bulle, Switzerland
Mariso Bulle S.A., Bulle, Switzerland
Liebherr-Intertrading S.A., Bulle, Switzerland
Eglesia AG, Bulle, Switzerland

Sabine Beutert[1)]
Trade Union Secretary, IG Metall Cologne-Leverkusen Administrative Office, Cologne, Germany

Yavuz Büyükdag[1)]
(since 26 April 2018)
Member of DEUTZ AG Works Council

Dr Fabian Dietrich[1)]
(since 26 April 2018)
Senior manager representative, DEUTZ AG, Cologne, Germany
Head of Legal at DEUTZ AG, Cologne, Germany

Dr Ing Ulrich Dohle
(since 1 January 2019)
Freelance management consultant
a) Benteler International AG, Salzburg, Austria (Chairman)
b) Administrative Board of Index-Werke, Esslingen, Germany (Chairman)
Prettl Family Foundation, Pfullingen, Germany
Member of the Advisory Board of the FEV Group, Aachen, Germany
Ravensburg-Weingarten University of Applied Sciences, Ravensburg-Weingarten, Germany
(Chairman of the Board of Governors)

Gisela Füssel[1)]
(until 26 April 2018)
Member of DEUTZ AG Works Council

Hans-Peter Finken[1)]
Member of DEUTZ AG Works Council

Dr Ing Hermann Garbers
Management consultant

Gerhard Gehweiler[1)]
(until 26 April 2018)
Senior manager representative, DEUTZ AG, Cologne, Germany
Head of Purchasing at DEUTZ AG, Cologne, Germany

Patricia Geibel-Conrad
(since 26 April 2018)
Director of her own audit/tax advice business
Management consultant
a) HOCHTIEF Aktiengesellschaft, Essen, Germany
CEWE Stiftung & Co. KGaA, Oldenburg, Germany

Göran Gummeson
(until 26 April 2018)
Senior management consultant
b) European Furniture Group AB, Tranås, Sweden
Nimbus Boats AB, Gothenburg, Sweden
Clean Oil Technology AB, Anderstorp, Sweden
German-Swedish Chamber of Commerce, Stockholm, Sweden

Leif Peter Karlsten
(until 26 April 2018)
CEO of Confiar AB, Gothenburg, Sweden
b) Bulten AB, Gothenburg, Sweden
Prevas AB, Vasteras, Sweden
Alelion Energy Systems AB, Gothenburg, Sweden
Holmbergs Safety Systems AB, Halmstad, Sweden
ReFinance AB, Sweden

Herbert Kauffmann
(until 26 April 2018)
Management consultant
a) adidas AG, Herzogenaurach, Germany

1) Employee representative on the Supervisory Board.
a) Membership of statutory German supervisory boards within the meaning of section 125 AktG.
b) Membership of comparable German or international supervisory bodies within the meaning of section 125 AktG.

Alois Ludwig
Management consultant
b) CARAT Systementwicklung- und Marketing GmbH & Co. KG, Mannheim, Germany

Dr Witich Roßmann[1)]
(until 26 April 2018)

Ali Yener[1)]
(since 26 April 2018)
Chief Representative and Managing Director of IG Metall Koblenz, Germany
a) TRW Deutschland Holding GmbH, Koblenz, Germany

[1)] Employee representative on the Supervisory Board.
a) Membership of statutory German supervisory boards within the meaning of section 125 AktG.
b) Membership of comparable German or international supervisory bodies within the meaning of section 125 AktG.

SUPERVISORY BOARD COMMITTEES

HUMAN RESOURCES COMMITTEE
Hans-Georg Härter, Chairman (until 31 December 2018)
Dr Ing Bernd Bohr, Chairman (since 1 January 2019)
Werner Scherer, Deputy Chairman (until 26 April 2018)
Corinna Töpfer-Hartung, Deputy Chairwoman (since 26 April 2018)
Herbert Kauffmann (until 26 April 2018)
Alois Ludwig (since 26 April 2018)

AUDIT COMMITTEE
Herbert Kauffmann, Chairman (until 26 April 2018)
Patricia Geibel-Conrad, Chairwoman (since 26 April 2018)
Werner Scherer, Deputy Chairman (until 26 April 2018)
Sabine Beutert, Deputy Chairwoman (since 26 April 2018)
Hans-Georg Härter (until 31 December 2018)
Dr Ing Bernd Bohr (since 1 January 2019)
Corinna Töpfer-Hartung (since 26 April 2018)

ARBITRATION COMMITTEE (SECTION 27 (3) OF THE GERMAN CODETERMINATION ACT (MITBESTG))
Hans-Georg Härter, Chairman (until 31 December 2018)
Dr Ing Bernd Bohr (since 1 January 2019)
Gisela Füssel (until 26 April 2018)
Herbert Kauffmann (until 26 April 2018)
Werner Scherer (until 26 April 2018)
Sophie Albrecht (since 26 April 2018)
Corinna Töpfer-Hartung (since 26 April 2018)
Ali Yener (since 26 April 2018)

NOMINATIONS COMMITTEE
Hans-Georg Härter, Chairman (until 31 December 2018)
Dr Ing Bernd Bohr, Chairman (since 1 January 2019)
Göran Gummeson (until 26 April 2018)
Herbert Kauffmann (until 26 April 2018)
Dr Ing Hermann Garbers (since 26 April 2018)
Alois Ludwig (since 26 April 2018)

BOARD OF MANAGEMENT

Dr Ing Frank Hiller (51)
Chairman
Technical and head-office functions

b) DEUTZ Corporation, Atlanta, USA, Chairman

Dr Margarete Haase (64)
(until 30 April 2018)
Finance, human resources, purchasing and information services

a) Fraport AG, Frankfurt am Main, Germany
ZF Friedrichshafen AG, Friedrichshafen (until 12 April 2018)
ING Groep N.V., ING Bank N.V., Amsterdam, Netherlands
OSRAM Licht AG, Munich, Germany
Marquard & Bahls AG, Hamburg, Germany

Dr Andreas Strecker (57)
(since 1 March 2018)
Finance, human resources, purchasing and information services

Michael Wellenzohn (52)
Sales, service and marketing

b) DEUTZ Asia Pacific (Pte), Singapore, Singapore
DEUTZ Corporation, Atlanta, USA

a) Membership of statutory German supervisory boards within the meaning of section 125 AktG.
b) Membership of comparable German or international supervisory bodies within the meaning of section 125 AktG.

ANNUAL FINANCIAL STATEMENTS IN ACCORDANCE WITH THE GERMAN COMMERCIAL CODE (HGB)

BALANCE SHEET OF DEUTZ AG

€ million

Assets	**31 Dec 2018**	31 Dec 2017
Intangible assets	60.9	39.8
Property, plant and equipment	248.4	239.0
Investments	256.2	294.8
Non-current assets	**565.5**	**572.6**
Inventories	204.8	169.6
Receivables and other assets	202.8	186.9
Cash and cash equivalents	115.7	128.0
Current assets	**523.3**	**484.5**
Prepaid expenses	1.7	1.4
Deferred tax assets	83.8	85.1
Total assets	**1,174.3**	**1,143.6**

Equity and liabilities	**31 Dec 2018**	31 Dec 2017
Issued capital	309.0	309.0
Additional paid-in capital	26.8	26.8
Retained earnings		
Legal reserve	4.5	4.5
Other retained earnings	232.8	216.9
Accumulated income/loss	69.6	71.8
Equity	**642.7**	**629.0**
Provisions	266.7	260.6
Other liabilities	264.3	253.5
Deferred income	0.6	0.5
Total equity and liabilities	**1,174.3**	**1,143.6**

INCOME STATEMENT OF DEUTZ AG

€ million

	2018	2017
Revenue	1,601.5	1,356.0
Cost of sales	–1,371.6	–1,171.5
Gross profit	**229.9**	**184.5**
Research and development costs	–59.9	–60.3
Selling expenses	–51.8	–44.9
General and administrative expenses	–30.9	–29.6
Other operating income	28.3	145.5
Other operating expenses	–58.6	–55.4
thereof expenses pursuant to art. 67 (1) and (2) of the Introductory Act to the HGB (EGHGB)	–2.3	–2.3
Net investment income	–5.1	15.5
Interest expenses, net	–5.0	–6.8
Write-downs of investments	–2.5	–0.5
Income taxes	–11.9	–16.7
Profit after income taxes	**32.5**	**131.3**
Other taxes	–0.7	–2.6
Net income	**31.8**	**128,7**
Profit carried forward	71.8	15.6
Dividend payments to shareholders	–18.1	–8.5
Additions to other retained earnings	–15.9	–64.0
Accumulated income/loss	**69.6**	**71.8**

RESPONSIBILITY STATEMENT

"To the best of our knowledge, and in accordance with the applicable accounting principles, the consolidated financial statements give a true and fair view of the net assets, financial position and results of operation of the Group, and the group management report, which is combined with the management report of DEUTZ AG, presents a true and fair view of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group."

Cologne, 18 February 2019

DEUTZ Aktiengesellschaft

The Board of Management

Dr Ing Frank Hiller
Chairman

Dr Andreas Strecker

Michael Wellenzohn

INDEPENDENT AUDITOR'S REPORT

To DEUTZ Aktiengesellschaft, Cologne

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

AUDIT OPINIONS

We have audited the consolidated financial statements of DEUTZ Aktiengesellschaft, Cologne, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2018, and the consolidated statement of comprehensive income, consolidated statement of profit or loss, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January to 31 December 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of DEUTZ Aktiengesellschaft, Cologne, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2018. In accordance with the German legal requirements, we have not audited the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

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

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2018, and of its financial performance for the financial year from 1 January to 31 December 2018, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

BASIS FOR THE AUDIT OPINIONS

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

KEY AUDIT MATTERS IN THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

- 1) Accounting treatment of internally generated intangible assets
- 2) Recoverability of goodwill

Our presentation of these key audit matters has been structured in each case as follows:

1) Matter and issue

2) Audit approach and findings

3) Reference to further information

Hereinafter we present the key audit matters:

1) ACCOUNTING TREATMENT OF INTERNALLY GENERATED INTANGIBLE ASSETS

1) In the consolidated financial statements of the Company expenses for the development of new technologies – in particular the development of new engine series – amounting to EUR 108.3 million (8.7 % of consolidated total assets) are reported under the "Intangible assets" balance sheet item. Development costs are capitalized based on milestones within the development process that are defined by the Company. The assets are generally subject to amortization on a straight-line basis over the expected production cycle of eight to ten years.

At each balance sheet date a test is performed to determine whether there are indications that an asset may be impaired. An impairment test is carried out at least once a year for intangible assets that are not yet available for use. Impairments are calculated by comparing the carrying amount against the recoverable amount. The recoverable amount of an asset is either the fair value of an asset or a cash-generating unit, less costs to sell, and the value in use, whichever is higher. For the purposes of the impairment test, assets are grouped, at the lowest level that makes sense, into cash-generating units for which cash inflows can be identified largely independently. In order to calculate the value in use, the expected future cash flows are discounted to their present values using a discount rate that reflects the current market expectations regarding the interest rate effect and the specific risks associated with the asset or cash-generating unit.

The valuations are based on model calculations that take into account the projections, with a finite planning period, and the corresponding carrying amounts as of 31 December 2018. These projections were also used to prepare the Group's medium-term plan prepared by the executive directors and adopted by the supervisory board. The financial surpluses are discounted using the weighted cost of capital of the respective asset or the respective cash-generating unit.

The impairment test identified impairment losses that had to be recognized on series 7.8 in the amount of EUR 1.9 million and on series 12.0/16.0 in the amount of EUR 0.4 million in total.

The outcome of this valuation is dependent to a large extent on the estimates made by the executive directors with respect to the future cash inflows from the respective assets or cash-generating units, the discount rate used, and other assumptions, and is therefore subject to considerable uncertainty. Against this background and due to the complexity of the valuation, this matter was of particular significance in the context of our audit.

2) As part of our audit, we first of all asked for the development process to be explained to us and assessed adherence to the requirements for capitalizing development costs based on milestones that had been reached.

We also evaluated the procedures for identifying and assessing issues and developments, which could result in an impairment of the intangible assets, including the controls established. In a further step, we assessed, among other things, the method used for performing impairment tests and assessed the assumptions and parameters used to determine whether they form an appropriate basis for impairment testing on internally generated intangible assets performed by the Company's executive directors on the whole. After matching the future cash inflows used for the calculation against the model calculations and the adopted medium-term business plan of the Group, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations.

In the knowledge that even relatively small changes in the discount rate applied can have a material impact on the value calculated using this method, we focused our testing in particular on the parameters used to determine the discount rate applied, and assessed the calculation model. We performed sensitivity analyses on an ad hoc basis in order to reflect the uncertainty inherent in the projections. Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

3) The Company's disclosures on the internally generated intangible assets are contained in sections "Accounting policies" and "Notes to the balance sheet" in the notes to the consolidated financial statements.

2) RECOVERABILITY OF GOODWILL

1) In the Company's consolidated financial statements goodwill amounting in total to EUR 48.0 million (3.8 % of total assets) is reported under the ["Intangible assets"] balance sheet item. Goodwill is tested for impairment by the Company once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out at the level of the groups of cash-generating units to which the relevant goodwill is allocated. The carrying amount of the relevant cash-generating units, including goodwill, is compared with the corresponding recoverable amount in the context of the impairment test. The recoverable amount is generally determined using the value in use. The present value of the future cash flows from the respective group of cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on assumptions about long-term rates of growth. Expectations relating to future market developments and assumptions about the development of macroeconomic factors are also taken into account. The discount rate used is the weighted average cost of capital for the respective group of cash-generating units. The impairment test determined that no write-downs were necessary.

The outcome of this valuation is dependent to a large extent on the estimates made by the executive directors with respect to the future cash inflows from the respective group of cash-generating units, the discount rate used, the rate of growth and other assumptions, and is therefore subject to considerable uncertainty. Against this background and due to the complex nature of the valuation, this matter was of particular significance in the context of our audit.

2) As part of our audit, we assessed the methodology used for the purposes of performing the impairment test, among other things. After matching the future cash inflows used for the calculation against the adopted medium-term business plan of the Group, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations. In addition, we assessed the appropriate consideration of the costs of Group functions. In the knowledge that even relatively small changes in the discount rate applied can have a material impact on the value of the entity calculated in this way, we focused our testing in particular on the parameters used to determine the discount rate applied, and assessed the calculation model. In order to reflect the uncertainty inherent in the projections, we evaluated the sensitivity analyses performed by the Company. We verified that the necessary disclosures were made in the notes to the consolidated financial statements relating to groups of cash-generating units for which a reasonably possible change in an assumption would result in the recoverable amount falling below the carrying amount of the cash-generating units including the allocated goodwill.

Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

3) The Company's disclosures on goodwill are contained in sections "Accounting policies" and "Notes to the balance sheet" in the notes to the consolidated financial statements.

OTHER INFORMATION

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in the group management report
- the corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code
- the separate non-financial report pursuant to § 289b Abs. 3 HGB and § 315b Abs. 3 HGB

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

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

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

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

RESPONSIBILITIES OF THE EXECUTIVE DIRECTORS AND THE SUPERVISORY BOARD FOR THE CONSOLIDATED FINANCIAL STATEMENTS AND THE GROUP MANAGEMENT REPORT

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

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

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

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

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

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

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

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

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

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

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

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

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

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

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

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

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

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 26 April 2018. We were engaged by the supervisory board on 13 December 2018. We have been the group auditor of the DEUTZ Aktiengesellschaft, Cologne, without interruption since the financial year 2014.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Bernd Boritzki.

Cologne, 6 March 2019

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Bernd Boritzki	ppa. Gerd Tolls
Wirtschaftsprüfer	Wirtschaftsprüfer
(German public auditor)	(German public auditor)

REPORT OF THE SUPERVISORY BOARD

CLOSE COOPERATION BETWEEN SUPERVISORY BOARD AND BOARD OF MANAGEMENT

In 2018, the Supervisory Board of DEUTZ AG continued its ongoing monitoring of the management of the business in accordance with the requirements of the German Stock Corporation Act (AktG) and the German Corporate Governance Code and provided advice to the Board of Management on key decisions. The Supervisory Board was directly involved in all material decisions taken by the Board of Management. In particular, the Board of Management coordinated closely with the Supervisory Board on the Company's corporate strategy.

A total of five ordinary and three extraordinary Supervisory Board meetings were held in 2018, including the constitutive meeting on 26 April 2018 following the re-election of the members of the Supervisory Board at the 2018 Annual General Meeting. Apologies for absence were received for the meeting on 8 March 2018 (Mr Gummeson), for the meeting on 17 April 2018 (Mr Finken and Mr Karlsten), for the meeting on 18 July 2018 (Mr Ludwig) and for the meeting on 27 September 2018 (Ms Albrecht); all members of the Supervisory Board participated in all the other meetings in 2018.

At each of the ordinary meetings of the Supervisory Board, the Board of Management reported on the general economic, market and competitive environment for the DEUTZ Group, presented a business update and sales report that included detailed information on the actual performance of the business over the immediately preceding period, submitted an up-to-date risk report, provided information on key operational issues and offered an overview of the results forecast for the year as a whole. These reports were made on the basis of the key performance indicators that were already familiar to the Supervisory Board members from the Company's written monthly reports. These key performance indicators included new orders, orders on hand, revenue, unit sales, EBIT, research and development expenditure, capital expenditure, working capital, quality data and headcount data, in each case compared against the prior-year figures and budget. Reports from the Human Resources and Audit Committees presented by their chairperson were also a regular item on the agenda of the Supervisory Board meetings.

FOCUS OF SUPERVISORY BOARD DELIBERATIONS

The deliberations and discussions of the Supervisory Board in the year under review focused on the current business position and risk situation of the DEUTZ Group as well as on the operational and strategic development of the business. Particular attention was paid to the E-DEUTZ strategy, the integration of Torqeedo GmbH into the DEUTZ Group, the alliance with Liebherr, the development of new business and the steps to bring about lasting quality improvements. The Supervisory Board also deliberated at length on the events that led to the review and subsequent correction of carrying amounts for the Chinese joint venture DEUTZ (Dalian) Engine Co., Ltd., on preparations for the full withdrawal from the DEUTZ Dalian joint venture completed at the end of 2018 and on the DEUTZ Group's new strategy for China. Finally, the Supervisory Board was involved in preparations for the partial financing of the acquisition of the business of the supplier Neue Halberg-Guss GmbH, Saarbrücken, by new owner companies.

Other key decisions concerned the 2019 budget, the medium-term planning up to 2023, the adoption of the profile of skills and expertise for the Supervisory Board pursuant to article 5.4.1 of the German Corporate Governance Code, the diversity plans for the Board of Management and Supervisory Board, and the approval of capital expenditure and development projects. As is the case every year, the Supervisory Board also adopted resolutions concerning the achievement of targets by the Board of Management – and consequently its variable remuneration for the previous year – as well as the setting of its targets for the current year and its medium-term targets.

The Board of Management ensured that it provided the Supervisory Board with comprehensive, regular and timely information at all times. Between meetings, the Board of Management informed the members of the Supervisory Board in writing about all important events. In addition, the chairman of the Supervisory Board and the chairman of the Board of Management remained in close and regular contact to discuss all important transactions, imminent decisions and optimisation measures. All the decisions that the Supervisory Board was required to take in accordance with the law and Statutes were taken on the basis of the reports and draft resolutions submitted by the Board of Management and, where necessary, following preparation by the relevant committees of the Supervisory Board.

COMPOSITION OF THE BOARD OF MANAGEMENT

At the time this annual report was published, the Company's Board of Management consisted of three people: Dr Frank Hiller (Chairman, responsible for technical and head-office functions), Dr Andreas Strecker (Board of Management member since 1 March 2018, initially with no areas of responsibility, then since 1 April 2018 responsible for finance, human resources, purchasing and information services) and Mr Michael Wellenzohn (responsible for sales, service and marketing).

At the Supervisory Board meeting on 8 December 2017, following preparatory work by the Human Resources Committee, the Supervisory Board, as already reported, appointed Dr Andreas Strecker as a member of the Board of Management and as the Company's Human Resources Director for the period from 1 March 2018 to 28 February 2021. On 1 April 2018, following his appointment to the Board of Management on 1 March 2018, Dr Strecker took over responsibility for finance, human resources, purchasing and information services from Dr Margarete Haase, whose term of appointment on the Board of Management ended on 30 April 2018.

By means of a resolution dated 31 January 2018, following preparatory work by the Human Resources Committee, the Supervisory Board, as already reported, extended Mr Wellenzohn's appointment by five years for the period from 1 January 2019 to 31 December 2023.

CORPORATE GOVERNANCE: DECLARATION OF CONFORMITY WITH ONE EXCEPTION

At its meetings on 27 September and 13 December 2018, the Supervisory Board again held in-depth discussions on the German Corporate Governance Code as amended on 7 February 2017 and, together with the Board of Management, issued a declaration of conformity pursuant to section 161 AktG on both occasions. Since 13 December 2018, this declaration has included only one variance from the Code and since 14 December 2018 has been available in the 'Investors / Corporate Governance' section of the Company's website at www.deutz.com, where it can be downloaded.

MATTERS HANDLED EFFICIENTLY BY FOUR COMMITTEES

The Supervisory Board has created four committees to enable it to perform its duties effectively. These committees prepare various topics and resolutions for the full Supervisory Board. Details of all members of the Supervisory Board and its committees, as well as other directorships held by its members, are shown separately on pages 140 to 141 of this annual report.

The Human Resources Committee makes preparations for all Supervisory Board decisions concerning the appointment of members of the Board of Management and their contracts of employment, including the remuneration specified therein, and all issues arising in this connection. The committee met twice in 2018. Among the main matters addressed were the achievement of the Board of Management's targets for 2017 and the setting of Board of Management targets, including medium-term targets, for 2018.

The work of the Audit Committee focused on monitoring the financial accounting process and on the preparatory review of the annual and consolidated financial statements, the combined management report of DEUTZ AG and the Group for 2018 and the profit appropriation resolution. Discussions were also held with the Board of Management on the condensed interim consolidated financial statements and the interim management report for the period ended 30 June 2018, which were reviewed by the auditor, and the interim management statements for the periods ended 31 March and 30 September 2018, in all cases prior to their publication.

The Audit Committee examined the audit engagement for the year ended 31 December 2018, including a review of auditor qualification and independence, the agreed fees and the proposed focus of the audit, and discussed the permitted non-audit services that were performed by the auditor in 2018 in accordance with a pre-approval catalogue and that are scheduled to be performed in 2019 as well.

In its meeting on 27 February 2019, which was attended by the Board of Management and the external auditor, the Audit Committee examined in detail the annual and consolidated financial statements on the basis of those statements and the combined management report of DEUTZ AG, the profit appropriation resolution, the separate combined non-financial report, the Board of Management report and the corresponding auditors' reports for 2018. During the meeting, the auditor gave a detailed report on the process and key findings of its audit of the aforementioned financial statements and of the combined management report including the key audit matters and the early-warning system for risk and answered all supplementary questions comprehensively. According to the findings of the audit, no issues were identified with the internal control system relating to the accounting system or with the early-warning system for risk. The committee's preparatory review also covered the auditor's review of the separate combined non-financial report for DEUTZ AG.

In addition, it held intensive discussions on the events that led to the review and correction of carrying amounts for the Chinese joint venture DEUTZ (Dalian) Engine Co., Ltd, and the audit carried out by the German Financial Reporting Enforcement Panel (FREP) in connection with this. The meetings also addressed the current status of the supplier Neue Halberg-Guss GmbH, matters related to the purchase price allocation for Torqeedo, the business performance of the subsidiaries and impairment tests for investments and goodwill. The Audit Committee gave the Supervisory Board a recommendation for its proposal to the Annual General Meeting regarding the appointment of the auditor for the single-entity and consolidated financial statements for 2019 and regarding the engagement of an auditor to provide a limited assurance report for the 2019 non-financial report.

The effectiveness of the risk management system, accounting-related internal control system and internal audit were also discussed in detail, as were matters related to compliance. In the meeting on 30 July 2018, the Chief Compliance Officer and the Head of Group Internal Audit gave a report and answered the Audit Committee's questions.

The Audit Committee held four meetings in 2018, all of which were attended by all the committee's members, the Board of Management and the external auditors.

The Arbitration Committee set up pursuant to section 27 (3) of the German Codetermination Act (MitbestG) is responsible for the activities described in section 31 (3) of the Act. It did not need to be convened during the year under review.

The Nominations Committee is tasked with proposing to the Supervisory Board suitable candidates as shareholder representatives on the Supervisory Board. The Nominations Committee met twice in 2018. Discussions at these meetings focused on the Supervisory Board election that was held in 2018.

The entire Supervisory Board was informed of the outcome of all discussions in the committees and gave its approval to the recommendations for board resolutions submitted by the committees.

Dr Ing Bernd Bohr
Chairman of the Supervisory Board

ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS AUDITED IN DETAIL AND APPROVED

The annual financial statements of DEUTZ AG prepared by the Board of Management in accordance with the German Commercial Code (HGB), the consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS) and the combined management report for DEUTZ AG and the DEUTZ Group, in each case for the year ended 31 December 2018, were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Cologne, Germany, the auditors appointed by the Annual General Meeting on 26 April 2018. The auditors issued unqualified opinions.

The annual financial statements of DEUTZ AG, the consolidated financial statements, the combined management report, the Board of Management's proposal for the appropriation of profit and the auditors' reports were made available to all members of the Supervisory Board and were examined by the Supervisory Board. The auditors explained their audit findings in detail to the Audit Committee meeting held on 27 February 2019 and to the Supervisory Board meeting held on 7 March 2019 and answered any supplementary questions raised.

The Supervisory Board approved the findings of the auditors' reports on DEUTZ AG and the DEUTZ Group. The conclusive findings of the Supervisory Board's own audit have not led to any reservations about either the annual financial statements or the consolidated financial statements, and the Supervisory Board has therefore approved them. The annual financial statements have thus been adopted. Finally, the Supervisory Board audited the separate combined non-financial report in accordance with its obligation pursuant to section 171 (1) sentence 4 AktG. It did not identify any issues.

The Supervisory Board also approved the Board of Management's proposal to use the accumulated income reported as at 31 December 2018 to pay a dividend of €0.15 per dividend-bearing share.

COMPOSITION OF THE SUPERVISORY BOARD AND ITS COMMITTEES

The changes in the composition of the Supervisory Board in 2018 are described below.

Following the re-election of the twelve members of the Supervisory Board at the Annual General Meeting on 26 April 2018, only one new appointment was made in 2018: on 20 December 2018, at the request of the Board of Management and as recommended by the Nominations Committee, the local court in Cologne appointed Dr Ing Ulrich Dohle as a shareholder representative on the Supervisory Board of DEUTZ AG with effect from 1 January 2019 and until the next Annual General Meeting in 2019. He succeeds Mr Hans-Georg Härter, who stepped down from his post with effect from 31 December 2018. The Supervisory Board would like to thank Mr Härter for his very successful work. The Supervisory Board will propose to the Annual General Meeting that Dr Ing Ulrich Dohle be elected as one of its members for the remaining term of the other Supervisory Board members, i.e. until the Annual General Meeting in 2023.

In its meeting on 13 December 2018, the Supervisory Board elected Dr Bernd Bohr as its chairman with effect from 1 January 2019 and, as such, as the successor to Mr Härter in this role.

In 2018, the following changes were made to the composition of the Supervisory Board's committees after they were reformed subsequent to the Supervisory Board election. In its meeting on 13 December 2018, the Supervisory Board elected Dr Ing Bernd Bohr to the Human Resources Committee, Arbitration Committee and Audit Committee with effect from 1 January 2019. He succeeded Mr Härter in each case. As chairman of the Supervisory Board, Dr Bohr automatically became chairman of the Nominations Committee with effect from 1 January 2019 in accordance with section 7 (3) a) sentence 2 of the Supervisory Board's rules of procedure, which meant that no separate election needed to take place. Dr Bohr has therefore been chairman of the Nominations Committee, Human Resources Committee and Arbitration Committee, as well as a member of the Audit Committee, since 1 January 2019.

CONFLICTS OF INTEREST / INDEPENDENCE OF SUPERVISORY BOARD MEMBERS / THANKS

No conflicts of interest between members of the Supervisory Board and DEUTZ AG arose in the year under review. The current members of the Supervisory Board of DEUTZ AG are all considered independent within the meaning of article 5.4.2 sentence 2 of the German Corporate Governance Code.

The Supervisory Board would like to express its thanks and appreciation to all employees of DEUTZ AG in Germany and abroad, to the elected employee representatives and to the Board of Management for their valuable efforts and the considerable dedication they showed in 2018.

Cologne, March 2019

Dr Ing Bernd Bohr
The Supervisory Board

CORPORATE GOVERNANCE DECLARATION AND CORPORATE GOVERNANCE REPORT

For DEUTZ, a responsible approach to management that meets the standards of good corporate governance forms the basis for enhancing shareholder value over the long term. This is one of the main reasons why we attach great importance to the implementation of the German Corporate Governance Code (DCGK) and ensure quality and transparency in all key decisions and processes in our Company.

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

Declaration of conformity with only one exception

In 2018, the Board of Management and the Supervisory Board once again carefully considered to what extent it was proper and consistent with the Company's objectives for DEUTZ to apply all the guidelines and recommendations of the DCGK. As a result, DEUTZ AG complies with the recommendations of the Code, as amended on 7 February 2017, with the following exception:

1. The D&O insurance taken out by DEUTZ AG for the members of the Supervisory Board does not provide for any excess, contrary to article 3.8 (2) and (3) DCGK. In the case of Supervisory Board members, an excess of this type is, as before, not considered an appropriate means of control.

The current declaration of conformity in accordance with section 161 AktG, which the Board of Management and Supervisory Board submitted on 13 December 2018, can be accessed in the 'Investor Relations / Corporate Governance' section of the Company's website at www.deutz.com. The previous declarations of conformity can also be viewed and downloaded there.

Composition of the Board of Management and Supervisory Board; composition and operating procedures of Supervisory Board committees

The Company's Board of Management consists of three people: Dr Frank Hiller (Chairman, responsible for technical and head-office functions), Dr Andreas Strecker (Board of Management member since 1 March 2018, initially with no areas of responsibility, then since 1 April 2018 responsible for finance, human resources, purchasing and information services) and Mr Michael Wellenzohn (responsible for sales, service and marketing).

At the Supervisory Board meeting on 8 December 2017, following preparatory work by the Human Resources Committee, the Supervisory Board, as already reported, appointed Dr Andreas Strecker as a member of the Board of Management and as the Company's Human Resources Director for the period from 1 March 2018 to 28 February 2021. On 1 April 2018, following his appointment to the Board of Management on 1 March 2018, Dr Strecker took over responsibility for finance, human resources, purchasing and information services from Dr Margarete Haase, whose term of appointment on the Board of Management ended on 30 April 2018.

By means of a resolution dated 31 January 2018, following preparatory work by the Human Resources Committee, the Supervisory Board extended Mr Wellenzohn's appointment by five years for the period from 1 January 2019 to 31 December 2023.

In accordance with the provisions of the German Codetermination Act (MitbestG), the Supervisory Board of DEUTZ AG comprises twelve members, six members being the representatives of the shareholders and six members being the representatives of the employees.

The changes in the composition of the Supervisory Board in 2018 are as follows:

Following the re-election of the twelve members of the Supervisory Board at the Annual General Meeting on 26 April 2018, only one new appointment was made in 2018: on 20 December 2018, at the request of the Board of Management and as recommended by the Nominations Committee, the local court in Cologne appointed Dr Ing Ulrich Dohle as a shareholder representative on the Supervisory Board of DEUTZ AG with effect from 1 January 2019 and until the next Annual General Meeting in 2019. He succeeds Mr Hans-Georg Härter, who stepped down from his post with effect from 31 December 2018. The Annual General Meeting of DEUTZ AG on 30 April 2019 is set to confirm the appointment of Dr Ing Dohle and to elect him as a member of the Supervisory Board for the remaining term of the other Supervisory Board members, i.e. until the Annual General Meeting in 2023.

In its meeting on 13 December 2018, the Supervisory Board elected Dr Ing Bernd Bohr as its chairman with effect from 1 January 2019 and, as such, as the successor to Mr Härter in this role.

The Supervisory Board has created four committees to enable it to perform its duties effectively. They are the Human Resources Committee, the Audit Committee, the Arbitration Committee and the Nominations Committee. The Human Resources Committee consists of two representatives of the shareholders and one employee representative; the Audit and Arbitration Committees both consist of two shareholder representatives and two employee representatives; and the Nominations Committee has three members, all of whom represent the shareholders. The

Audit Committee follows its own rules of procedure, which can be viewed on the DEUTZ AG website, while the other committees work according to the rules of procedure that apply to the (full) Supervisory Board.

The Human Resources Committee makes preparations for all Supervisory Board decisions concerning the appointment of members of the Board of Management and their contracts of employment, including the remuneration specified therein, and all issues arising in this connection. The committee met twice in 2018. Among the main matters addressed were the achievement of the Board of Management's targets for 2017 and the setting of Board of Management targets, including medium-term targets, for 2018.

The work of the Audit Committee focused on monitoring the financial accounting process and on the preparatory review of the annual and consolidated financial statements, the combined management report of DEUTZ AG and the Group for 2018 and the profit appropriation resolution. Discussions were also held with the Board of Management on the condensed interim consolidated financial statements and the interim management report for the period ended 30 June 2018, which were reviewed by the auditor, and the interim management statements for the periods ended 31 March and 30 September 2018, in all cases prior to their publication.

The Audit Committee examined the audit engagement for the year ended 31 December 2018, including a review of auditor qualification and independence, the agreed fees and the proposed focus of the audit, and discussed the permitted non-audit services that were performed by the auditor in 2018 in accordance with a pre-approval catalogue and that are scheduled to be performed in 2019 as well.

In its meeting on 27 February 2019, which was attended by the Board of Management and the external auditor, the Audit Committee examined in detail the annual and consolidated financial statements on the basis of those statements and the combined management report of DEUTZ AG, the profit appropriation resolution, the separate combined non-financial report, the Board of Management report and the corresponding auditors' reports for 2018. During the meeting, the auditor gave a detailed report on the process and key findings of its audit of the aforementioned financial statements and of the combined management report including the key audit matters and the early-warning system for risk and answered all supplementary questions comprehensively. According to the findings of the audit, no issues were identified with the internal control system relating to the accounting system or with the early-warning system for risk. The committee's preparatory review also covered the auditor's review of the separate combined non-financial report for DEUTZ AG that had to be produced.

In addition, it held intensive discussions on the events that led to the review and correction of carrying amounts for the Chinese joint venture DEUTZ (Dalian) Engine Co., Ltd, and the audit carried out by the FREP in connection with this. The meetings also addressed the current status of the supplier Neue Halberg-Guss GmbH, matters related to the purchase price allocation for Torqeedo, the business performance of the subsidiaries and impairment tests for investments and goodwill. The Audit Committee gave the Supervisory Board a recommendation for its proposal to the Annual General Meeting regarding the appointment of the auditor for the single-entity and consolidated financial statements for 2019 and regarding the engagement of an auditor to review the non-financial report for 2019.

The effectiveness of the risk management system, accounting-related internal control system and internal audit were also discussed in detail, as were matters related to compliance. In the meeting on 30 July 2018, the Chief Compliance Officer and the Head of Group Internal Audit gave a report and answered the Audit Committee's questions.

The Audit Committee held four meetings in 2018, all of which were attended by all the committee's members, the Board of Management and the external auditors.

The Arbitration Committee set up pursuant to section 27 (3) of the German Codetermination Act (MitbestG) is responsible for the activities described in section 31 (3) of the Act. It did not need to be convened during the year under review.

The Nominations Committee is tasked with proposing to the Supervisory Board suitable candidates as shareholder representatives on the Supervisory Board. The Nominations Committee met twice in 2018. Discussions at these meetings focused on the Supervisory Board election that was held in 2018.

The entire Supervisory Board was informed of the outcome of all discussions in the committees and gave its approval to the recommendations for board resolutions submitted by the committees.

In 2018, the following changes were made to the composition of the Supervisory Board's committees after they were reformed subsequent to the Supervisory Board election. In its meeting on 13 December 2018, the Supervisory Board elected Dr Bohr to the Human Resources Committee, Arbitration Committee and Audit Committee with effect from 1 January 2019. He succeeded Mr Härter in each case. As chairman of the Supervisory Board, Dr Bohr automatically became chairman of the Nominations Committee with effect from 1 January 2019 in accordance with section 7 (3) a) sentence 2 of the Supervisory Board's rules of procedure, which meant that no separate election needed to take place. Dr Bohr has therefore been chairman of the Nominations Committee, Human Resources Committee and Arbitration Committee, as well as a member of the Audit Committee, since 1 January 2019.

Details of all members of the Supervisory Board and its committees, as well as other directorships held by its members, are shown separately on pages 140 and 141.

Targets and timeframes in accordance with sections 76 (4), 111 (5) AktG

On 21 August 2017, the Board of Management of DEUTZ AG set certain targets and timeframes in accordance with section 76 (4) AktG. The proportion of women employed by DEUTZ AG at the top level of senior management below the Board of Management is to be increased to 13 per cent by 30 June 2022. The proportion of women at the second level of senior management below the Board of Management is to be increased to 7 per cent over the same period. The top level of senior management below the Board of Management encompasses all managers in Germany who report directly to a member of the Board of Management. The second level of senior management below the Board of Management comprises all managers in Germany who report directly to a manager in the top level of senior management.

To ensure that women are taken into consideration for vacant managerial positions, DEUTZ AG has adopted a staff development programme. When positions in the top and second levels of senior management below the Board of Management become available, the Board of Management and the HR department are striving to ensure that at least one woman is always shortlisted for the post (article 4.1.5 DCGK). This means that external recruitment must focus on female managers.

At the time of publication, the proportion of women in the top level of senior management below the Board of Management is 12.5 per cent and in the second level of senior management below the Board of Management 15.7 per cent. DEUTZ AG thus attained the aforementioned target for the second level of senior management. The target for the top level of senior management was just missed. However, the proportion of women represented at this level did more than double compared with the prior year (2017: 5.9 per cent). The Company was unable to achieve the target for the first level of senior management because only few management positions had to be filled since the Board of Management set the targets on 21 August 2017. Furthermore, it remains the case that women continue to be under-represented in the scientific and technical degree courses that are of particular relevance to DEUTZ AG.

At its meeting on 21 September 2017, the Supervisory Board of DEUTZ AG set the following target in accordance with section 111 (5) AktG: on 30 June 2022, the members of the Board of Management of DEUTZ AG should include at least one woman.

Disclosures regarding compliance with the statutory quotas for women and men on the Supervisory Board

In accordance with the Law for the equal participation of women and men in managerial positions in the private and public sectors (law on the quota for women), the Supervisory Board of DEUTZ AG had to have at least four female members and four male members following the election of the Supervisory Board at the Annual General Meeting on 26 April 2018, if not before.

The Supervisory Board of DEUTZ AG has been in compliance with these statutory quotas since the Supervisory Board election held in 2018.

This was previously the case only for the employee representatives; it had not been necessary to appoint new shareholder representatives to the Supervisory Board since the law on the quota for women came into effect on 1 January 2016.

Description of the diversity plan for the composition of the Board of Management

The Supervisory Board, with the support of the Human Resources Committee and the involvement of the Board of Management, carries out long-term planning for appointments to the Board of Management. In its meeting on 27 September 2018, the Supervisory Board agreed the following diversity plan for the composition of the Board of Management, incorporating the recommendations of the German Corporate Governance Code:

1. Description of the diversity plan

The Supervisory Board has developed the following diversity plan for the composition of the Board of Management in accordance with section 289f (2) no. 6 HGB:

In addition to basic suitability criteria such as good character, integrity, outstanding leadership qualities, professional expertise needed for the member's specific remit, proven track record, knowledge of the Company and the ability to adapt business models and processes to the needs of a changing world, the Supervisory Board also considers diversity when selecting candidates for a position on the Board of Management. The Supervisory Board regards diversity as meaning, in particular:

- appropriate gender representation
- an adequate mix of ages among the members of the Board of Management
- a range of educational backgrounds and occupations.

2. Objectives of the diversity plan

The objective of the diversity plan for the Board of Management is to consciously harness diversity as a means of driving the Company forward. After all, taking account of different perspectives, skills, backgrounds and experience will be key to maintaining our competitiveness and success over the long term. Diversity within the Board of Management will, in particular, help us to better understand new business models and the wide-ranging expectations of our customers from around the world.

3. Manner of implementation

The Supervisory Board takes particular account of the following aspects with regard to the composition of the Board of Management:

- Members of the Board of Management should have several years of managerial experience.

- Members of the Board of Management should bring experience from a wide range of occupations and professional backgrounds.
- The Board of Management collectively should have technical expertise, particularly knowledge and experience of manufacturing and sales of all types of engines and of other technical products, as well as international experience.
- The Board of Management collectively should have many years' experience in the areas of research and development, production, sales, finance and human resources.
- The Board of Management collectively should have international experience.
- The Supervisory Board has formally agreed a target quota in accordance with the Law for the equal participation of women and men in managerial positions in the private and public sectors. The resolution stipulates that there should be at least one woman on the Board of Management of DEUTZ AG on 30 June 2022.
- An age limit of 65 (standard retirement age) applies in principle to the members of the Board of Management.

The Supervisory Board determines which candidate should be offered a specific position on the Board of Management. Its decision is based on the best interests of the Company, taking all the circumstances of the individual case into account.

4. Current composition

As well as many years of experience within the Group, the members of the Board of Management also have extensive knowledge and experience – some international – from various activities outside DEUTZ AG. In its current composition, the three-person Board of Management meets all the specified targets apart from that regarding the proportion of women. The current age range on the Board of Management is 52 to 57 years. The average age of the Board of Management members is 54.

OBJECTIVES FOR THE COMPOSITION OF THE SUPERVISORY BOARD, PROFILE OF THE SKILLS AND EXPERTISE REQUIRED OF ITS MEMBERS AND DESCRIPTION OF THE DIVERSITY PLAN

The diversity plan for the Supervisory Board was adopted by the Supervisory Board at its meeting on 27 September 2018 together with the objectives for the Supervisory Board's composition and profile of skills and expertise:

The Supervisory Board of DEUTZ AG has defined specific targets for its composition and has drawn up a profile of skills and expertise for the Supervisory Board as a whole in accordance with article 5.4.1 of the German Corporate Governance Code.

The composition of the Supervisory Board has to ensure that its members have the knowledge, skills and professional experience required to properly perform all duties within an international group of companies. This does not mean that each individual member of the Supervisory Board must have all the knowledge and experience required, but that for each key area of the Supervisory Board's activities, at least one member has competence in that area so that collectively – including the employee representatives and taking account of the special features of the right of codetermination – the Supervisory Board covers the required knowledge and experience.

1. Description of the areas of expertise required for the Supervisory Board

The Supervisory Board of DEUTZ AG should be composed of individuals who collectively provide a range of skills and expertise that ensures the Supervisory Board can comprehensively and effectively advise and supervise the Board of Management on every aspect of DEUTZ's business activity. The Supervisory Board regards the following as key elements of this skill set:

- Experience in managing and supervising international companies
- Collective familiarity of the members with the Company's key areas of activity and of the associated markets and value chains
- Understanding of the Company's strategy and its future strategic development, including against the background of any changing market requirements
- Knowledge of codetermination law
- Adequate knowledge of finance, financial reporting, accounting, compliance and risk management
- In-depth experience in the area of technological research and development, industrial manufacturing or service
- In-depth experience in the area of sales, service or marketing in the industrial sector for engines, drive systems or associated machinery
- Expertise in corporate social responsibility (CSR)
- Expertise in digital strategy and Industry 4.0
- Communications expertise
- Fundamental knowledge of stock market law, stock corporation law and the financial markets

In addition, in accordance with the requirements of section 100 (5) AktG, at least one member of the Supervisory Board and the Audit Committee must have expertise in the areas of accounting or auditing (financial expert) and the members of the Supervisory Board must, collectively, be familiar with the engine manufacturing, drive systems or associated machinery sectors.

2. Minimum requirements for professional expertise and personal capabilities

The individual members of the Supervisory Board should have certain minimum competencies that are necessary for the proper performance of their role:

- The ability to understand and critically scrutinise the business model
- Fundamental knowledge of the relevant legal provisions
- Fundamental knowledge of compliance
- Fundamental financial expertise, particularly in accounting and annual financial statements
- Ability to examine the annual financial statements, if necessary with the assistance of the independent auditors
- The ability to understand, critically scrutinise and draw conclusions from the reports of the Board of Management and of the Supervisory Board committees
- The ability to assess the propriety, commercial viability, appropriateness and legality of business decisions and to check their plausibility
- Willingness and ability to devote the time and effort required
- Willingness to undertake ongoing professional development in the form of both inhouse and external training activities
- Personal independence and integrity

3. Objectives for the composition of the Supervisory Board as a whole

- **Diversity**
  In terms of the diversity of its composition, the Supervisory Board strives to ensure the appropriate participation of both genders, a range of professional and international experience and the inclusion of members with many years of relevant experience. As DEUTZ AG is a publicly listed company that is subject to the German Codetermination Act, the Supervisory Board must comprise at least 30 per cent women and at least 30 per cent men in accordance with the principles laid down in section 96 (2) AktG.

- **International expertise**
  As DEUTZ is an international group of companies, care must be taken to ensure that the Supervisory Board has a sufficient number of members with many years of international experience. Supervisory Board members can satisfy this requirement in a variety of ways, e.g. by currently or previously holding a senior management role in an international company or by currently or previously living and working in another country.

- **Independence and potential conflicts of interest**
  More than half of the Supervisory Board members should be independent within the meaning of article 5.4.2 of the German Corporate Governance Code. The Supervisory Board does not believe that fulfilment of the Code's independence criteria can be called into question solely because a member exercises their Supervisory Board mandate as an employee representative. Supervisory Board members must not hold directorships or similar positions or advisory functions for major competitors of the DEUTZ Group. Conflicts of interest that are substantial and not merely temporary relating to the personal circumstances of a Supervisory Board member shall result in the termination of the mandate.

- **Time required to perform Supervisory Board duties**
  The Supervisory Board believes it is important that both its current members and future candidates for Supervisory Board seats are able to devote sufficient time to preparing for and following up the regular Supervisory Board meetings, taking part in such meetings and reading the regular reports. Additional time is required if members are elected to committees, particularly if they chair such committees. Based on these criteria, the time demanded of Supervisory Board members and candidates in respect of seats on other supervisory or advisory bodies, their active professional activity or other duties must be taken into account.

- **Regular review/evaluation**
  (1) In the process for selecting shareholder representatives, the Nominations Committee proposes candidates to the Supervisory Board, taking account of the above criteria, and the Supervisory Board then proposes these candidates for election by the Annual General Meeting. The representatives to be elected to the Supervisory Board by the employees must also fulfil the key criteria of this profile of skills and expertise. (2) In addition, evaluations must be carried out at regular intervals to establish the extent to which the members of the Supervisory Board and the composition of the Supervisory Board remain compliant with the objectives specified in point (1) and the Supervisory Board in its existing composition is able to carry out its duties effectively.

4. Diversity plan

- **Description of the diversity plan**
  The Supervisory Board has also resolved to strive for a diverse composition, particularly with regard to age, gender, educational background and occupation.

- **Objective of the diversity plan**
  The objective of the diversity plan for the Supervisory Board is to ensure that it has a broad understanding of the social and business requirements placed upon DEUTZ AG. In particular, diversity should help the Supervisory Board to judge the business decisions taken by the Board of Management from different perspectives and on the basis of a wide range of experience.

- **Manner in which the diversity plan is to be implemented**
  The Supervisory Board must be able to draw on as wide a range of expertise, capabilities and experience as possible. It is therefore important to take due account of diversity in

its composition and, when preparing election nominations, to make sure that the profiles of the candidates complement those of the existing members.

In accordance with statutory provisions, the Supervisory Board includes at least 30 per cent women and at least 30 per cent men.

A further target for the composition of the Supervisory Board is that members do not remain in post beyond the end of the Annual General Meeting following the member's 75th birthday (standard retirement age), unless special circumstances apply. Nor should members of the Supervisory Board serve any more than three full terms, unless special circumstances apply.

Results of the diversity plan achieved in the past year The current composition of the Supervisory Board reflects the stated objectives and matches the agreed profile of skills and expertise.

Disclosures relevant to corporate management practices: compliance management system, environmental and quality management, energy management

DEUTZ AG has a compliance management system that is firmly anchored in the Company's organisational structure. The system is continually enhanced in order to meet changing requirements. Dr Hiller is the member of the Board of Management responsible for compliance.

The prime objective of the compliance management system is to prevent violations of applicable laws, rules, regulations and internal policies. To this end, employees are given help in familiarising themselves with the relevant laws, regulations and policies as well as guidance on how to apply them correctly. This is primarily achieved through a structured policy management system in which existing policies are reviewed on an ongoing basis to see if they need updating and new policies are published. The policy management system is based on the code of conduct, which provides a framework for ensuring that behaviour towards business partners and employees is fair and in compliance with the law. Employees can access the code of conduct via the internal communications platform. Third parties can view the code of conduct on the DEUTZ AG website. The guidelines set out in the code of conduct are formalised in specific policies, including a compliance policy, a policy on gifts and entertainment, a policy on engaging external sales service providers, an anti-money laundering policy and an insider trading policy, that help to ensure that employees are aware of the relevant laws and policies and are able to apply them correctly.

The Board of Management supports and promotes ethical conduct. It is unreservedly committed to corporate compliance and declines to be involved in any transactions that are inconsistent with these values. The Board of Management does not tolerate any form of corruption and is fully committed to compliance with competition law and to incorporating the notion of sustainability into the Company's activities.

Training is intended to ensure that employees are aware of the relevant laws and corporate policies, and that they comply with them at all times in their day-to-day work. Salaried staff in the head-office sales, procurement, research and development and administration units, as well as in the subsidiaries, generally receive annual training sessions that are specifically tailored to their areas of activity. In the production plants, compliance training takes place in conjunction with the regular safety training.

A Compliance Officer appointed by the Board of Management coordinates compliance activities at DEUTZ AG. The individual business units and subsidiaries have their own compliance coordinators, who are responsible for compliance in their organisations and submit regular structured reports in writing to the Compliance Officer, who in turn reports to the Board of Management and Audit Committee. The basic principles of the compliance organisation are described in the compliance organisational policy. The duties of the relevant employees are set out in job descriptions.

Employees can supply information or direct questions to line managers, compliance coordinators, the Compliance Officer or the managers responsible for the legal affairs or internal audit units. Furthermore, the DEUTZ AG website incorporates a whistleblowing system that can also be accessed by non-employees. Any information supplied is rigorously followed up. Any necessary investigations are carried out by the Compliance Officer, with external support if required.

Regular meetings are held to develop, discuss and coordinate compliance initiatives. The compliance activities focus on preventing corruption, tackling money laundering and complying with export regulations (including export controls). They also ensure safety in the workplace, IT and data security, corporate security and product safety. A further aim is to prevent breaches of environmental, antitrust and insider trading laws.

As and when needed, the Board of Management and the Compliance Officer take legal advice on establishing and continuously improving the compliance management system. The internal audit department reviews the activities, and the Audit Committee monitors them on behalf of the Supervisory Board.

Compliance activities during the year under review again centred on the continuation and stepping up of regular classroom-based training for staff (including for staff at affiliated companies abroad), focusing on the code of conduct, data protection, gifts and entertainment, export controls, competition law and contract law. A further focus was the delivery of training courses via a web-based e-learning programme, which featured modules on antitrust law, information security and prevention of corruption.

In 2018, more than 1,000 employees took part in classroom-based training and 1,998 employees successfully completed all or individual modules of the e-learning programme.

As part of the ongoing review of our organisational policies, a new compliance policy was adopted and the policies on applications and approvals for new hires, export controls, and reporting and handling serious failures were revised.

Another essential element of corporate management at DEUTZ AG is rigorous environmental, quality and energy management. In the year under review, DEUTZ AG continued to satisfy the quality management requirements in accordance with ISO 9001, the environmental management requirements in accordance with ISO 14001 and the energy management requirements in accordance with ISO 50001. The relevant certificates from TÜV Rheinland can be found on the DEUTZ AG website.

All standards set by the Deutsches Institut für Normung e.V., Berlin (DIN) can be inspected free of charge at DIN standards repositories.

CORPORATE GOVERNANCE REPORT

Basic principles and objectives of the composition of the Supervisory Board; particularly, conflicts of interest/ independence of Supervisory Board members and the consideration of women

At its meeting held on 27 September 2018, the Supervisory Board adopted the profile of skills and expertise required for its members together with the objectives regarding its composition in accordance with articles 5.4.1 (1) and (2), 5.4.2 DCGK. We refer here to our detailed remarks on pages 155 to 161.

Except for the target relating to female representation, which was achieved on the shareholder representative side only after the Supervisory Board election in 2018, the Supervisory Board has continuously met these objectives since 2012. It has even exceeded them in cases such as the international experience available on the Supervisory Board and the number of independent members. The current members of the Supervisory Board are all considered independent within the meaning of article 5.4.2 sentence 2 DCGK. No conflicts of interest between members of the Supervisory Board and DEUTZ AG arose in the year under review.

Consideration of women when making appointments to the Board of Management

At the time of publication, the Board of Management of DEUTZ AG consisted of three members, none of whom were female. This equates to a ratio of 0 per cent.

Responsible risk management

A forward-looking, prudent and responsible approach to corporate risks is a core aspect of good corporate governance and forms the basis for the risk management system at DEUTZ. The Board of Management regularly notifies the Supervisory Board of any existing or anticipated risks. Details of the DEUTZ Group's risk management systems can be found in the risk report on pages 59 to 63.

Comprehensive transparency and active investor relations

The transparent presentation of developments and decisions in a company forms the core of any model system of corporate governance. Continuous, open dialogue with all stakeholders ensures trust in a company and its value creation process. DEUTZ therefore attaches the greatest importance to ensuring that all relevant target groups are given the same information at the same time and in a timely manner.

We achieve this objective by using various media. DEUTZ AG reports on the performance and development of its business and on significant changes and events four times a year in its interim management statements, half-year report and annual report. The interim management statements and half-year reports are published within 45 days of the end of a reporting period; the annual report is published within 90 days of the end of the financial year. The Company maintains constant contact with investors and analysts through its regular investor relations activities. In addition to the annual analysts' meeting held when the Company's consolidated financial statements are published, conference calls for analysts and institutional investors also take place when the interim management statements and half-year report are published. The Annual General Meeting is usually held in the first five months of the year; shareholders who do not attend the AGM in person can instruct proxies to vote on their behalf.

Our website also offers comprehensive information on the Company: DEUTZ AG annual reports, half-year reports and interim management statements, press releases and ad-hoc announcements, analyst recommendations and investor relations presentations as well as key dates in the financial calendar can all be found at www.deutz.com. The Company's Statutes are also available online. Almost all the pages on our website are provided in both German and English to ensure that important company news and information is as accessible as possible, including to an international audience. Apart from the regularly published information, DEUTZ AG also provides details of circumstances that are not in the public domain but that could have a significant impact on DEUTZ's share price were they to become known. The Company's reporting policy therefore complies both with legal requirements and DCGK guidelines.

Accounting and auditing

DEUTZ AG's consolidated financial statements are prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU). The consolidated financial statements are prepared by the Board of Management and reviewed by the auditors.

The auditors have agreed to inform the chairperson of the Supervisory Board or the chairperson of the Audit Committee without delay if grounds for disqualification or release of the auditors, or any misrepresentations in the declaration of conformity, come to light during the audit. The auditors inform the chairperson of the Supervisory Board without delay of any issues or incidents relevant to the role of the Supervisory Board that arise during the audit of financial statements.

Conflicts of interest and consultancy agreements

Information about conflicts of interests in relation to Supervisory Board members can be found under 'Basic principles and objectives of the composition of the Supervisory Board' at the start of this corporate governance report.

The Company does not have any consultancy agreements with members of the Supervisory Board.

The members of the Board of Management must disclose any conflicts of interest to the Supervisory Board. The Supervisory Board then reports these cases, along with any conflicts of interest relating to its own members, to the Annual General Meeting.

Remuneration report

The remuneration of the Board of Management complies with the German Act on the Appropriateness of Management Board Remuneration (VorstAG) and DCGK recommendations.

A description of the main features of the remuneration systems for the Board of Management and Supervisory Board, along with details of the remuneration for each member, can be found in the remuneration report on pages 55 to 58 of the combined management report.

Dealings subject to reporting requirements

Article 19 of the Market Abuse Regulation (MAR) state that persons with executive functions or persons with whom they are closely associated must notify both the company and the German Federal Financial Supervisory Authority (BaFin) of their own dealings in shares of the company or in financial instruments of the company based on such shares.

In 2018, Dr Hiller, Dr Strecker, Mr Wellenzohn and Supervisory Board member Gerhard Gehweiler (member of the Supervisory Board until 26 April 2018) disclosed the purchase of DEUTZ shares in accordance with article 19 MAR. No other persons required to make such a disclosure did so before the adoption of the 2018 annual financial statements. Transactions disclosed in previous years are published on the DEUTZ AG website.

GLOSSARY

APQP (Advanced Product Quality Planning) In commercial quality management, this conceptual part of the quality planning process anticipates the characteristics that will be required of a product or a service in the future.

Audit An analysis examining whether processes, specifications and policies meet the required standards. This method of investigation is a common feature of a quality management system. The audits are carried out by a specially trained auditor.

Captive market / segment Market segment in which original equipment and commercial vehicle manufacturers have their own engine production facilities to meet their engine needs. Consequently, the captive market is not generally accessible to independent engine manufacturers.

Cash flow statement Shows the Group's inflows and outflows of cash over the financial year. It distinguishes between cash flow from operating activities, cash flow from investing activities and cash flow from financing activities. It also shows the change in cash and cash equivalents.

Continuous improvement process (CIP) Describes a way of thinking aimed at making a company more competitive through a series of small, progressive steps. CIP is applied to products, processes and service quality. Specific CIP teams are set up to implement small improvements (as opposed to major, dramatic changes). CIP is a basic principle of quality management and an essential part of ISO 9001. The method of having specific CIP teams develop suggestions for improvement is usually bracketed under the term 'ideas management' together with the company suggestion scheme.

Compliance Denotes the entirety of measures taken by a company to comply with laws, regulations and directives and also to comply with contractual obligations and self-imposed obligations. Compliance is a key element of corporate governance.

Corporate citizenship Denotes a company's corporate social responsibility activities.

Corporate governance Responsible management and control of a company with a view to long-term value creation and increasing shareholder value.

Deferred taxes Differences between the calculation of profit under tax law and under IAS result in differing tax calculations. These differences in the amount of tax are recognised on the balance sheet as deferred tax assets or liabilities.

DIN EN ISO 9001 (Deutsches Institut für Normung – European Norm – International Organization for Standardization – 9001) A German, European and international industrial standard for environmental management.

Diversity Acceptance of the differences between individual employees, which – when embedded in a tolerant corporate culture – can be utilised to boost the success of a company. Employees should not suffer discrimination due to ethnic origin, gender, age, religion, sexual orientation, disability, etc. They should all have equal opportunities.

Downsizing Reduction of technical dimensions (such as weight and capacity) but delivering the same or similar power output.

Earnings per share A key figure calculated by dividing the net income attributable to the shareholders of DEUTZ AG by the average number of shares in issue.

EBIT (earnings before interest and tax) Income from operating activities (before interest and tax).

EU Stage I, II, III A, III B, IV, V Exhaust emissions standard laid down by the European Union for off-road applications. Sets limits for pollutants such as nitrogen oxide, hydrocarbons and soot particulates in exhaust gas.

Exhaust aftertreatment Ensures compliance with statutory emissions limits for pollutants such as nitrogen oxides (NOx) and soot particles through the cleansing of combustion exhaust gases. In vehicles, exhaust aftertreatment is achieved by the use of catalytic converters and diesel particulate filters.

Free float The proportion of shares in a public limited company (Aktiengesellschaft) not held by a major shareholder. According to the Deutsche Börse definition, shareholdings of less than 5 per cent are classified as free float.

Forward Individually structured, non-exchange-traded forward transaction.

Hedging Countering interest-rate, currency, price or similar risks through the use of derivative financial instruments that limit the risk associated with the underlying transactions.

IMS (integrated management system) Standardised structure bringing together methods and tools for ensuring compliance with requirements in various areas (e.g. quality, environment, health and safety), thereby contributing to corporate governance (i.e. the management and monitoring of a company).

Kaizen Describes both a Japanese philosophy of life and work and a methodical approach focused on continuous improvement. The improvements are achieved through incremental perfectioning or optimisation of a product or process.

Kanban A method used in software development to limit the number of work items that are in progress at any one time. The aim is to shorten lead times and to quickly identify problems, particularly bottlenecks.

Liquefied petroleum gas (LPG) In general usage, LPG is understood to mean short-chained hydrocarbons such as propane and butane, as well as mixtures thereof, which remain in liquid form at room temperature and under low compression (< 10 bar).

Long-term incentive (LTI) plan A form of incentive-based remuneration offered to members of the Board of Management and selected senior managers; its purpose is to enable these executives to benefit from the company's long-term success, thereby encouraging them to stay with the company.

Material handling Equipment for moving goods within contained areas, such as airports or factories. Examples include forklift trucks, telehandlers, lifting platforms and ground support equipment.

Non-captive market / segment Market segment in which original equipment and commercial vehicle manufacturers purchase engines from third-party manufacturers to meet their engine needs. The non-captive market is accessible to independent engine manufacturers.

Off-highway applications (off-road) Engine-powered applications whose use on roads is subject to restrictions, e.g. trains, ships, agricultural vehicles and construction vehicles.

OHSAS (Occupational Health and Safety Assessment Series) A standard based very closely on ISO 9001 and ISO 14001. OHSAS 18001 was defined as a UK standard in 2007. It has also become a national standard in Poland. Used in more than 80 countries worldwide, OHSAS 18001 is one of the best known and most important standards for occupational health and safety management systems. Certification for this standard can be obtained.

Option Contract that, until the expiry date, gives the holder the right to buy – and the writer the obligation to sell – an underlying instrument (a security or a product/commodity) at an exercise price that has been fixed in advance.

PDCA Stands for Plan Do Check Act. The PDCA cycle is easy to use, can be applied in all parts of the company and only has to be adapted to the specific task in hand. The key benefits of the PDCA method are its simplicity, how quickly it can be learned and how well it can be adapted to a range of tasks and problems.

Ppm The size of a proportion or the strength of concentration is normally expressed as a percentage (%) or per mill (‰). Very small parts, e.g. a thousandth or a millionth of a per mill, have to be written somewhat awkwardly, using decimal points, as 0,001 ‰ or 0,000001 ‰ respectively. To avoid having this confusing representation, further abbreviations have been introduced.

Rating Used to assess the creditworthiness of a company. It gauges the extent to which the company will be able to repay the principal and interest on its outstanding liabilities at the agreed date.

REACH European Union regulation concerning the registration, evaluation, authorisation and restriction of chemicals.

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.

RoHS Directive 2011/65/EU; restricts the use of certain hazardous substances in electrical and electronic equipment.

Scrum Method used in project and product management, particularly for agile software development. Scrum originates from software engineering but is now used in many other industries. It is an application of lean development for project management.

Six Sigma (6σ) Management system used for process improvement, statistical quality targets and quality management. At its core, it uses statistical means to describe, measure, analyse, improve and monitor business processes.

Synthetic fuel Fuel that is produced in a different way to conventional fuels (e.g. diesel, petroleum, kerosene) and is sourced from a raw material other than, for example, crude oil.

US EPA TIER 1, 2, 3, 4 US emissions standard for off-road applications. Sets limits for pollutants such as nitrogen oxide, hydrocarbons and soot particulates in exhaust gas.

Working capital Inventories and trade receivables less trade payables.

Working capital ratio Ratio of working capital (inventories plus trade receivables less trade payables) at the end of the reporting period to revenue for the preceding twelve months.

Xetra Stands for 'Exchange Electronic Trading' and is the name given to the electronic dealing system run by Deutsche Börse (also known as screen-based trading).

DEUTZ GROUP: MULTI-YEAR OVERVIEW

€ million

	Continuing operations 2014	Continuing operations 2015	Continuing operations 2016	Continuing operations 2017[3]	Continuing operations 2018
New orders	1,379.0	1,225.9	1,261.4	1,556.5	1,952.6
Unit sales (units)	196,403	137,781	132,539	161,646	214,776
DEUTZ Compact Engines	183,125	125,214	123,179	151,671	195,259
DEUTZ Customised Solutions	13,278	12,567	9,360	8,740	9,259
Other				1,235	10,258
Revenue	1,530.2	1,247.4	1,260.2	1,479.1	1,778.8
DEUTZ Compact Engines	1,279.9	967.2	1,000.8	1,227.5	1,484.0
DEUTZ Customised Solutions	250.3	280.2	259.4	247.9	271.2
Other				3.7	26.8
Consolidation				0.0	–3.2
EBITDA	120.3	112.2	114.2	237.3	161.4
EBITDA (before exceptional items)	137.4	112.2	114.2	133.2	161.4
EBIT	12.8	4.9	23.4	143.8	82.0
EBIT (before exceptional items)	31.7	4.9	23.4	39.7	82.0
EBIT margin (%)	0.8	0.4	1.9	9.7	4.6
EBIT margin (before exceptional items, %)	2.1	0.4	1.9	2.7	4.6
Net income	19.5	3.5	16.0	118.5	69.9
Net income (before exceptional items)	34.7	3.5	16.0	33.0	69.9
Earnings per share (€)	0.18	0.04	0.14	0.98	0.58
Earnings per share (before exceptional items, €)	0.30	0.04	0.14	0.27	0.58
Dividend per share (€)	0.07	0.07	0.07	0.15	0.15
Total assets	1,149.2	1,088.1	1,059.7	1,198.2	1,249.3
Non-current assets	563.6	520.5	483.7	519.3	506.2
Equity	511.0	495.6	491.1	584.3	619.1
Equity ratio (%)	44.5	45.5	46.3	48.8	49.6
Cash flow from operating activities	114.1	103.3	63.8	112.7	97.5
Free cash flow	52.0	35.0	4.7	82.5	14.5
Net financial position[1]	13.7	39.0	31.6	98.2	93.7
Working capital[2]	196.2	183.6	204.3	222.2	276.2
Working capital ratio[4] (average, %)	13.3	17.6	17.9	13.4	15.8
Capital expenditure[5] (after deducting grants)	40.3	56.2	52.9	54.7	59.1
Depreciation and amortisation	107.5	107.3	90.8	93.5	79.4
Research and development (after deducting grants)	53.1	40.8	50.4	67.0	85.0
thereof capitalised	26.3	13.0	9.1	17.5	21.0
Employees (31 Dec)	3,916	3,730	3,665	4,154	4,645

[1] Net financial position: cash and cash equivalents less current and non-current interest-bearing financial debt.
[2] Working capital: inventories plus trade receivables less trade payables.
[3] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 35 in the management report for further details.
[4] Working capital ratio (average, %): average working capital at the four quarterly reporting dates divided by revenue for the previous twelve months.
[5] Capital expenditure: capital expenditure on property, plant and equipment and intangible assets, excluding capitalisation of R&D.

DEUTZ GROUP: MULTI-YEAR OVERVIEW

€ million

	Continuing operations 2014	Continuing operations 2015	Continuing operations 2016	Continuing operations 2017[3]	Continuing operations 2018
Revenue by region € million	**1,530.2**	**1,247.4**	**1,260.2**	**1,479.1**	**1,778.8**
Europe/Middle East/Africa	1,166.2	844.5	872.7	1,063.5	1,277.4
Americas	256.6	275.3	239.6	268.1	337.8
Asia-Pacific	107.4	127.6	147.9	147.5	163.6
Revenue by application segment € million	**1,530.2**	**1,247.4**	**1,260.2**	**1,479.1**	**1,778.8**
Construction Equipment	429.0	334.7	350.0	437.4	545.5
Material Handling	286.3	188.5	189.0	265.6	373.1
Stationary Equipment	179.2	178.1	147.3	152.0	166.3
Agricultural Machinery	257.5	159.3	176.5	230.5	261.1
Automotive	82.0	87.9	77.2	56.1	55.6
Service	259.3	278.4	287.3	309.2	329.9
Miscellaneous	36.9	20.5	32.9	28.3	47.3
Key figures for DEUTZ shares					
Number of shares (31 Dec)	120,861,783	120,861,783	120,861,783	120,861,783	120,861,783
Number of shares (average)	120,861,783	120,861,783	120,861,783	120,861,783	120,861,783
Share price (31 Dec, €)	4.00	3.69	5.35	7.58	5.15
Share price high (€)	7.94	5.59	5.58	7.78	8.68
Share price low (€)	3.35	2.86	2.65	5.31	5.02
Market capitalisation (€ million)	483.4	446.0	646.6	916.1	622.4
Earnings per share (€)	0.18	0.04	0.14	0.98	0.58
thereof from continuing operations	0.18	0.04	0.14	0.98	0.58
thereof from discontinued operations	0.00	0.00	0.00	0.00	0.00
Earnings per share (before, exceptional items, €)	0.30	0.04	0.14	0.27	0.58

[3] Adjusted as a result of the write-downs on the DEUTZ Dalian joint venture. See page 35 in the management report for further details.

FINANCIAL CALENDAR

2019	
30 April	Annual General Meeting in Cologne
7 May	Interim management statement for the first quarter of 2019 Conference call with analysts and investors
1 August	Interim report for the first half of 2019 Conference call with analysts and investors
7 November	Interim management statement for the first to third quarter of 2019 Conference call with analysts and investors
2020	
14 May	Annual General Meeting in Cologne

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