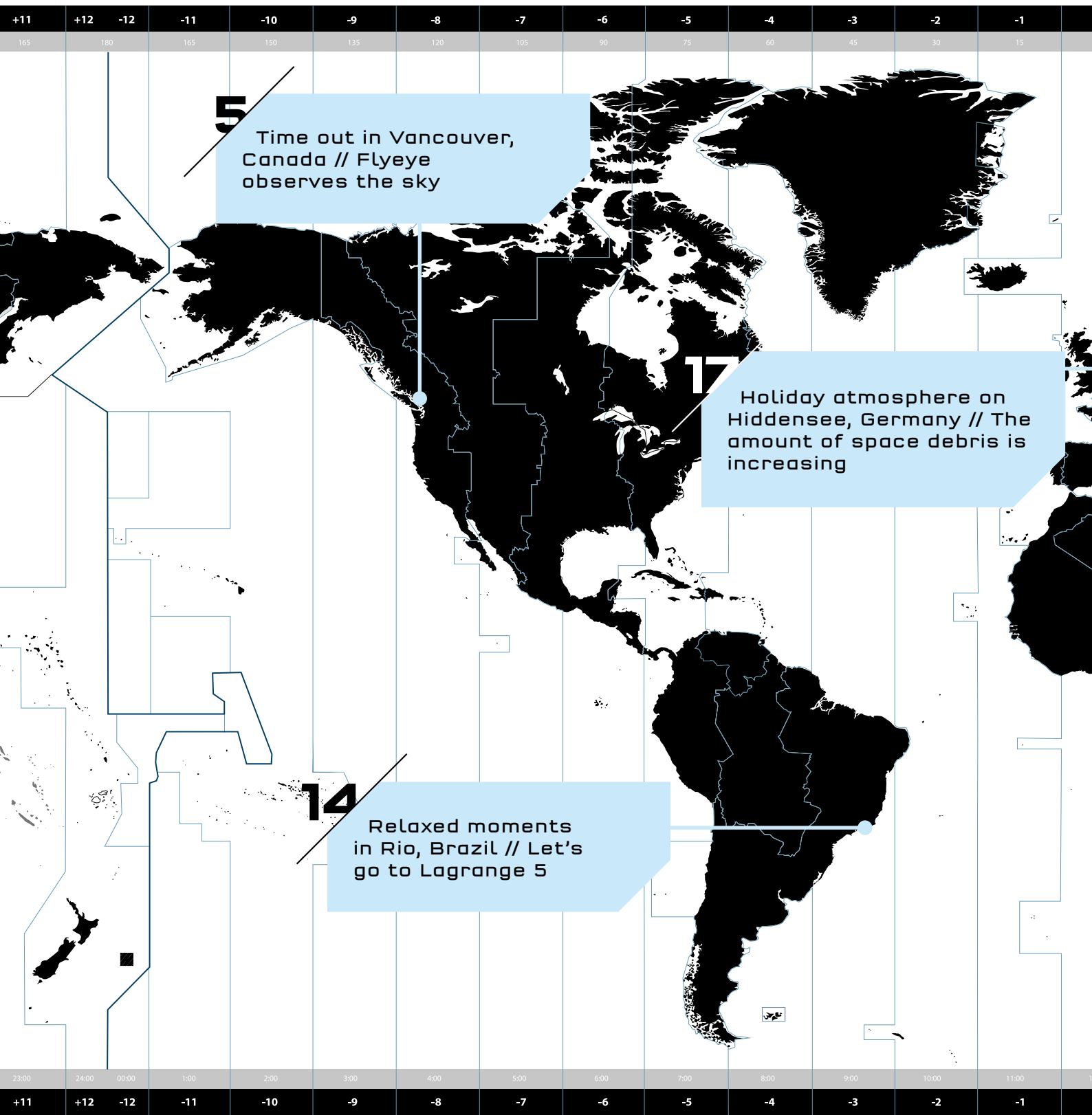
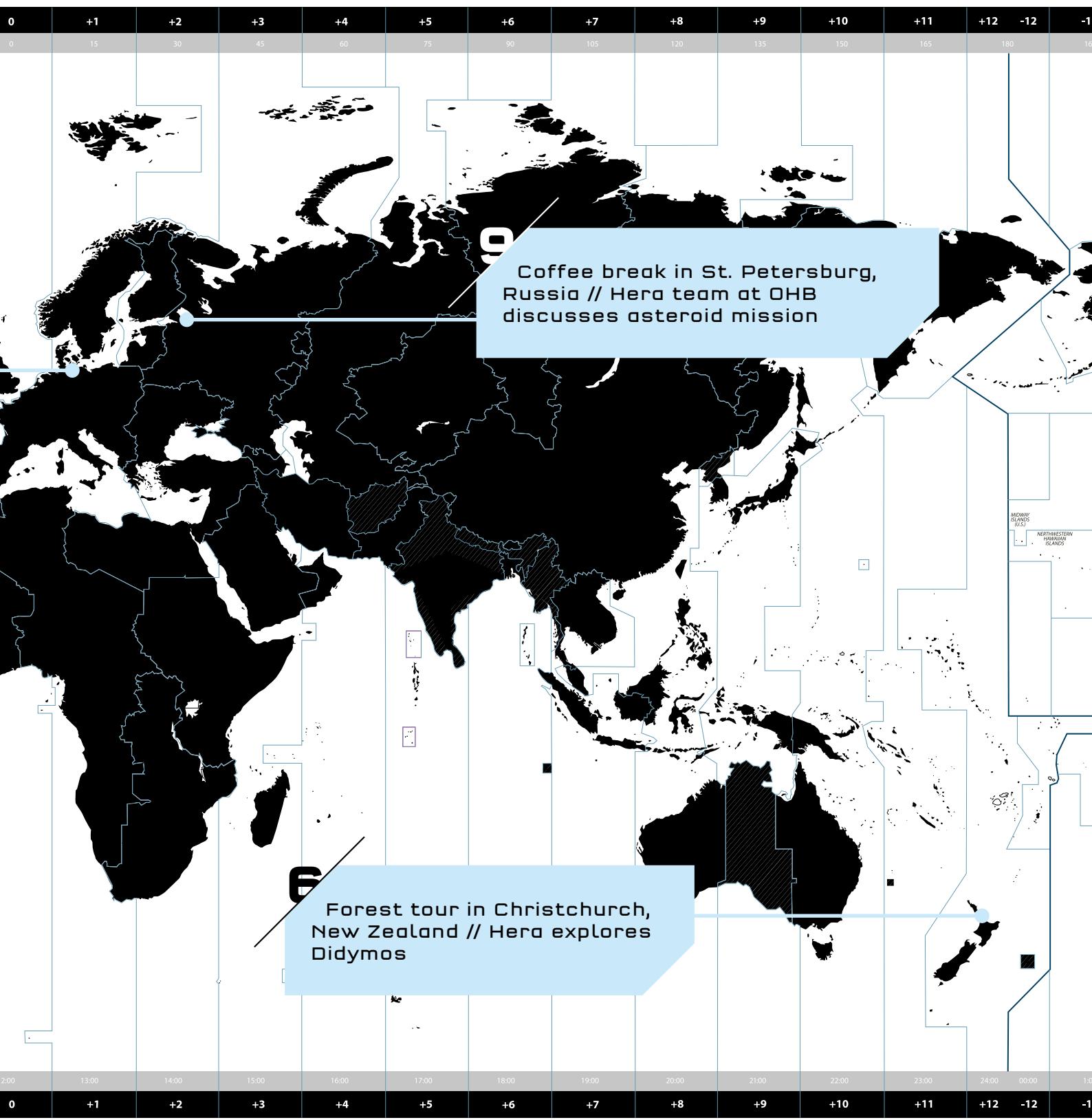




**ENJOY**  
SPACE SAFETY

# ENJOY SPACE SAFETY





At OHB, we are working on technical systems to protect our planet, ward off threats from space and make the world a safer place.





THE THREATS  
ARE REAL AND  
THEREFORE  
WE MUST NOW  
START TO  
DEVELOP THE  
TECHNOLOGIES  
TO **DEFEND**  
AGAINST THEM.”

— MARCO FUCHS  
CHIEF EXECUTIVE OFFICER

# ENJOY SPACE SAFETY

## OHB SE FIGURES

### THE GROUP

in EUR 000	2019	2018	2017	2016
Revenues	1,004,618	976,551	825,894	699,184
Total revenues	1,030,086	1,000,392	859,689	728,386
EBITDA	78,331	65,013	58,809	55,081
EBIT	49,109	47,751	44,223	42,700
EBT	39,144	44,092	42,238	38,009
Share of OHB SE shareholders in net profit for the year	25,543	24,998	23,355	22,212
Earnings per share (EUR)	1.47	1.44	1.34	1.28
Total assets	931,019	753,606	719,698	682,914
Equity	200,830	200,019	207,280	183,590
Cash flow from operating activities	22,884	60,179	34,977	72,726
Equity investments	36,923	40,736	44,885	50,200
thereof capital spending	2,388	2,342	245	1,966
Order backlog	1,840,009	2,398,682	2,438,864	1,559,655
Employees at December 31	2,933	2,769	2,420	2,298

### THE SHARES

in EUR	2019	2018	2017	2016
Closing price	43.50	30.90	44.61	18.54
Year high	48.65	49.75	47.47	20.78
Year low	29.60	27.55	18.26	17.02
Market capitalization at year-end (in EUR million)	760	540	779	324
Number of shares	17,468,096	17,468,096	17,468,096	17,468,096
Dividend	0.43*	0.43	0.40	0.40

\* Subject to approval by the shareholders

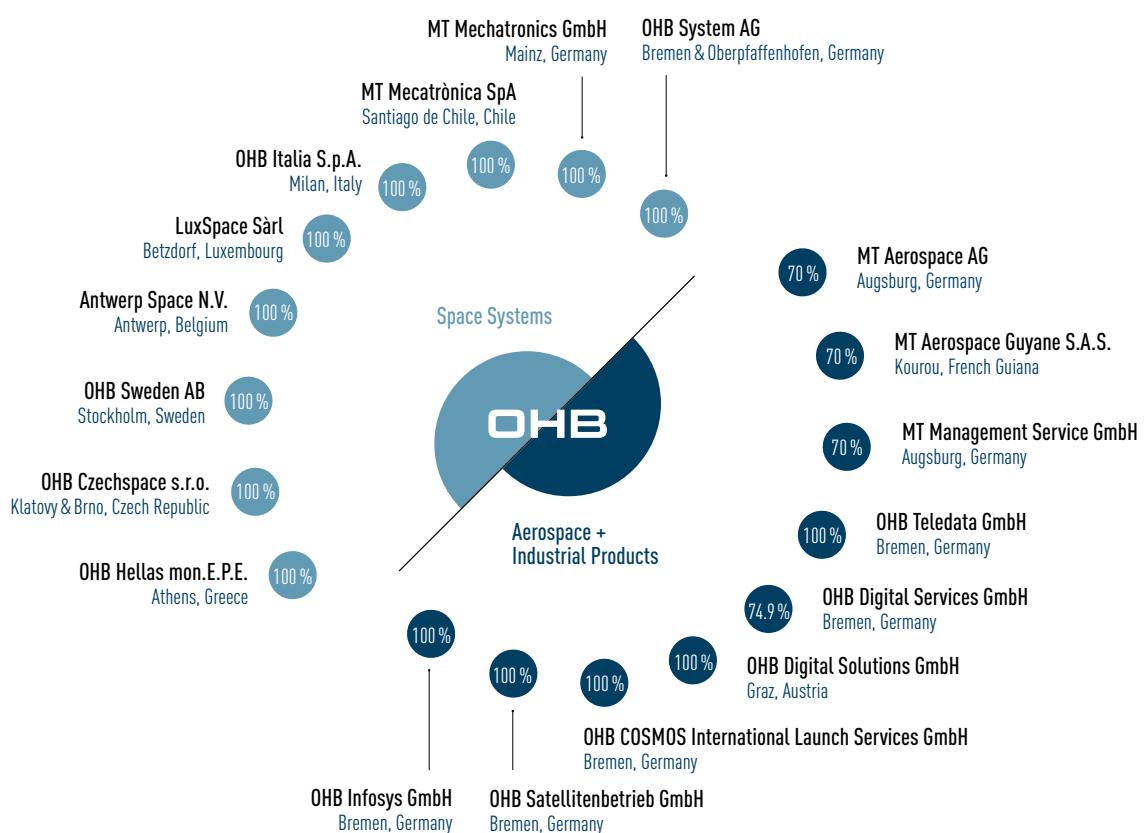
**EUR 1,030 MILLION**    TOTAL REVENUES  
**EUR 78 MILLION**    EBITDA  
**EUR 49 MILLION**    EBIT

## OHB SE AT A GLANCE

**OHB SE** is a European aerospace and technology group and one of the most important independent forces in the European space industry. With more than 35 years of experience in developing and executing innovative space technology systems and projects and its range of specific aviation/aerospace and telematics products, the OHB Group is superbly positioned to face international competition. Over the last few years, it has broadened its geographic footprint within Europe and now has facilities in many important ESA member countries. These strategic decisions on locations allow the Group to participate in numerous European programmes and missions. The two "Space Systems" and "Aerospace + Industrial Products" business units reflect the convergence of these activities and the focus on specific core skills. The "**Space Systems**" business unit focuses on developing and executing space projects. In particular, it is responsible for developing and manufacturing low orbiting and geostationary satellites for navigation, science, communications, earth and weather observation and reconnaissance including

scientific payloads. Reconnaissance satellites and broadband wireless transmission of image data form core technologies for security and reconnaissance. The exploration segment works on studies and models for exploring our solar system, primarily Mars, the Moon and asteroids. Its human space flight activities chiefly entail projects for the payloads and operations of the International Space Station, ISS. In addition, OHB is an experienced provider of mechatronic systems for antennas and telescopes and is involved in major radio telescope projects.

The "**Aerospace + Industrial Products**" business unit is primarily responsible for manufacturing aviation and space products as well as engaging in other industrial activities. In this area, OHB has established itself as a leading supplier of aerospace structures; among other things, it is the largest German supplier for the Ariane program and is the established manufacturer of components for satellites and aircraft. A broad portfolio of service activities completes this business unit – these include the operation of satellites, IT services and applications in the context of transport and mobility.



# ENJOY SPACE SAFETY

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## CALENDAR OF EVENTS 2020

Annual Press Conference and Publication of Annual Report for 2019, Bremen, and Analyst Conference, Frankfurt am Main	March 18, 2020
German Corporate Conference, Bankhaus Lampe, Baden-Baden	March 24–26, 2020
3-month Report/ Conference call with Analysts	May 12, 2020
Annual General Meeting, Bremen	May 26, 2020
6-month Report/ Conference call with Analysts	August 11, 2020
Ninth German Corporate Conference, Berenberg/Goldman Sachs, Munich	September 21–23, 2020
9-month Report/ Conference call with Analysts	November 12, 2020
Analyst Presentation German Equity Forum, Frankfurt am Main	November 16–18, 2020
DZ Bank Equity Conference, Frankfurt am Main	November 23–24, 2020

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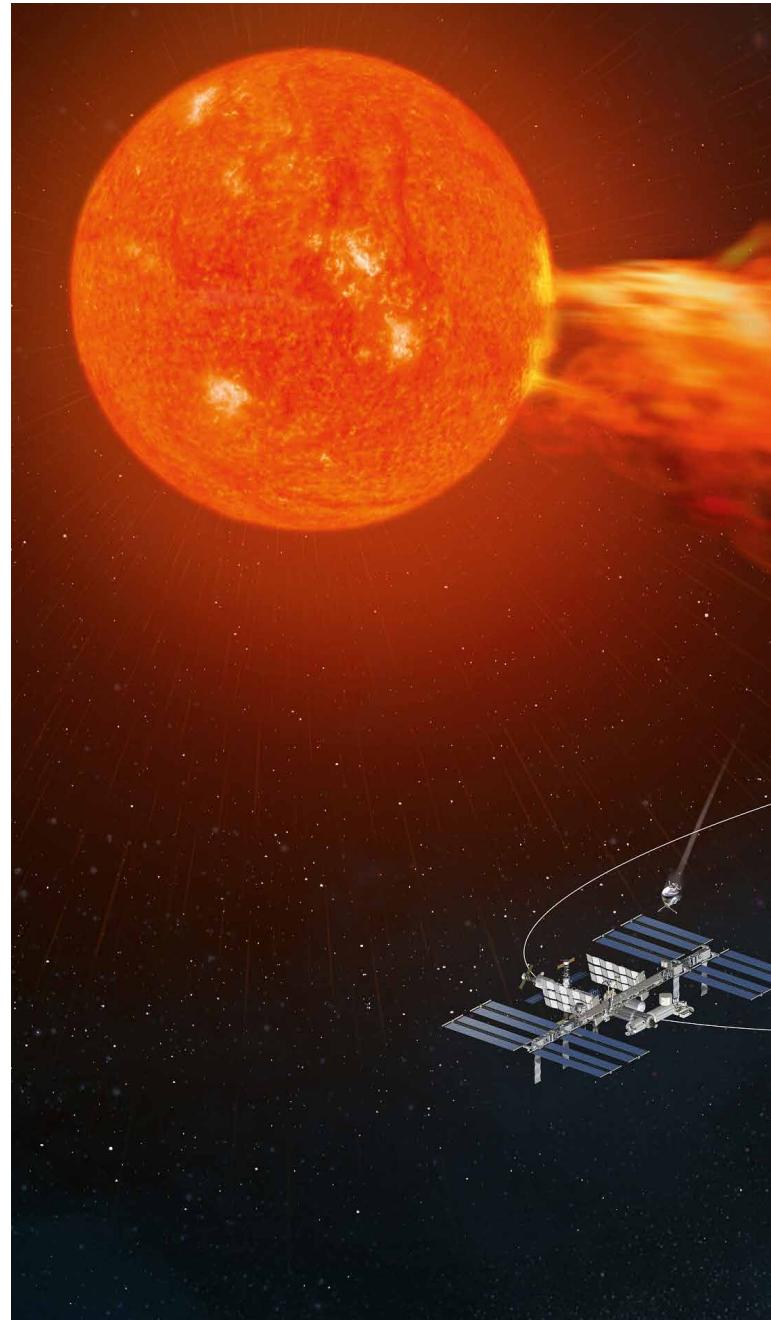
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## WHAT IS SPACE SAFETY?

"THERE ARE MILLIONS OF BOULDERS IN THE UNIVERSE WHICH, IF THEY WERE TO COLLIDE WITH THE EARTH, WOULD EXTINGUISH EVERY FORM OF LIFE ON OUR PLANET. FORTUNATELY, SUCH AN EVENT OCCURS ONLY EVERY 100 MILLION YEARS ON AVERAGE. THE LAST TIME SUCH AN OBJECT HIT THE EARTH WAS **66 MILLION YEARS AGO**, WHEN 75 PERCENT OF ALL LIVING CREATURES ON THE EARTH, INCLUDING THE DINOSAURS, DIED OUT. HOWEVER, AS THE OPTIMIST I CONSIDER MYSELF TO BE, I ASSUME THAT **PEOPLE'S INVENTIVENESS** WILL ENSURE THAT SOLUTIONS WILL BE FOUND TO ADDRESS ALL THESE THREATS IN GOOD TIME."

— MARCO FUCHS  
CHIEF EXECUTIVE OFFICER



Asteroids, space debris, space weather – **the threats from space** are manifold and, in the worst case, disastrous. While asteroids have posed a threat to the Earth for billions of years, space debris and the effects of space weather are phenomena that have only recently gained technological relevance.



In order to **reduce and avert these dangers**, the European Space Agency ESA has consolidated all relevant activities in its "**Space Safety**" program. The purpose of the measures pooled in this program is to "protect our planet, its inhabitants and the vital infrastructures on which we have become so dependent".

The most important of these activities are the Hera asteroid defense program, the Lagrange mission, which aims to shield sensitive infrastructures in space and on the Earth from harmful radiation from the sun more effectively, and a series of measures to collect space debris and to prevent it from occurring in the first place as far as possible.

## THE FLYEYE TELESCOPE – EARLY WARNING SERVICE FOR THE SKY

In the recent past, there has been an increase in the number of reports of asteroids that have come close to colliding with the Earth. As recently as on October 10, 2019, ESA extended its list of risks to include asteroid "2019 SU3", which could potentially hit the Earth in September 2084. In July 2019, asteroid "2019 OK" had passed the Earth almost without

Engineered and assembled by OHB Italia in Milan, ESA's Flyeye telescope is to be used to support observations from Sicily in Italy in the near future.

The Flyeye is an optical instrument with a very large field of view and high resolution. It replicates the complex structure of the eye of a fly, which is the reason for its name.

According to ESA, several Flyeye telescopes will be installed around the world in the future. The data collected by Flyeye will be sent to the Minor Planet Center (MPC) operated by the International Astronomical Union in the United States together with data obtained by European and international astronomers. The MPC is the international contact point for asteroid sightings. ESA's Near-Earth Object Coordination Center (NEOCC) in Italy will be planning and coordinating the deployment of the Flyeye. The data gained from the "Very Large Telescope" installed in Chile will also be utilized for this purpose. ESA's calculations should then allow forecasts to be made for up to 100 years in advance. Even though there is unlikely to be any collision with the Earth in the next 100 years, hundreds of thousands of asteroids remain undetected and unaccounted for.

# 900

### POTENTIALLY DANGEROUS NEAR-EARTH OBJECTS

being detected. And the asteroid known as Apophis or the "God of Chaos" also caused some consternation as it is expected to pass us at a distance of around 30,000 kilometers, thus coming dangerously close to the Earth. What can we do to protect ourselves from these risks?

In order to find an answer to this question, it is crucial to broaden our knowledge of asteroids because what we already know is that statistically we must expect an asteroid impact capable of wreaking havoc every few centuries. The more we know about asteroids – from their discovery and identification, to their trajectory and composition – the better we can prepare for day X, when an asteroid of a potentially dangerous size (i.e. with a diameter of more than 100 meters) is heading for our planet. 900 potentially dangerous "near-Earth objects" are currently being monitored.

The telescope will be able to detect celestial bodies with a diameter of as little as 40 meters three weeks before an impending impact with the Earth. "As far as I am concerned, our work is always particularly valuable when OHB employees' expertise can make a meaningful contribution to humankind," says Marco Fuchs, CEO of high-tech group OHB SE.

The telescope is expected to be shipped from Milan to Sicily at the end of 2020. Final assembly on the mountain of Mufara, at an altitude of 1,865 meters, will be completed in the course of next year, meaning that Flyeye will be ready for operation at the end of 2021. ESA is providing the local infrastructure in conjunction with the Italian space agency ASI.



Vancouver, 13:50 (PDT)  
Summer in Canada –  
these are carefree  
long days spent in  
nature.

Sicily, 21:50 (CET)  
Meanwhile, the Flyeye  
telescope on Mount  
Mufara is scanning  
the night sky to  
detect potentially  
dangerous asteroids  
at an early stage.

Vancouver, Canada, 2021, Pacific Daylight Time (PDT)

13  
50



21  
50

Sicily, Italy, 2021, Central European Time (CET)

# ENJOY SPACE SAFETY

6

15  
35

Christchurch, New Zealand, New Zealand Daylight Time (NZDT), in 2024



In space at the same time in 2024: Didymos and Hera

# CIVIL PROTECTION MADE IN BREMEN

## WITH THE HERA MISSION, OHB IS MAKING A CRUCIAL CONTRIBUTION TO THE PREVENTION OF ASTEROID IMPACTS

Awarded by the European Space Agency ESA in August 2018, the contract for the Hera feasibility study marked the beginning of a new chapter in the history of the OHB Group. From that point on, the Group started making a very specific contribution to protecting the Earth from threats for outer space. The aim of the future Hera study is to provide a detailed definition of a mission entailing a probe flying to the "Didymos" twin asteroids. The satellite will analyze the physical properties of the asteroid surface and interior and study its dynamics after an impact at enormous speed.

In addition, OHB has made great progress in the race to build the probe, which is scheduled to be launched in 2024. The Hera mission is the European contribution to a joint but staggered "planetary defense mission" with NASA. In particular, Hera is to examine the impact crater on the smaller of the two asteroids (known as "DidyMoon") caused by NASA's DART satellite, which is to be launched in an earlier mission in 2021. The purpose of the impact is to slow down DidyMoon's speed by about half a millimeter per second. Hera will provide detailed information about the changes in DidyMoon's orbit in the light of its composition and surface and interior structures. This experiment will be investigating a practical method for deflecting asteroids that are on a collision course with the Earth and the results of this international partnership could also be applied to other asteroids as well.

## ASTEROID RESEARCH IS CRUCIAL

Didymos, the mission target, has a main body of 780 meters in diameter and is orbited by a moon called "DidyMoon" measuring 160 meters in diameter, i.e. roughly the size of the Great Pyramid of Giza. If such a boulder were to fly towards the Earth, the resultant impact would have dire consequences regionally, wreaking unprecedented socio-economic havoc all around the world. In order to shove such errant asteroids into a different orbit, however, it is first crucial to learn much more about them. "It is important to know exactly what effects a collision will have on the orbit of an asteroid. We still do not know very much about these celestial bodies," says Marc Scheper, Head of OHB's Space Transport, Robotic Missions



Christchurch,  
15:35 (NZDT)  
**Holidays with the family:** On a hike it is over rough and smooth.

**Didymos, 15:35**  
The Hera probe is approaching the asteroid and thus making an important contribution to protecting the Earth from asteroid impacts.

15  
35

and Exploration Departments. "Only by knowing exactly what an asteroid is made up of will we be able to develop effective interception methods should such an object be on a direct trajectory for collision with the Earth one day."

## VALUABLE PREPARATORY WORK THROUGH THE AIM STUDY

OHB previously gained valuable knowledge in this area in the years from 2015 to 2017 as a result of its work on an earlier asteroid defense study known as AIM (Asteroid Impact Mission). The importance of the Hera project for the future of the Earth and of humanity as a whole is best illustrated by a few figures: experts assume that 90 percent of all very large asteroids capable of destroying civilization are known. However, only a small percentage of the smaller asteroids believed to be lurking in outer space have been identified. And there are colossuses with a diameter of up to 500 meters capable of destroying entire regions. To provide some perspective, the asteroid that exploded over Tunguska in Siberia on June 30, 1908 and felled every single tree over an area of 2,000 square kilometers had a diameter of between 30 and 80 meters. Its explosive power is estimated to equal that of 1,400 Hiroshima bombs.



09  
10

Bremen, Germany (CET)

## WELL AND TRULY IN THE PUBLIC'S INTEREST!

Data on the size, composition and trajectory of asteroids is therefore of strategic, scientific and economic interest. This means that expanding our knowledge and categorizing and plotting celestial bodies, for example by creating a dynamic map, is very much in the public's interest. At the same time, such a quest is a mammoth undertaking that requires a global approach, in which space agencies, scientists, the private sector and non-profit organizations must pool their resources. Countless amateur astronomers, who repeatedly



Bremen, 09:10 (CET)  
Dr. Stefan Voegt (right)  
will be heading the  
mission as Project  
Manager at OHB  
driving Hera for-  
ward – talking here  
to his fellow team  
Members Francesco  
Barba and Ingo Gerth  
(from left).

"IT IS IMPORTANT TO KNOW  
EXACTLY WHAT **EFFECTS**  
A COLLISION WILL HAVE ON  
THE ORBIT OF AN ASTEROID."

### MARC SCHEPER

HEAD OF OHB'S SPACE TRANSPORT, ROBOTIC MISSIONS  
AND EXPLORATION DEPARTMENTS

demonstrate their expertise and admirable stamina, and "Big Data" experts could also make valuable contributions.

This is because asteroids are (still) unknown worlds that are waiting to be discovered and explored. Thanks to modern technology, Big Data and New Space, the pace with which previously unknown asteroids are detected will continue to accelerate. Whereas a few years ago three asteroids were detected per month, today this is occurring at a rate of three

times per night, adding up to 1,000 additional asteroids each year! Some 900 potentially dangerous "near-Earth objects" are already under constant observation. Consequently, protecting the Earth from threats from outer space is a long-term mission.

But asteroids are not always synonymous with danger and catastrophes: they can also be valuable sources of raw materials, especially precious metals. So asteroid missions also help us to design methods for future asteroid mining.



St. Petersburg,  
11:10 (MSK)  
Coffee break in St.  
Petersburg: Friends  
meet and start the  
day together.

Bremen, 09:10 (CET)  
Hera-Team @ work:  
Mark Fittock and  
Elisabetta Vattolo  
discuss the next  
phase of the project.

St. Petersburg, Russia, Moscow Time (MSK)



Bremen, Germany (CET)

## HAZARDS FROM OUTER SPACE - WHAT WE CAN DO TO PROTECT OURSELVES FROM ASTEROID IMPACTS

The answer to this question was also of fundamental importance for the decision-makers at last year's ESA Council Conference. This is reflected in the fact that the Hera asteroid defense mission was awarded a higher budget than expected at Space19+. A total of EUR 170 million is now available for the first phase of the mission. This is a strong signal demonstrating the commitment to protect the Earth, says Mark Fittock, Project Manager of the first phase of the Hera asteroid defense mission.

### MR. FITTOCK, WHAT DOES THE CONCESSION MADE BY THE ESA MINISTERS MEAN FOR OHB?

**Mark Fittock** It means that we are able to perform our tasks in a much stronger position and will continue to observe the tight schedule for Hera. As the principal contractor, we are doing everything in our powers to find a pragmatic solution for a highly complex technical challenge. The outcome of Space19+ was highly motivating for our team and we are proud to be flying to Didymos in 2024. And, of course, we are excited about this prospect, too. Navigating a space-craft to an asteroid is a dream come true for any space engineer.

### WHERE DO THINGS GO FROM HERE FOR HERA AT OHB?

**Mark Fittock** We'll continue to work as before as we have no time to lose. We are currently in the detailed planning stage for all future tasks, including preparations of the tenders



10  
00

Bremen, Germany (CET)

for possible subcontractors. In this way, we are gradually coming closer to launching Europe's first asteroid defense mission in 2024. So far we have mainly been working on the design of the probe itself. Now we will be expanding the team who are working on the probe to determine exactly how best to execute this mission. We will also be liaising with the various payload teams. This means that we will be determining what potential payloads we can include and how best to get them to DidyMoon on board the space probe in order to identify the best asteroid defense method for the future.



Bremen, 10:00 (CET)  
Mark Fittock oversaw the first phase of the Hera asteroid defense mission and will continue to lead the mission as Project Office Manager.

THERE HAS RECENTLY BEEN AN INCREASE IN THE NUMBER OF REPORTS OF ASTEROIDS COMING PERILOUSLY CLOSE TO THE EARTH. WHAT IS THE REASON FOR THIS?

**Mark Fitton** The main reason for the increased occurrence of asteroids is not that there are more of them but that we are able to observe them in the first place and determine their position with greater precision. Thanks to the technological progress we have made in detecting and tracking asteroids, we know where they are and where they are headed. Obviously, awareness of these celestial bodies has risen in recent years. In my opinion, this has to do with the fact that our understanding of the risks associated with asteroids has also improved. Now we need to know more about how we can respond to these risks.

#### WHAT ARE THESE RISKS?

**Mark Fitton** Generally speaking, the greatest risk is that we don't have any response to asteroids at the moment. So if an asteroid were to be heading for the Earth, we would be completely at its mercy. So far, we can only observe asteroids and determine where they are. Despite the technical progress that has been made over the last few years, some asteroids still occasionally go undetected. Accordingly, we need to improve this aspect. On the other hand, we urgently require a solution in the event that an asteroid is on a collision course with the Earth. So far, we've simply been lucky, something which cannot be said of the dinosaurs in earlier times. We don't want to be in a position in which we simply have to accept our fate. Rather, we want to be able to take our fate into our own hands. That's why asteroid defense missions are so important. It's a question of understanding what we can do in response to asteroids that are headed in our direction.

IN THE SCI-FI CLASSIC "ARMAGEDDON", THE EARTH IS THREATENED BY AN APPROACHING ASTEROID. ULTIMATELY, THE ASTEROID IS BLOWN UP. WHAT ASTEROID DEFENSE OPTIONS DO WE HAVE IN THE FUTURE?

**Mark Fitton** There are several options when it comes to asteroid defense. On the one hand, these depend on how much lead time we have, i.e. how long we know in advance that an asteroid is approaching the Earth. On the other hand, the methods available to us depend on the size of the asteroids. If we have sufficient advance warning and the asteroids are relatively small, there are some relatively simple steps that we can take: We can send a space probe to the asteroids to give them a small "shove" in the right direction. In this way we can deflect them to make sure that they don't collide with the Earth. In the case of somewhat larger asteroids a more forceful impact is required. Ultimately, the larger the

"WE DON'T WANT TO BE IN A POSITION IN WHICH WE SIMPLY HAVE TO ACCEPT OUR FATE. RATHER, WE WANT TO BE ABLE TO TAKE OUR FATE INTO OUR OWN HANDS."

**MARK FITTOCK**  
HERA PROJECT MANAGER

asteroids are, the more difficult it is to deflect them. So, we will need to take increasingly drastic measures. This is definitely not Armageddon-style, because we don't want to blow the asteroids to pieces. Indeed, this would be far too dangerous in view of the risk of subsequently being hit by

one or more of the fragments of the asteroid. We do not want to expose ourselves to this danger. Enormous distances are always involved in the vastness of space. This means that a "shove" in the right direction at the right time is sufficient to avert the risk of an asteroid impact.

OHB HAS BEEN CONDUCTING RESEARCH IN THIS AREA FOR SOME TIME.  
WHAT CONTRIBUTION IS IT MAKING TO ASTEROID DEFENSE?

**Mark Fitton** OHB wants to participate in what is known as the "AIDA collaboration" by assembling the Hera space probe for ESA. "AIDA" stands for Asteroid Impact Deflection Assessment. One part of this collaboration involves the exploration of a binary asteroid system known as "Didymos". This asteroid system consists of a larger body ("Didymos A") and a smaller one ("Didymos B"), which orbits Didymos A like a moon. NASA will initially be approaching Didymos B with its DART space probe to give it a small shove, thus altering its orbit around Didymos A. It will be possible for us to observe this maneuver from the Earth. This will give us information on this method of asteroid defense. However, this information is probably not sufficient to protect us effectively in the future. That's where Hera comes in: Hera's task will be to investigate the effect of DART on Didymos B at close range in order to gain greater insight using various cameras and scientific instruments.

## AND WHY EXACTLY IS THIS PAIR OF ASTEROIDS BEING EXAMINED?

**Mark Fitton** The two asteroids are close enough to the Earth for them to be observed closely, but far enough away that they pose no danger to us. So there is no risk of the asteroid pair being deflected in our direction and

**"THIS COLLABORATION IS VITAL IF WE ARE TO PROTECT OUR PLANET."**

**MARK FITTOCK**  
HERA PROJECT MANAGER,  
FIRST PHASE

hitting the Earth. Nevertheless, they are close enough for more detailed exploration, something which is of elementary importance for the mission. The most important thing here is the timing: DART and Hera must be launched to coincide with the best time for observing the asteroid pair.

## WHAT SIGNIFICANCE DOES THE COLLABORATION HAVE FOR FUTURE RESEARCH?

**Mark Fitton** This collaboration is vital if we are to protect our planet. It will allow us to assess the effectiveness of the asteroid defense method and to see whether other approaches are needed and how we can best make use of the technologies currently available to us. The collaboration is of particular importance with regard to the composition of the asteroids. One purpose of the Hera mission is to understand what asteroids of this scale and form are made of. This is, of course, something that goes far beyond the mission. However, numerous asteroid missions conducted in recent years have tried to find out more about the composition of asteroids. Once we have a better understanding of their composition and know the impact of asteroid deflection, we will be able to plan our missions more effectively and achieve better protection of our planet.

## SO, HERA WILL BE EXPLORING THE ASTEROID?

**Mark Fitton** Exactly, Hera will have several payloads on board. These will include various optical cameras to take precise pictures of the craters and to investigate the impact of the DART mission. In addition, Hera will be transporting two "cube-sats", i.e. minisatellites. These will be released from the space probe and carry out experiments autonomously. The data they collect will then be sent back to Hera and transmitted to the Earth. To ensure accurate data collection, it is important for all payloads to work in sync.

ASTEROID 2019 OK MISSED  
THE EARTH BY ONLY  
**65,000**  
KILOMETERS

**WHAT WORK HAS BEEN  
COMPLETED SO FAR?  
WHAT ARE THE SPECIAL  
CHALLENGES IN ASSEM-  
BLING THIS SPACE PROBE?**

**Mark Fitton** The previous phase of the project was about adapting the mission in the light of the launch possibilities we have. In this respect we are quite limited because the asteroid duo is moving away from us. Compared to other projects, the time frame is therefore rather tight. This makes it all the more important to utilize elements that really work. We

need to know how to assemble the probe successfully to meet our launch date in 2024.



Bremen, 10:05 (CET)  
In an interview,  
engineer Mark Fitton  
explains why launching  
a space vehicle  
headed for an asteroid  
is a dream come true  
for him.

**HERA SCHEDULED  
FOR LAUNCH IN  
2024**



Bremen, Germany (CET)

# ENJOY SPACE SAFETY

14

Rio de Janeiro, Brazil, Daylight Saving Time (DST)

16  
10



Lagrange 5, at the same time in the near future

# WHAT DO THE NORTHERN LIGHTS HAVE TO DO WITH POWER FAILURES?

Like the weather on Earth, space weather is also influenced significantly by the sun. In addition to electromagnetic radiation, which also includes visible light, the sun also emits a constant stream of charged particles, known as solar wind. As solar activity increases, this stream of particles can intensify sharply in a phenomenon known as a solar storm. The extent of solar activity is primarily influenced by the sun's magnetic field, which fluctuates periodically every eleven years and is reflected in the number and size of the dark sunspots on its surface, some of which are visible to the naked eye. A large number and size of sunspots is an indication of increased solar activity. Although the sunspots have a temperature more than 1,000 degrees Celsius less than the rest of the solar surface, the sun radiates with a slightly higher output during maximum sunspot activity than in times of minimum activity. This is

mainly due to the solar flares that typically occur in the vicinity of sunspots. These are up to 1,500 degrees Celsius hotter than the rest of the sun's surface.

Normally, the stream of particles emitted by the sun is only perceptible in the polar regions in the form of Northern lights on the Earth, because the terrestrial magnetic field deflects the stream of particles. However, particularly strong solar activity or violent solar flares can have severe consequences. For example, solar storms can cause large-scale power failures by disturbing the Earth's magnetosphere.

Given the dependence of modern life on electricity supplies, it is crucially important to be able to predict extreme space weather events. Whereas the particularly violent solar storm occurring in 1859, referred to as the "Carrington event", merely led to a disruption of the telegraph network that had recently been installed worldwide, a solar storm of a comparable strength would trigger global computer failures and paralyze traffic in large parts of the world today.

Satellites are even more exposed to the effects of solar storms than systems on the surface of the Earth, which is more protected thanks to the atmosphere. In addition to damage to solar cells and electronic systems, the heating and expansion

of the outermost layers of the Earth's atmosphere as a result of the high-energy radiation also poses a threat. Low-flying satellites thus experience increased resistance, which creates a drag on them. They may even fall to the ground if their orbit is not lifted in a steering maneuver within a short space of time. The US space station Skylab was also affected and had to be abandoned earlier than planned for this reason.

Consequently, ESA is also working on a mission to L5, Lagrange point 5. The gravitational conditions at this position (Lagrange point 5) allow a space probe to be positioned stably for solar observation. Currently, the warning time before solar storms is only a few hours. However, with the Lagrange probe in position this period could be extended to four to five days.

The observatory for the L5 mission is being engineered by OHB on behalf of ESA. The specifications of the space probe and the integration process for the instruments have been defined. The instruments are a critical point of the mission, as they have to measure and send data to Earth continuously even and especially in times of increased solar activity. Due to the special requirements that the instruments must meet, two further studies have been commissioned by ESA to explore this matter. OHB was involved in the development of a special magnetometer as a subcontractor.



Rio de Janeiro,  
16:10 (DST)  
The people of Rio like to spend the very hot afternoon in late summer with an ice cream.

Lagrange 5, 16:10  
The probe, which is positioned at Lagrange point 5, can detect solar storms much earlier than before, providing an advance warning of four to five days.

## THERE'S QUITE A LOT GOING ON UP THERE: **SPACE DEBRIS** IS BECOMING AN EVER BIGGER PROBLEM

The Space Debris Center of Competence at OHB has been providing support for two and a half years now, offering its experience and analyses in efforts to reduce space debris. A further goal pursued by the Center is to enhance OHB's processes in order to avoid space debris as far as possible. This also includes the installation and maintenance of a knowledge database. As OHB's Space Debris Center coordinator, Dr. Charlotte Bewick is well aware of the dangers of space debris for spacecraft and humans as well as the contribution OHB is making to reduce space debris.

"Space debris, i.e. man-made waste materials, can pose a great hazard because the particles could hit satellites and other spacecraft and damage them," says Dr. Charlotte Bewick.

missions. Below 400 km, scrap particles burn up within a few years when they enter the Earth's atmosphere."

If humanity wants to fly missions into space in the long term, it needs ways to eliminate space debris. "You can ensure a controlled re-entry into the Earth's atmosphere by either constructing the satellite in such a way that it enters and burns up in the Earth's atmosphere virtually by itself at the end of its life, or you can perform a special maneuver to achieve a controlled re-entry. During my doctoral thesis I also worked on re-entry methods for smaller satellites with the help of the solar pressure and the resistance of the residual atmosphere. We are also exploring these driveless re-entry techniques with particular interest at the Center."

as the "10 commandments", the rules set out the ISO standard define the primary requirements for the avoidance of space debris. The ISO standard also stipulates that satellites in low Earth orbits are only allowed to stay in orbit for 25 years. "At the Space Debris Center, we use special software to calculate whether the satellite will re-enter the Earth's atmosphere on its own after 25 years or whether we need a maneuver." For this reason, the OHB teams make sure during the design phase that materials with a certain melting point are used. If a maneuver is necessary to make the satellite re-enter the Earth's atmosphere, there are also other aspects to consider: more fuel and hence larger tanks and nozzles, among other things, are required. Most of the components that are used burn up during re-entry.

ROUGHLY **6.5** TONS  
OF DEBRIS ABOVE US

"There are certain orbits that are quite contaminated. Especially at altitudes of 700 to 800 kilometers, where there is hardly any atmosphere to exert a retarding effect.

This means that objects continue to float at these heights for hundreds or even thousands of years. At the same time, many satellites are located in this area as these orbits are particularly good for Earth observation

The Space Debris Center team also advises the project teams to ensure that the pre-development phase already takes account of the importance of minimizing space debris as far as possible.

The standards for avoiding space debris are defined in ISO 24113 and the European Cooperation for Space Standardization (ECSS) standard. Often referred to by space engineers

Yet, how much debris is actually floating above our heads? DISCOS, the space debris database operated by the European Space Agency ESA, provides a good overview in order to prevent a satellite from being placed in a debris-ridden orbit. But the amount of debris is increasing all the time. As a result, the occasional collision in space has already occurred in space. One of the best-known incidents is the collision between the communications satellites Kosmos 2251 and Iridium 33 about ten years ago at an altitude of almost 800 kilometers. The speed at which the two satellites had been traveling caused a huge cloud of dust with more than 100,000 individual pieces when they collided.

So, there's quite a lot going on up there. According to Dr. Charlotte Bewick, there is a way of getting control over the problem: "What we need is an orbital towing service. In addition, there are already many interesting studies and mission drafts. With this in mind, OHB subsidiary LuxSpace is working on a product for microsatellites, known as the 'DoWn!' drag sail, which is designed to lower satellites into the Earth's atmosphere more quickly at the end of their mission so that they can burn up there."

DoWn! stands for 'Deorbit Wing' and makes it possible for a correspondingly equipped satellite to 'sail' more quickly back into the Earth's atmosphere at the end of its life cycle. In this way, it doesn't need its own propulsion. Unfortunately, nobody currently wants to finance such a mission in full as space debris removal is not as prestigious as the major scientific research missions. The international community must sit down together and find a joint solution. It's time to act."



Hiddensee, 13:55 (CET)  
Pure joy: Walk along the beach of Hiddensee.

At the same time somewhere in orbit, 13:55

Hundreds of kilometers above our heads, over 600,000 items of debris with a diameter of more than one centimeter are orbiting the Earth. Things could be quite tricky in the event of an accident ...

**13  
55**

Hiddensee, Germany (CET)



**13  
55**

At the same time somewhere in orbit

## OHB and IAI offer Europe a lunar landing system



29.01.2019 Contract signed between OHB and Israel Aerospace Industries (IAI). The two companies want to jointly offer a lunar landing system. Under the terms of the agreement, OHB will be acting as the prime contractor, coordinating the joint activities with ESA and the developers of the scientific payloads for the lunar landing vehicle.



## 1<sup>ST</sup> QUARTER



31.01.2019 Further four navigation satellites are released for integration in the constellation of the European satellite navigation system Galileo. They are to strengthen the satellite constellation and make the European satellite navigation system even more efficient.



## Four more OHB satellites for Galileo

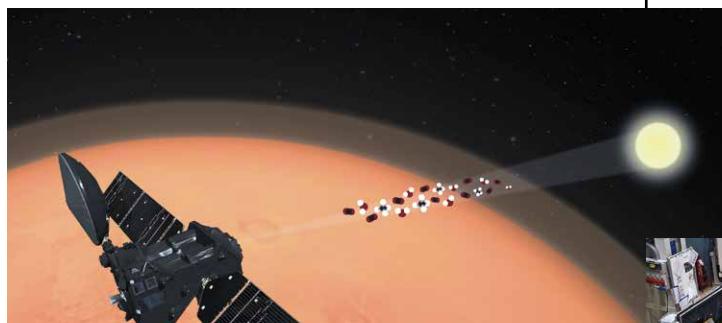


Hyperspectral satellite PRISMA reaches orbit



22.03.2019 OHB Italia's PRISMA Earth observation satellite is launched on board a Vega. The Italian space agency ASI satellite will be observing the Earth with a hyperspectral optical sensor.

ExoMars carrier leaves the Bremen plant



28.03.2019 OHB on its way to Mars: The carrier module assembled by OHB in Bremen is shipped. ExoMars is a joint project being pursued by ESA and the Russian space agency Roskosmos to search for traces of life on the Red Planet.

Weather satellite MTG in Bremen



2<sup>ND</sup> QUARTER



06.05.2019 With the start of production for the first 14 Ariane 6 launchers, MT Aerospace AG is in for exciting times as the OHB subsidiary is one of the largest suppliers of components for the Ariane program in Europe.

Series production contract for Ariane 6



30.06.2019 OHB sponsors Asteroid Day again in 2019. With its participation in the Flyeye and Hera projects, the company is also supporting efforts to understand more about asteroids.



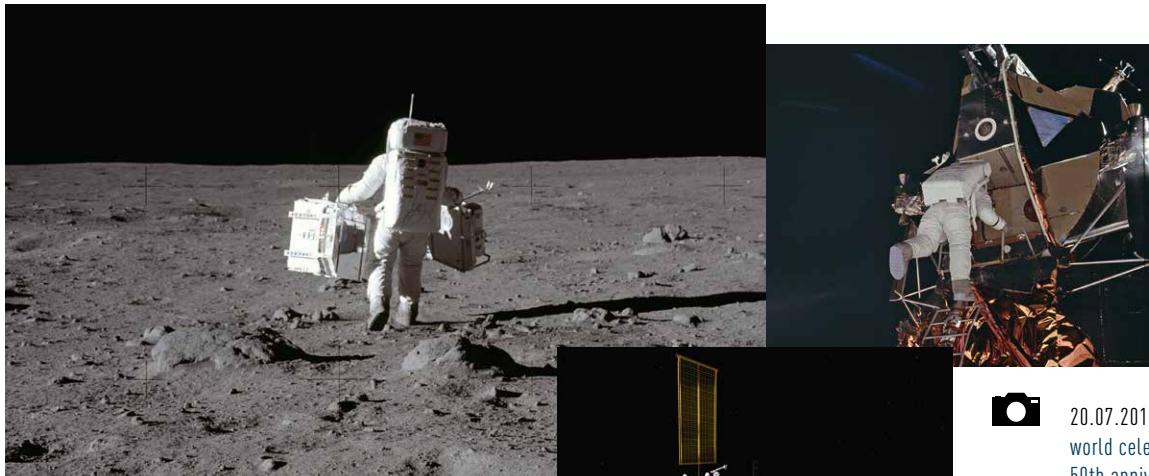
OHB is sponsor of Asteroid Day

### OHB inaugurates new premises in Bremen



28.06.2019 OHB celebrates the inauguration of new clean-room facilities of around 700 square meters and 1,350 square meters of new laboratory space. The new premises include the Satellite Test Center and the Mikroba and Copernicus halls.

50<sup>th</sup> anniversary of the first man on the Moon



20.07.2019 The whole world celebrates the 50th anniversary of the first lunar landing by humans. The Lunar Gateway space station is to serve as a base camp for missions to the lunar surface in the future. OHB is participating in ESPRIT, the planned European contribution.

## 3<sup>RD</sup> QUARTER



EDRS-C from OHB in space



06.08.2019 The EDRS-C telecommunications satellite, which is the second node of the Space Data Highway (also known as European Data Relay Satellite System (EDRS)), left the European Spaceport in Kourou on schedule.



## OHB awarded SARah project extension contract



07.08.2019 Contract for the expansion of the satellite-based radar reconnaissance system for the German Armed Forces SARah signed. The supplement addresses the current threats in the area of IT security and satellite communications.

## OHB reception in Berlin



26.09.2019 At OHB SE's annual reception in Berlin, representatives from politics and business met to discuss space-related issues in a relaxed atmosphere.

OHB holds roofing ceremony for largest integration hall



08.11.2019 The first OHB employees will be moving into the five-storey PLATO building complex (office space and clean room) at the end of April 2020.

## 4<sup>TH</sup> QUARTER



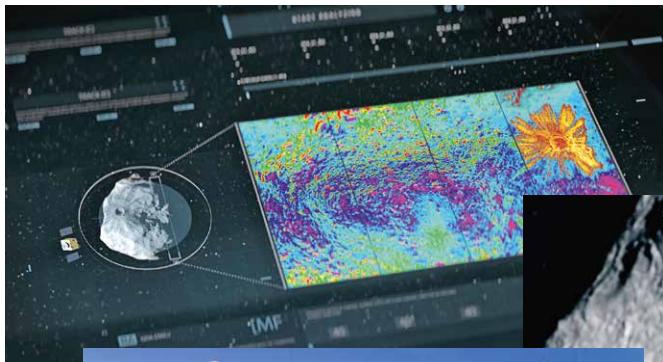
Contract signing Magellan telescope



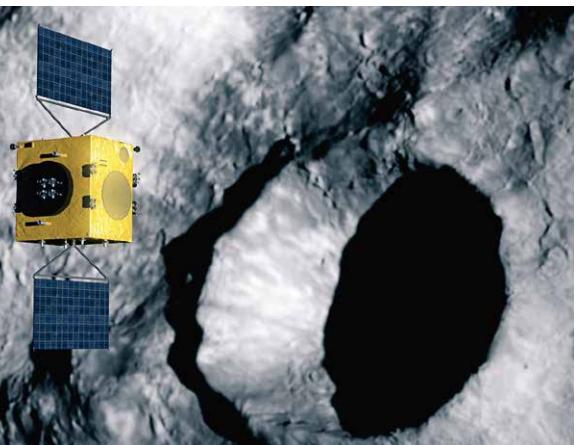
30.10.2019 The GMT is an astronomic observatory with a diameter of 24.5 meters. MT Mechatronics and Ingersoll Machine Tools will be engineering and assembling the 1,800-ton precision mechanism.



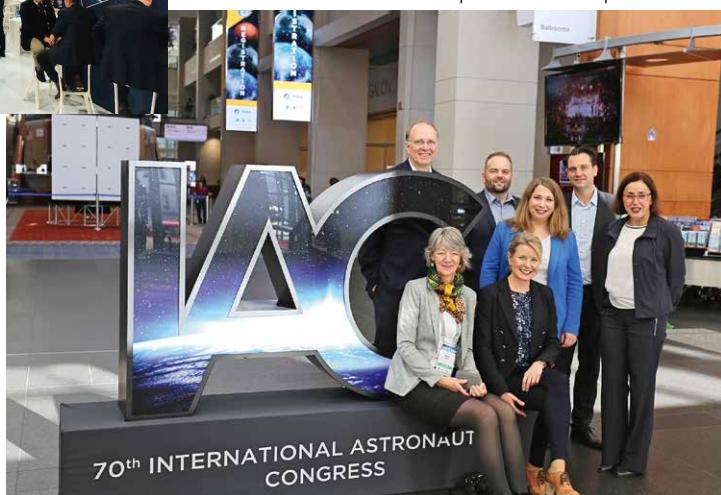
## ESA Conference of Ministers



29.11.2019 The ESA Council of Ministers conference made a major concession in the area of space safety for the asteroid defense mission Hera. A total of around EUR 170 million has now been budgeted for the first phase. In addition to Hera, Earth observation was also particularly reinforced.



## Space Tech Expo and IAC



October / November 2019 This year, the OHB Group made a stellar appearance at the International Astronautical Congress (IAC) in Washington and the Space Tech Expo in Bremen.





# LETTER TO THE SHAREHOLDERS

## DEAR READERS,

Developments over the past year have shown to an even greater extent than in previous years that the space industry has evolved from being a rather disregarded niche industry into a crucial infrastructure provider. The importance of satellite-based applications in telecommunications, navigation and science cannot be overstated. However, I would like to emphasize once again the area of earth observation, which is of great relevance in connection with climate change, an issue which was omnipresent last year. Satellite-based systems make it possible to measure greenhouse gases worldwide and also provide important indications of the effects of climate change, for example by observing the earth's gravitational field.

This is reflected in the budget decision taken by the ESA Member states at the Ministerial Conference on November 28, 2019 under which a total of EUR 2.5 billion was earmarked for earth observation over the next three years. This is a very positive outcome and testifies to the sustained



Dr. Lutz Bertling

Born in 1962, doctor of engineering

Member of the Management Board of OHB SE  
since 2018

Marco R. Fuchs

Born in 1962, attorney

Chairman of the Management Board of OHB SE  
since 2000

Klaus Hofmann

Born in 1960, degree in business administration

Member of the Management Board of OHB SE  
since 2015

Kurt Melching

Born in 1962, degree in business administration

Member of the Management Board of OHB SE  
since 2018

commitment towards the Copernicus program, which accounts for the largest share (EUR 1.8 billion) of the budget and under which six enlargement missions are planned. With the studies they have already carried out, OHB Group companies stand a good chance of participating in these projects. Last year, teams at OHB thus worked intensively on proposals for various Copernicus missions. Decisions are expected to be made on contract awards in the course of the current year. A decision on the award of the contract is also expected for the European Commission's Galileo project. Here, too, a team from OHB System laid the foundations for a possible award by preparing a corresponding proposal in 2019.

During the ESA Ministerial Conference, which takes landmark decisions for the European space industry every two to three years, further decisions relevant to OHB were announced on November 28, 2019, when the budget for the Hera asteroid defense mission was approved in the newly created ESA "Space Safety" segment. OHB System AG has already carried out a feasibility study for a similar mission for ESA and is now expected to be assigned prime contractor for Hera. You can learn more about this topic in the image section of this Annual Report, which we regularly use to present selected activities to you. The decision to focus on space safety this year was particularly easy for us to make in view of its growing relevance: on the one hand, the contract for the European part of the Hera mission will be signed this year and, on the other hand, the Flyeye telescope, which our subsidiary OHB Italia has designed and assembled on behalf of ESA, will be going into operation in Sicily this year. With the help of this telescope, it will be possible to scan the sky for asteroids potentially on a collision course with the earth. This shows that space applications not only help to make our lives simpler and more convenient but can also provide elementary protection. The OHB companies have the skills for realizing such applications and have additionally broadened and deepened their capabilities in the past year: the increase in the number of employees during this period to 2,933 is the result of previous organic growth but also pre-empts significant incoming orders in the current year.

## A BUDGET OF EUR 2.5 BILLION WAS ADOPTED FOR EARTH OBSERVATION FOR THE NEXT THREE YEARS.

**MARCO R. FUCHS**  
CHIEF EXECUTIVE OFFICER

With the growing number of satellites in fully functional operation, OHB companies working in the "Space Systems" segment continued to position themselves very effectively in 2019 in preparation of these new orders: the PRISMA hyperspectral satellite, which was developed, built and tested by OHB Italia, is designed for the observation of our own earth. It was successfully launched on board a European Vega vehicle on March 22. After several months of testing, it has gone into operation and is fully functional. What sets PRISMA apart is its innovative electro-optical instrument, with which it can identify geometric, chemical and physical properties.

OHB System is participating in the second part of the ExoMars exploration mission, which will be launched this year. Final work on the carrier, which will transport-

ing a landing module with a rover to Mars, was completed in the first quarter of 2019. The vehicle was subsequently shipped from Bremen to the main contractor of the mission, Thales Alenia Space, in Turin, Italy, where it was integrated with the landing module.

OHB System was able to establish itself even more firmly in the field of geostationary satellites: following on from the launch of the first communications satellite in 2017, its second geostationary communications satellite – the EDRS-C satellite – is now in orbit after being successfully launched on August 6, 2019. All functional testing was completed successfully. Both satellites are based on OHB System's SmallGEO platform, which has a structure that enables them to be customized individually and efficiently according to the client's requirements.

MT Mechatronics GmbH received a prestigious order in October, when GMTO Corporation, which is responsible for the development of the Giant Magellan Telescope on behalf of various scientific institutions, signed a contract with the company. Under this contract, MT Mechatronics is designing the telescopic structure and supplying the special drives and the control electronics including software among other things. The telescope will be located in the Chilean Andes and, after going into operation, will expand our knowledge of the universe as it will be looking for signs of biochemical activity in the atmosphere of planets orbiting stars outside our solar system.

In the "Aerospace + Industrial Products" segment, MT Aerospace AG continued to produce components for the soon-to-end Ariane 5 launcher series, simultaneously commencing volume production of parts for the replacement Ariane 6 series. The new launcher's maiden flight is scheduled for December of this year. However, both launcher models will be deployed alongside each other during a transitional phase lasting until 2022.

The Management Board and Supervisory Board will be asking the shareholders to approve a dividend of 43 cents (previous year: 43 cents) per share at this year's annual general meeting.

### **OHB 2025 - SHAPING THE FUTURE**

This year, we are starting to implement the Group strategy "OHB 2025 -Shaping the future", which we presented at Capital Market Day. This marks the starting point of a further growth cycle for the OHB Group, which will continue until 2025. The planned expansion of service business is reflected in the establishment of a new segment, which will be launched by the end of this year. Known as "OHB Digital", the new segment will cover a wide range of service activities including satellite operation and downstream applications (specifically the provision of data collected by satellite systems for end customers). This step is part of our attempts to achieve our quantitative growth targets for 2025. In this way, the Group is simultaneously expanding its activities and thus also fulfilling a qualitative strategy goal, namely to offer the end customer as wide a range of services as possible.

### **OUTLOOK FOR 2020**

Based on the high order backlog of around EUR 1.8 billion (previous year: EUR 2.4 billion, as of December 31 in both cases), the Management Board expects consolidated total revenues to increase to EUR 1.1 billion in 2020 as a whole. EBITDA should come to EUR 80 million and EBIT to EUR 44 million.

The OHB Group's very good performance reflects the heightened importance that the space industry has for a wide range of users. 2019 was marked by a further expansion of our skills in various areas and proposals that have laid the foundations for the Group's continued growth over the coming years. The company's success would not have been possible without the skills of our employees. On behalf of the rest of the Management Board, I would therefore particularly like to thank them for the work they performed last year, their creativity and their dedication to achieving the Group's goals combined with their strong commitment!

Bremen, March 17, 2020



**Marco R. Fuchs**  
Chief Executive Officer





# REPORT OF THE SUPERVISORY BOARD

## DEAR SHAREHOLDERS,

In 2019, the Supervisory Board performed its duties with due care in accordance with the applicable statutory requirements, the provisions of the company's bylaws and its rules of procedure. It regularly advised the Management Board on the management of the company and monitored it on an ongoing basis. In addition to its supervisory function, the activities of the Supervisory Board also include a formative element. Thus, the Supervisory Board contributes to the company's business success not only in the short term, but also in the medium and long term.

The Management Board briefed the Supervisory Board regularly and comprehensively on the Group's business performance, current tendering processes, order intake, the relevant financial indicators and capacity utilization at



Prof. Heinz Stoewer

Deputy Chairman of the Supervisory Board of OHB SE, Member of the Supervisory Board since 2005, born in 1940, Professor em. Space Systems Engineering, Technical University of Delft, Netherlands. Managing Director of Space Associates GmbH, Munich

Robert Wethmar

Chairman of the Supervisory Board since 2018, Member of the Supervisory Board since 2012, born in 1961, attorney at law, LL.M. Partner at law firm Taylor Wessing, Hamburg

Christa Fuchs

Member of the Supervisory Board of OHB SE since 2002, born in 1938, businesswoman. Managing Shareholder of VOLPAIA Beteiligungs-gesellschaft mbH, Bremen

Ingo Kramer

Member of the Supervisory Board of OHB SE since 2018, born in 1953, degree in industrial engineering. Partner of J. Heinr. Kamer Holding GmbH & Co. KG, Bremerhaven, President of the federation of German employers associations BDA, Berlin

OHB SE, the other Group companies and the individual segments. The Management Board answered all of the Supervisory Board's questions in full and comprehensively. The Supervisory Board sought and received ongoing information on corporate planning, strategic development and the main acquisition projects and advised the Management Board on individual matters relating to human resources, corporate acquisitions and project tenders.

## MEETINGS IN 2019

The Supervisory Board held five ordinary meetings at which it deliberated on the Group's business performance, the reports submitted by the Management Board, the updates on the status of current projects, pending tender processes, planned acquisitions and the corporate budget for 2020 to 2022. Ordinary meetings of the Supervisory Board in 2019 were held on February 11, March 19, May 24, September 19 and December 16. The meeting on February 11 took the form of a telephone conference, while the meetings of March 19 and May 24 were held at the company's offices in Bremen and the meetings of September 19 and December 16 at the company's offices in Wessling near Oberpfaffenhofen. All five meetings of the Supervisory Board held in the year under review were attended in full; in the case of one meeting (September 19), one Member participated by telephone. The Management Board attended all of the meetings of the Supervisory Board in full. One Member of the Management Board participated in the meeting of September 19 by telephone. The minutes of all of the Supervisory Board's ordinary meetings were taken by the company's legal counsel.

The main purpose of the meeting held on **February 11, 2019** was to deliberate on the final guidance for 2019 ahead of the company's Capital Market Day on February 12, 2019. The Supervisory Board approved the guidance issued by the Management Board providing for total revenues of EUR 1.05 billion, EBITDA of EUR 80 million and operating earnings (EBIT) of EUR 50 million.

The meeting held on **March 19, 2019** was chiefly devoted to the Management Board's report on the Group's performance in the period commencing January 1, 2018 and ending December 31, 2018, the current state of business as well as the forecasts for 2019. For this purpose, the Management Board submitted the annual financial statements, the consolidated financial statements, the management report for OHB SE and the Group management report for 2018. The statutory auditor from PricewaterhouseCoopers Wirtschaftsprüfungsgesellschaft GmbH, Bremen, personally presented the audit report and elaborated on it at this meeting. The consolidated financial statements and the annual financial statements of OHB SE were unanimously approved and, consequently, duly adopted. The Report of the Supervisory Board including the declaration of consent of the related parties report prepared by the Management Board was also approved. The Supervisory Board took note

of and adopted the Management Board's proposal for the allocation of the unappropriated surplus and the distribution of a dividend of EUR 0.43 per share, which was increased over the previous year, for approval by the shareholders. In addition, the Supervisory Board discussed the agenda of OHB SE's annual general meeting scheduled for May 24, 2019 and the proposed resolutions.

In addition to the regular topics, further items were on the agenda for the meeting on March 19, 2019. Thus, the Management Board presented selected digitalization projects of the OHB Group. A further presentation by the Management Board on which the Supervisory Board and the Management Board deliberated concerned the corporate culture at OHB, particularly in the light of the challenges and opportunities facing a fast-growing company. Another presentation with subsequent discussion dealt with the market for small satellites and the opportunities available to OHB for participating in this market. The budget situation in Europe in connection with the upcoming ESA programs was also discussed. Finally, the Supervisory Board and the Management Board deliberated on recent M&A activities.

At the meeting of **May 24, 2019**, the Supervisory Board and the Management Board confirmed their satisfaction with the annual general meeting that had been held that morning. In particular, the decision to start the meeting at 9:00 a.m. for the first time as well as the venue met with great approval. In addition, the Management Board reported on the Group's business performance in the first quarter of 2019 and the current state of business. A further item on the agenda of the Supervisory Board's meeting concerned the current status of the M&A activities.

At the meeting of **September 19, 2019**, the Management Board reported on OHB SE's business performance in the first half of the year and on the current state of business. In addition, it presented various business expansion projects and provided information on the business situation of individual Group companies. The Supervisory Board and the Management Board also dealt with the progress made with digitization at OHB as well as the company's IT structures, which are to be additionally optimized. In addition, the Management Board submitted the annual report on the leases in place between the OHB operating companies and the Fuchs family's real estate companies in Bremen, Oberpfaffenhofen and Milan. A further item on the agenda concerned a resolution on the declaration of conformity to the German Corporate Governance Code in the version of February 7, 2017 stipulated by Section 161 of the German Stock Corporation Act.

Held on **December 16, 2019**, the Supervisory Board's final meeting for the year dealt primarily with the Management Board's report on the Group's business performance in the first nine months of 2019 and the expected full-year financial figures for 2019. In addition, the Management Board presented the corporate plan for the years from 2020 to

2022. After extensive discussion, the Supervisory Board approved this corporate plan.

The December meeting of the Supervisory Board also dealt with the presentation of the 2019 internal audit report, the audit activities carried out and the results. Moreover, the audit schedule for 2020 was submitted and duly approved by the Management Board and Supervisory Board. Legal counsel presented the compliance report for 2019, which the Management Board and Supervisory Board duly approved. In addition, the Management Board and the Supervisory Board dealt with the current status of ongoing M&A activities.

## CORPORATE GOVERNANCE

The Management Board also submitted a corporate governance report to the Supervisory Board in accordance with Section 3.10 of the German Corporate Governance Code in connection with the corporate governance declaration stipulated by Section 289f of the German Commercial Code. The corporate governance declaration can be examined at OHB SE's website. The Supervisory Board regularly discussed the application and further development of the principles of corporate governance within the company. On September 19, 2019, the Management Board and the Supervisory Board issued an updated declaration of conformity in accordance with Section 161 of the German Stock Corporation Act and made this available permanently to shareholders at the company's website.

## APPROVAL OF THE ANNUAL FINANCIAL STATEMENTS FOR 2019

The annual financial statements, the consolidated financial statements and the related management reports of OHB SE for 2019 were audited by PricewaterhouseCoopers Wirtschaftsprüfungsgesellschaft GmbH, Bremen, and issued with an unqualified auditor's report.

These documents were made available to all Members of the Supervisory Board in sufficient time. At the Supervisory Board's balance sheet meeting held on March 17, 2020, these documents were discussed in the presence and with the involvement of the statutory auditor.

The Supervisory Board did not raise any objections and accepted the results of the audit. It approved the consolidated financial statements, as a result of which they are now deemed to have been duly adopted. The Supervisory Board concurred with the Management Board's proposal for the allocation of the company's unappropriated surplus. The related parties report prepared by the Management Board was audited by PricewaterhouseCoopers Wirtschaftsprüfungsgesellschaft GmbH, Bremen, and given the following unqualified audit certificate:

"Having examined and assessed the related parties report in accordance with our duties, we hereby confirm that

1. the facts stated in the report are correct,
2. the company's transactions as detailed in the Report were not unreasonably high."

The Supervisory Board raises no objections following its own examination and therefore approves the Management Board's related parties report.

## CHANGES TO THE SUPERVISORY BOARD AND THE MANAGEMENT BOARD

There were no changes to OHB SE's Supervisory Board and Management Board in 2019.

## VOTE OF THANKS

The Supervisory Board wishes to sincerely thank the Management Board, all employees and the employee representatives for their work. They have once more made a contribution to a very successful year for OHB SE.

Bremen, March 17, 2020

**Robert Wethmar**  
Chairman of the Supervisory Board

# CORPORATE GOVERNANCE REPORT

In June 2002, a commission installed by the German Federal Government published recommendations known jointly as the "German Corporate Governance Code" setting out standards of conduct and behavior for companies. Corporate governance includes the entire management and supervision system and seeks to make the rules applicable in Germany more transparent to national and international investors in the interests of strengthening confidence in the management of German companies. The Supervisory Board and the Management Board of OHB SE are committed to the principles embodied in the Code as a means of ensuring value-oriented corporate governance and supervision and welcome the adoption of these principles in Germany.

## MANAGEMENT BOARD AND SUPERVISORY BOARD SHAREHOLDINGS

As of the reporting date, Christa Fuchs, Member of the Supervisory Board, held 1,401,940 shares and Prof. Heinz Stoewer, a Member of the Supervisory Board, 1,000 shares. Marco Fuchs, Chief Executive Officer, held 6,046,610 shares. Dr. Lutz Bertling, a Member of the Management Board, held 14,500 shares as of the balance sheet date. On December 31, 2019, VOLPAIA Beteiligungs-GmbH held 3,730,170 shares. Christa Fuchs held 20% and Marco Fuchs 60% of this entity's capital as of the reporting date.

## DIRECTORS DEALINGS

In the year under review, no securities transactions were carried out by the Members of the Management Board and Supervisory Board or by related legal entities.

## OBJECTIVES REGARDING THE COMPOSITION OF THE SUPERVISORY BOARD

OHB SE seeks to implement the principle of diversity in the composition of the Supervisory Board and has formulated the following objectives in this connection. The Members of the Supervisory Board as a whole (i.e. in its entirety and not necessarily each individual Member of the Supervisory Board) should meet the following requirements:

- knowledge of the aerospace industry, particularly space technology
- several years of practical experience in industry and public organizations/agencies
- extensive knowledge gained over many years in finance, accounting, bookkeeping and administration

In addition, the principle of diversity is implemented by ensuring an appropriate degree of female representation on the Supervisory Board. As well as this, a combination of Members from technical and commercial backgrounds is sought. The number of independent Members as defined in Article 5.4.2 of the Corporate Governance Code is to equal at least one.

## **STATUS OF IMPLEMENTATION**

With Supervisory Board chairman Robert Wethmar, partner in an international law firm, Christa Fuchs, the founder of OHB System AG and long-standing commercial director, and Prof. Heinz Stoewer as an internationally experienced space expert and former leading manager at ESA and managing director of the German Space Agency, the desired diversity in terms of gender, expertise and international experience was achieved to a high degree. As a result of the company's growth in recent years, another Member was added to the Supervisory Board in the business year 2018: Ingo Kramer, President of the Federation of German Employers' Associations (BDA) and long-standing Managing Director of the family-owned company Kramer GmbH & Co. KG. Thanks to his many years of cross-industry experience as managing partner and his active Membership in economic and political organisations, he rounds off the competence profile of the supervisory board with his generalist view.

### **DECLARATION OF CONFORMITY TO THE GERMAN CORPORATE GOVERNANCE CODE BY OHB SE PURSUANT TO SECTION 161 OF THE GERMAN STOCK CORPORATION ACT**

The principles of responsible and good corporate governance guide the actions of OHB SE's Management Board and Supervisory Board. They are oriented to achieving sustained business success. For this reason, OHB SE welcomes the German Corporate Governance Code and the fact that it is embodied in statutory law. The Management Board and the Supervisory Board of OHB SE declare that the company has conformed to the recommendations of the Corporate Governance Code Commission appointed by the German Federal Government and will continue to do so in the future.

This declaration of conformity is based on the February 7, 2017 version of the German Corporate Governance Code.

OHB SE departs from the recommendations of the German Corporate Governance Code in a small number of points:

### **DEDUCTIBLE FOR MEMBERS OF THE SUPERVISORY BOARD (3.8)**

The D&O insurance cover taken out by OHB SE does not provide for any deductibles for the Members of the Supervisory Board. The D&O cover is a group policy for Members of the company's Management Board and Supervisory Board as well as numerous domestic and non-domestic Group employees. In the past, it was believed that there was no good reason to draw any distinction between employees on the one hand and the Members of the company's Management Board and Supervisory Board on the other. However, in accordance with the Act on the Appropriateness of Management Board Compensation, deductibles for Members of the Management Board have now been added to the company's D&O insurance cover of an amount stipulated by the Act and the Code. On the other hand, the legislation expressly does not stipulate a corresponding deductible for Members of the Supervisory Board. Only the Code contains a recommendation to this effect. For this reason, the Management Board and Supervisory Board continue to see no reason to depart from the previous practice. The reasoning of the Management Board and Supervisory Board in this respect is based on their view that the prime imperative is to encourage suitably qualified persons to serve on the Supervisory Board, enhancing it with their experience for the company's benefit. These efforts would be adversely affected if the Members of the Supervisory Board gained in this way were to enjoy only limited insurance cover for their activities.

For this reason, OHB SE takes the view that the existence of a deductible would not serve to improve the motivation or sense of responsibility of Members of the Supervisory Board especially as they would be able to take out cover of their own to override the deductible.

**VARIABLE REMUNERATION – MULTI-YEAR ASSESSMENT BASIS (4.2.3)**

The German Corporate Governance Code recommends a multi-year assessment basis for calculating the variable remuneration paid to the Management Board, which should essentially be forward-looking. In view of the company's origins, the variable remuneration paid to the Members of the Management Board is calculated on the basis of its business performance in the previous year. The current service contracts with the Members of the Management Board do not provide for the application of a multi-year assessment basis.

**DISCLOSURES ON COMPENSATION OF THE MANAGEMENT BOARD (4.2.5)**

OHB SE already discloses the compensation paid to its Management Board in detail in the annual compensation report, which is included in the management report. We do not consider any additional disclosures such as those recommended in 4.2.5 to be appropriate in the light of reporting relevance. In particular, the tables recommended for the presentation of these disclosures do not fit the structure of the components of the compensation paid to the Management Board and have therefore been dispensed with.

**AGE LIMITS FOR THE MANAGEMENT BOARD (5.1.2)**

OHB SE does not set a maximum age for Members of the Management Board as this would limit the availability of Management Board Members for appointment by the Supervisory Board.

**FORMATION OF SUPERVISORY BOARD COMMITTEES (5.3)**

OHB SE's Supervisory Board has not formed any committees on account of the small number of Members (four).

**AGE LIMITS FOR THE SUPERVISORY BOARD/REGULAR LIMIT TO TERM OF SUPERVISORY BOARD MEMBERS' OFFICE (5.4.1)**

The Corporate Governance Code recommends defining maximum ages as well as a regular limit for the term of the Supervisory Board Members' office. The Supervisory Board is elected by the shareholders of OHB SE. An age limit may result in rigid rules and an unwanted exclusion criterion detrimental to the company's goal of encouraging persons with great experience to serve on the Supervisory Board. For this reason, a more flexible approach, in which a decision is based on the merits of the individual case, is preferred over a rigid rule. The Management Board and Supervisory Board do not consider the introduction of a limit to Supervisory Board Members' term of office to be appropriate.

**PROPOSALS FOR THE SUPERVISORY BOARD CHAIR (5.4.3)**

Proposals for the Supervisory Board chair are not disclosed to the shareholders because in accordance with statutory stipulations the Supervisory Board alone is responsible for electing its chair.

Management Board and Supervisory Board of OHB SE

Bremen, September 19, 2019

# OHB STOCK

## AFTER A NEGATIVE PERFORMANCE IN THE PREVIOUS YEAR, THE INDICES DEVELOPED UNEXPECTEDLY POSITIVELY IN THE 2019 STOCK MARKET YEAR

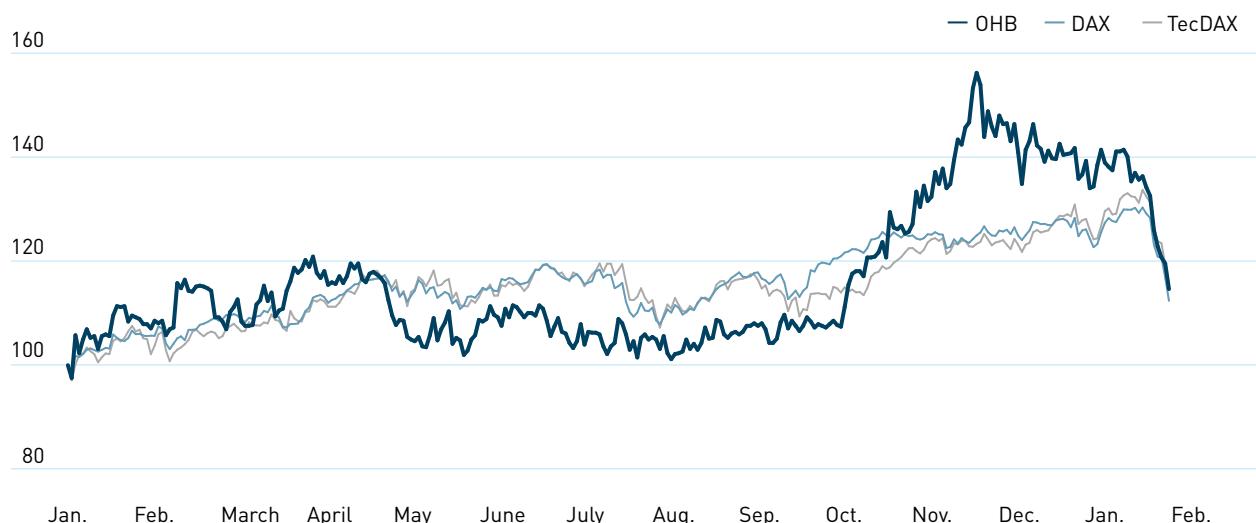
After the German Share Index (DAX) had closed the 2018 stock market year with a very disappointing result of minus 18% and the global economic downturn threatened to continue at the beginning of 2019, the generally positive performance for the year as a whole was not necessarily foreseeable. At the beginning of the year, estimates by various economic institutes and the ifo business climate index showed a negative trend, and the EU Commission also reduced its growth prospects for the European economic area. However, key interest rates in the Eurozone continued to stagnate at historic lows and the European Central Bank did not hold out the prospect of a change in its accommodative monetary policy for the current year due to the economic risks. Despite the gloomy economic outlook and the uncertainties associated with the expected Brexit, this factor led to a uniformly positive development of the German

financial market: The DAX recorded a price gain of more than 25% (corresponding to 2,669 points) last year and ended trading at the end of the year at 13,249 points. The TecDAX, which comprises the 30 largest German technology stocks, recorded a positive performance of over 22% (equivalent to 551 points).

## OHB STOCK BENEFITING FROM STRONG INDUSTRY INTEREST AND CLEARLY OUTPERFORMING THE INDEX

Over the same period, OHB share price climbed from EUR 30.90 to EUR 43.50, or by around 43%, with the stock reaching its annual high of EUR 48.65 on December 13. The average daily trading volume in the period under review changed from 15,659 shares (Xetra and Frankfurt floor) in the previous year to 5,511 shares a day, plus a further 2,257 shares traded via the alternative exchange platform Tradegate.

**[01] PERFORMANCE OF OHB SHARE PRICE IN COMPARISON TO DAX AND TECDAX**  
for the period from January 1, 2019 to February 28, 2020



## OHB STOCK PARAMETERS

in EUR	2019	2018	2017	2016
Year-end closing price	43.50	30.90	44.61	18.54
High for the year	48.65	49.75	47.47	20.78
Low for the year	29.60	27.55	18.26	17.02
Market capitalization (end of year) in million	760	540	779	324
Average daily trading volume (shares)	7,768	15,659	19,295	4,752
Price/earnings ratio (P/E) (end of year)	29.59	21.46	33.29	14.59
Earnings per share (EPS)	1.47	1.44	1.34	1.28
Dividend per share	0.43*	0.43	0.40	0.40
<b>Dividend yield (end of year)</b>	<b>0.99%</b>	<b>1.39%</b>	<b>0.90%</b>	<b>2.16%</b>

\* Subject to approval by the shareholders

## ANALYST RATINGS

Date	Bank	Target price in EUR	Rating
March 2020	Bankhaus Lampe	50.00	buy
February 2020	Pareto Securities	49.00	buy
February 2020	HSBC Trinkaus & Burkhardt	45.00	hold
February 2020	Commerzbank	34.00	reduce
December 2019	DZ Bank	50.00	buy

## OHB STOCK DATA

ISIN	DE0005936124
Ticker	OHB
Trading segment	Prime Standard
Sector	Aerospace, Telecommunication, Information Technology
Indexes	Prime All Share, Tec All Share, CDAX
Designated Sponsor	DZ Bank AG, HSBC Trinkaus & Burkhardt KGaA
Issued capital	EUR 17,468,096
Share type	Bearer shares without par value

## TREASURY STOCK

As of December 31, 2019, OHB SE held 67,996 treasury shares, equivalent to 0.39% of its share capital.

## ANNUAL GENERAL MEETING APPROVES DIVIDEND INCREASE TO 43 CENTS

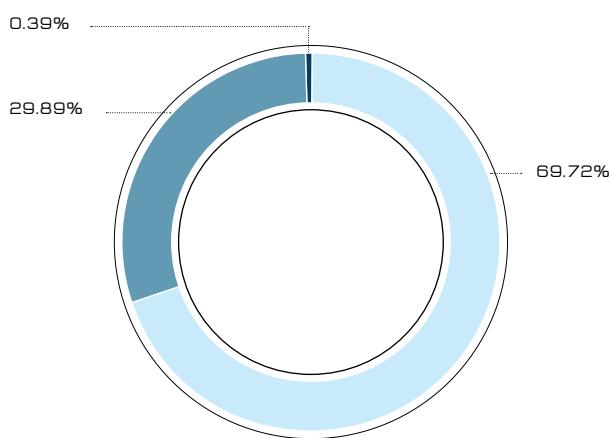
Shareholders received an increased dividend of 43 cents per share entitled to dividend for the 2018 financial year (previous year: 40 cents). The annual general meeting held on 24 May 2019 approved a corresponding proposal by the Management Board and Supervisory Board. The total dividend distribution on the 17,400,100 shares entitled to dividend thus amounted to EUR 7.48 million. The remaining amount of the HGB balance sheet profit of EUR 3.89 million was carried forward to new account. The other items on the agenda were also approved with large majorities, in particular the approval of the actions of the management and supervisory boards and the appointment of PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Bremen, as auditors.

## INVESTOR RELATIONS ACTIVITIES

Right at the beginning of last year, representatives of the company took part in a major capital market conference in Lyon and presented the company to potential investors in various discussions. As usual, OHB SE's Management Board Members gave an initial outlook for the current 2019 fiscal year at the Capital Market Day held at OHB System's headquarters in Oberpfaffenhofen. On February 7, 2019, analysts, investors and bankers gathered here and were informed by Members of the Management Board about the status of current projects and new market trends. The company published its consolidated financial statements for fiscal 2018 on March 20, 2019, on which date it first held a financial statements press conference in Bremen, followed by an analysts' conference in Frankfurt. During a subsequent roadshow, a Member of the Management Board met with interested fund managers from several banks to present OHB SE there. In the further course of the year, the company attended capital market conferences in Baden-Baden, Munich, Frankfurt and Berlin as well as a roadshow in Scandinavia, which included meetings with investors in Copenhagen and Helsinki.

## [02] SHAREHOLDER STRUCTURE OHB SE

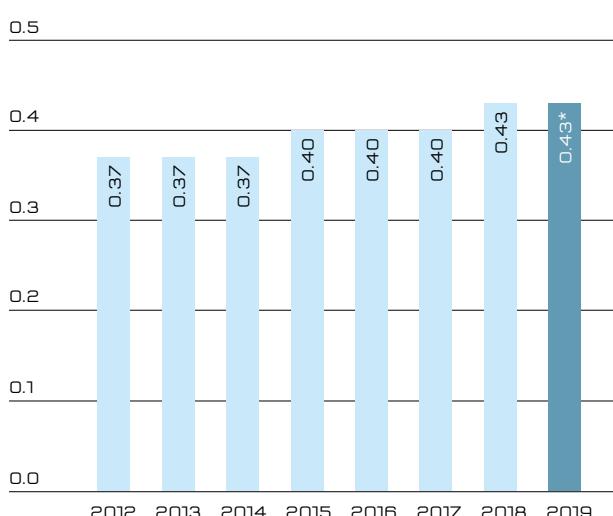
on December 31, 2019



**Issued capital:** shares 17,468,096

■ Treasury stock (shares 67,996)  
■ Free float (shares 5,221,380)  
■ Fuchs pool (shares 12,178,720)

## [03] DIVIDEND PERFORMANCE 2012–2019 in EUR



\* Subject to approval by the shareholders

## IR CONTACT

### Martina Lilienthal

Investor Relations

Phone: +49 (0)421 2020-7200

Fax: +49 (0)421 2020-613

Email: ir@ohb.de

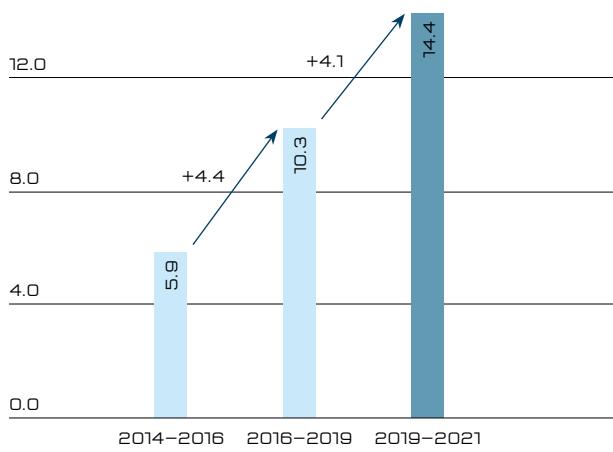
# CAPITAL MARKET DAY

## OHB 2025 - SHAPING THE FUTURE

At the Capital Market Day held on February 13, 2020, OHB SE's Management Board Members presented the Group's strategy "OHB 2025 – Shaping the future". This strategy sets the starting point for the OHB Group's further growth cycle up to fiscal 2025, defining among other things the main focus of the subsidiaries' activities and setting growth and profitability targets for the Group's development.

The central element of the Strategy 2025 is the creation of a third segment "OHB Digital". In addition to existing companies such as OHB Digital Solutions, OHB Digital Services and OHB Infosys, the activities of OHB Satellitenbetrieb, the Satellite Ground Systems and Airborne + Ground Solutions divisions as well as MT Mechatronics are to be concentrated under this umbrella as a new powerful company. It pools the company's skills in offering comprehensive solutions in the area of ground-based systems and services. OHB Digital will also be the nucleus for the expansion of the data applications business.

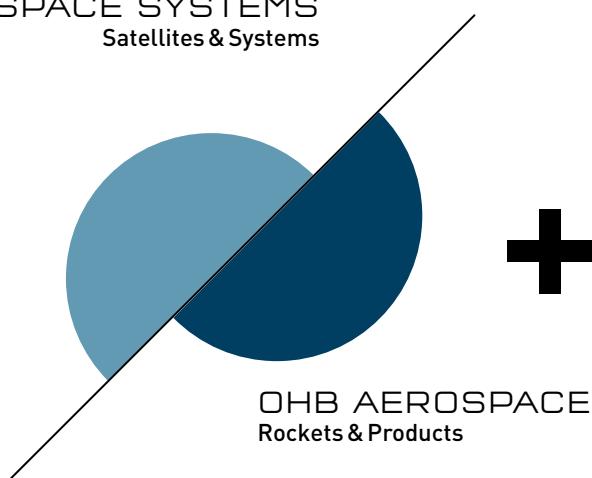
## [04] BUDGET DECISIONS OF ESA'S MINISTERIAL COUNCIL (in EUR billion)



The budget decisions of ESA's Ministerial Council support OHB SE's medium-term goals

## FUTURE COMPANY OVERVIEW OF OHB SE

### OHB SPACE SYSTEMS Satellites & Systems



### OHB DIGITAL Solutions & Services



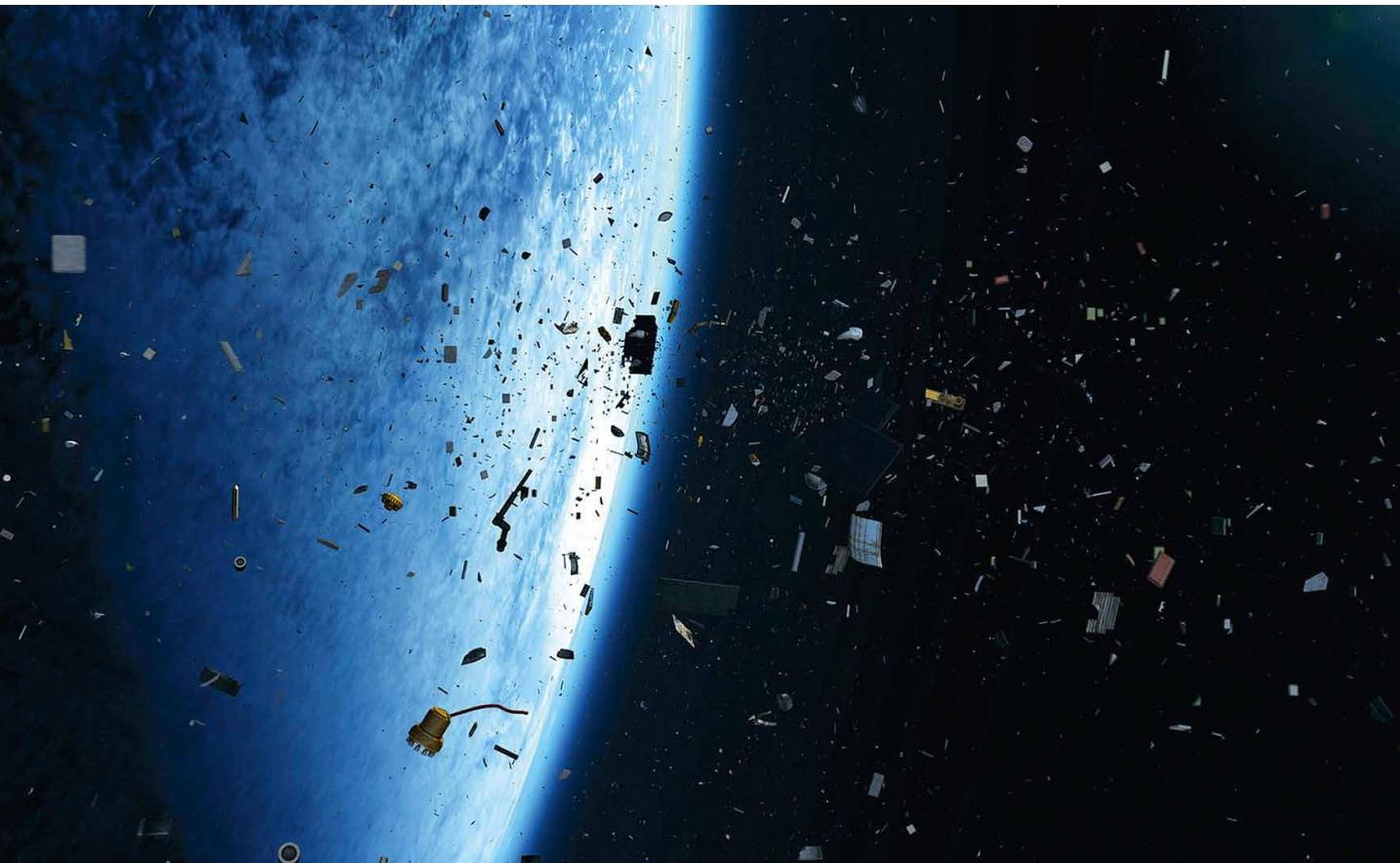
13.02.2020 Presentation of the new Group strategy and networking during the break



13.02.2020 Q&A session with the Management Board and in-depth discussions following the presentations

# COMBINED MANAGEMENT REPORT

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# I. BASIS OF THE GROUP

## [A] GROUP BUSINESS MODEL

As a space technology group, OHB SE combines activities from different areas of space-related high technology. Due to the fact that the individual subsidiaries are spread geographically across different European countries, the company as a German group has operations in selected Member countries of the European Union (EU) and the European Space Agency ESA. This is a crucial requirement for successfully taking part in projects under national and European space programs. The individual companies are able to retain their individuality and corporate culture within the Group, while still being bound by the decisions made by the Group holding company and being able to harness synergistic benefits. OHB SE itself does not engage in any operating business itself but supports the subsidiaries in various areas, particularly sales and marketing activities, participation in trade fairs, human resources, procurement, the installation and maintenance of the IT infrastructure and digitalization, thus assuming the role of an active holding company. OHB SE comprises two segments:

### SPACE SYSTEMS

This segment focuses on developing and executing space projects. In particular, it is responsible for developing and assembling satellites for navigation, research, communications, earth and weather observation and reconnaissance including scientific payloads for low and geostationary orbits as well as beyond. Reconnaissance satellites and broadband wireless transmission of image data form core technologies for security and reconnaissance. The exploration segment works on studies and models for exploring our solar system, primarily the Mars, Moon and the asteroids. Its human space flight activities chiefly entail projects for the assembly and outfitting of the International Space Station ISS and the future Lunar Gateway.

### AEROSPACE + INDUSTRIAL PRODUCTS

This segment is primarily responsible for fabricating and developing aviation and space products as well as performing other industrial activities. In this area, OHB has established itself as a significant supplier of aerospace structures; among other things, it is the largest German supplier of components for the Ariane program and an established producer of components for satellites and aircraft. In addition, OHB is an experienced vendor of mechatronic systems for antennas and telescopes and is involved in major radio and optical telescope projects. The Group companies have also launched an initiative to gain system skills in small launchers to complement their existing capabilities.

## [B] TARGETS AND STRATEGIES

The Group is continuing to pursue a policy of steady growth and increased output. This involves preserving and broadening its employees' expertise and protecting jobs. The profitability margins (EBIT and EBITDA margin relative to total revenues) are being specifically increased in certain areas. These goals are to be reached by increased business development activities and further technological developments. Generally speaking, a positive cash flow from operating activities is being targeted. The Group will continue to focus on the space industry. The growth referred to above is primarily to be generated organically in this sector. Business with institutional customers still forms the basis of OHB SE's activities. In this connection, the Group is clearly oriented to the European market. With the SmallGEO, Triton and InnoSat series developed by the Space Systems segment together with earth observation satellites, the Group is additionally able to offer satellite products to commercial customers. These activities are not confined to the European market. One new thrust of the Group's activities will entail the expansion of services as a separate segment in the future. These will entail the operation of satellites and satellite constellations as well as the development and marketing of software products or using space-derived data.

## [C] MANAGEMENT PROCESS SYSTEM

OHB SE's overarching goal is to steadily increase its enterprise value by improving its earnings potential on a sustained basis. The Group manages its financial position on the basis of the following performance indicators: total revenues, earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation and amortization (EBITDA) and cash flow. These parameters are defined in an annual budget and tracked during the year by means of forecasts and reports on actual figures together with deviation analyses at the project level. Cash flows are managed at the project level by means of individual measures taken in consultation with customers and suppliers in order to optimize liquidity. Further management factors include productivity ratios, particularly employee productivity. Other

important non-financial performance indicators are employee numbers in the individual companies as well as the fluctuation rate, for which a target of less than 5% has been defined. Given the dynamic recruitment process for increasing the Group's personnel capacity, it is crucial for fluctuation to be managed and monitored. It stabilized below the 5% threshold again in 2019. Fluctuation monitoring is aided by the measurement of employee satisfaction, which was carried out in 2018 at OHB System AG using the Organizational Health Index (OHI) offered by the McKinsey Group. Since then, a quarterly "pulse check" has been performed to update this data. This covers the specific requirements of the OHB workforce in compressed form and documents the progress achieved in the areas of activity identified.

## **[D] RESEARCH AND DEVELOPMENT**

In the year under review, OHB spent EUR 18.8 million (previous year: EUR 25.4 million) on research and development (R+D). Of this, Space Systems accounted for EUR 14.8 million (previous year: EUR 23.0 million) and Aerospace + Industrial Products for EUR 4.0 million (previous year: EUR 2.4 million). Part of the R+D activities (EUR 2.1 million; previous year: EUR 3.1 million) are being funded by various institutions such as the EU and national government agencies. Subsidies account for between 25% and 75% of the total costs depending on the percentage of completion of the development project.

In the **Space Systems** segment, one of the main aspects again entailed technological enhancements specifically for scientific research and exploration in space. Further aspects involved enhanced mission design on the basis of the universal platforms being developed for low-orbit satellites and inexpensive launch systems for these satellites. A further important area being addressed by OHB System AG entailed technologies for enhancing and future-proofing the Small-GEO platform particularly in the light of commercial customers' requirements and public communications. One particular aspect involves internal studies and design work targeted at constellations comprising a large number of low and medium-orbit satellites. These latter activities are particularly performed by LuxSpace Sàrl, OHB Sweden AB and OHB Italia S.p.A. OHB System AG has established a task force to study and explore quantum cryptology and quantum computing to determine the relevance of these new technologies for use in space.

Aspects from the field of space situational awareness such as space traffic management or space surveillance and tracking (e.g. space debris detection and removal) as well as the detection and potential deflection of near-Earth objects, such as asteroids, will play an important role in the future. OHB is readying itself for this potential market by engaging in customer-funded and internally financed studies.

The **Aerospace + Industrial Products** segment concentrated on engineering components for the future Ariane 6 launch vehicle. Important milestones in the engineering of tank and structural components were achieved in 2019. The ESA Future Launcher Preparatory Program (FLPP 3 NEO) continued working on development projects aimed at the technical and economic optimization of the Ariane 6. The results of these projects will be used in the Black Upper Stage Technology Demonstrator (BSTD) project, which will be developing and testing the prototype of a highly efficient, lighter-weight upper stage launcher.

## II. BUSINESS REPORT

### [A] UNDERLYING CONDITIONS

#### I. MACROECONOMIC ENVIRONMENT

The economic performance of Germany as an ESA Member in particular is of relevance for the OHB Group's business activities as the contributors' budget is based on their individual gross domestic product. In addition, ESA imposes certain requirements that guarantee that the contributions that are made flow back into the domestic industries via contract awards. Last year, German economic output, i.e. gross domestic product, rose by 0.6%, thus again falling short of the figures recorded in prior years (1.5% in 2018, 2.5% in 2017). The German economy has thus expanded for the tenth year in succession, although growth has lost momentum. Compared with the average growth rate of 1.3% over the past ten years, the German economy thus expanded more slowly in 2019. The situation on the output side of gross domestic product was mixed. The services and construction sectors recorded strong growth, but manufacturing output slumped. Economic output in Germany was generated by an annual average of 45.3 million employees working in Germany in 2019. With an increase of 562,000 persons over the previous year, this figure represents a new record. This 0.9% rise is mainly due to an increase in employees subject to compulsory social security. As in earlier years, higher labor market participation as well as immigration from outside Germany made up for the age-related demographic effects on the employment market. Inflation receded slightly over the previous year, averaging 1.4% in Germany in 2019, down from 1.8% in the previous year.

#### II. SECTOR ENVIRONMENT

Measured in terms of direct annual sales, the space industry still holds only a niche position compared with other industries in Europe and also the rest of the world but is indirectly of crucial importance for the economy as a whole. Space is an "enabling" industry. Navigation, earth observation and communications satellites orbiting in space constitute vital elements of our infrastructure with an importance similar to that of high-voltage power lines, roads, water ways and air transportation. Total failure or shutdown would trigger a worldwide social and economic collapse. In addition to their original positioning function, navigation satellites also provide a global time reference. For example, they allow IT systems to be synchronized globally, providing the basis for international financial transactions to be executed and documented reliably. The data collected by weather satellites ensures safe flying conditions and more frequent flights, improved efficiency in agriculture, the avoidance of poor harvests and more plannable logistics and holiday travel. Space travel makes an important contribution to improving environmental protection, allows the causes of and flows in migration to be observed and thus

makes a decisive contribution to improving civil and military security. Space may be a small industry but one that is of crucial importance for a modern and sustainable economic system. Space systems are indispensable for trends such as the Internet of Things, future mobility, global digitalization and broadband communication even in remote areas, climate and environmental protection and the protection of our planet.

Space activities vary greatly from region to region but are of particular significance in North America, China and Europe (including Russia). In recent years, China has almost reached eye level with the historically strong regions, while activities in India have also developed significantly. Space is acknowledged socially and politically as a key global industry. Given the long-term nature of the programs and projects, macroeconomic and political conditions in individual countries have only a limited direct impact on current programs and projects. Moreover, depending on the region in question, commercial, civil and military space programs are often linked with each other to very differing extents or are completely independent of each other.

In Europe, the programs initiated by the European Space Agency ESA and the EU as well as national space activities remained stable thanks to their multi-year budget horizons. ESA's own budget amounted to EUR 4.18 billion in the year under review plus an additional EUR 1.54 billion for programs implemented by ESA on behalf of institutional partners (e.g. EU, EUMETSAT). The budget for 2020 stands at EUR 4.87 billion for internal projects plus an additional EUR 1.81 billion for partner projects. The German contribution to the ESA space program was just under EUR 930 million in 2019, while the budget for the German national space program was approximately EUR 285 million in 2019, with a figure of EUR 297.2 million planned for 2020. At the ESA Council of Ministers conference in Seville, Spain, in November, programs with a record value of EUR 14.4 billion were approved for the next few years. The German share and, hence, also flowback amounts to EUR 3.3 billion. This is the largest German contribution in ESA's history, simultaneously making Germany the largest contributor. The European Commission has proposed a significant increase in the budget from EUR 11.1 billion for the period from 2014 to 2020 to EUR 16.7 billion for the next multiannual financial framework from 2021 to 2027. That said, the new commission and the new parliament have also threatened to cut the budget by around 10%.

In the United States, NASA had a budget of USD 20.7 billion in 2018 and of USD 21.5 billion in 2019. An amount of more than USD 22.6 billion has been proposed for 2020 but is still awaiting Congress approval. In addition, the US Department of Defense's budgets for space projects came to a total of more than USD 24.5 billion in 2018. All in all, the US space budget for 2018 was more than USD 48.3 billion. Around

USD 3 billion went to other US authorities. Although the figures for 2019 are not yet available, it can be assumed that the planned introduction of the "Space Force" will result in a further increase in the budget.

After more than two decades of uncertainty as to their future direction, space activities in the Russian Federation still do not have any clear perspective. It is still not possible to assess the ramifications for space programs of the current situation in the Russian economy following the imposition of Western sanctions and the effects of current oil prices. In particular, the United States has substantially scaled back joint activities with the Russian Federation but still remained dependent on Russia for the transportation of supplies and astronauts to the International Space Station ISS in 2019. It expects to regain the independence which it held prior to the termination of the Shuttle program from 2020, when national commercial operators become available.

China, India, Japan, South Korea, Turkey and Brazil are still pursuing their ambitions of establishing their own national space flight programs and infrastructures. The installation of a national satellite-based navigation system, the country's own space station and long-term successful lunar landings with rovers and subsequently with national astronauts ("taikonauts") form key elements of the Chinese space program. The successful unmanned landing on the far side of the Moon underscores China's ambition of becoming a leading space nation, if not the leading one. In 2019, one third of all voyages into space were executed using Chinese launchers.

Held in November 2019 in Seville, the last ESA Conference of Ministers was of crucial importance for the European space industry both economically and in terms of programs. Work on implementing the resolutions passed at this conference, many of which are highly advantageous for OHB, has already commenced. As a result, the OHB Group will be engaged in an exceptionally high level of bidding activities in 2020, justifying expectations of high order receipts. In addition to this established market with mostly institutional funding, strong worldwide momentum can also be observed as new, largely privately financed companies have entered the market or are planning to do so. In addition, a large number of start-ups are building microsatellites and

launch systems based on small vehicles and developing innovative applications for using the data gained from them. This is triggering a revival in the space industry, which OHB views as an enrichment rather than a threat.

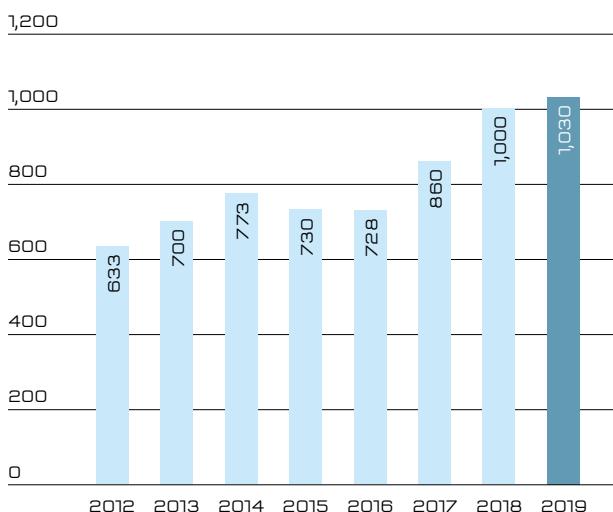
Demand has been softening in the market for geostationary satellites for a number of years. This decline, combined with new competitors in the launcher segment, is spurring competition, exerting pressure on prices. In 2019, four Ariane 5 vehicles were successfully launched from the Kourou spaceport (six launches had been completed in the previous year). This vehicle will only remain in operation until 2022, after which solely the newly developed Ariane 6 will be deployed following its maiden flight, which is scheduled for the end of 2020. Production of the Ariane 5 will be discontinued in 2020. This factor, together with a decline in expected demand for Ariane 6, will lead to lower revenues and adjustments to production capacities.

## **[B] OHB SE'S BUSINESS RESULTS IN 2019**

The Group's business performance in the year under review and the resultant growth in its performance indicators lived up to the Management Board's positive expectations. In February 2019, the company published full-year guidance on its total revenues, EBITDA and EBIT. At EUR 78 million and EUR 49 million respectively, EBITDA and EBIT fell only very slightly short of the guidance (EUR 80 million and EUR 50 million respectively). Total revenues [SEE CHART \[05\]](#) in the period under review came to EUR 1,030 million, thus almost exactly matching expectations (EUR 1,050 million). At EUR 509 million, the proportion of subcontractor input in total revenues remained at the previous year's high level. As forecast, the EBITDA margin came to 7.6% in the year under review (previous year: 6.5%), while an EBIT margin of 4.8% was recorded (previous year: 4.8%). Consolidated net profit after non-controlling interests rose to EUR 25.5 million (previous year: EUR 25.0 million), while earnings per share [SEE CHART \[06\]](#) came to EUR 1.47 (previous year: EUR 1.44). As expected, the previous year's high order backlog (EUR 2,399 million) dropped as of the reporting date due to work commenced on the orders received. Even so, the order backlog of EUR 1,840 million as of the reporting date continues to ensure high capacity utilization and forward planning visibility.

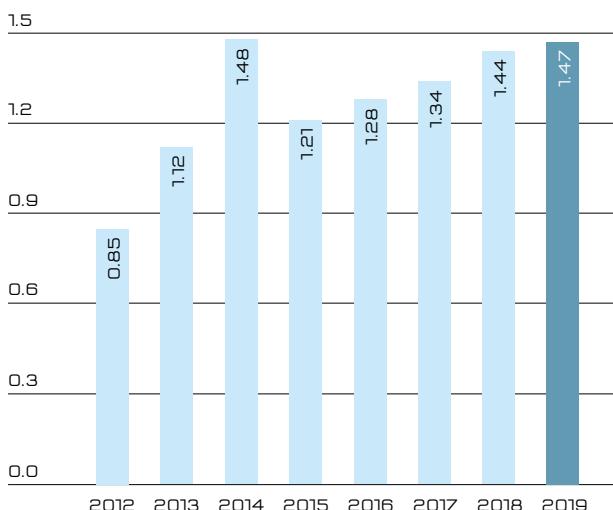
## [05] CONSOLIDATED TOTAL REVENUES

2012–2019 in EUR million



## [06] EARNINGS PER SHARE

2012–2019 in EUR



## [C] BUSINESS PERFORMANCE

The OHB Group's favorable business performance continued in 2019. Total revenues increased by 3% over the previous year (EUR 1,000 million) to EUR 1,030 million. This was accompanied by a 3% increase in sales to EUR 1,005 million, up from EUR 977 million the previous year. The transformation of the space industry from what was once a solely research or politically/ideologically driven segment into a user-oriented and economically significant market has formed the basis for Group's continuous and sustained

growth over the last one-and-a-half decades. The areas in which it engages via its subsidiaries place it in an excellent position: After the growth of the last few years, the space market will continue to expand as new possibilities for utilizing new or existing technologies are yielding new requirements. The existing applications are based on satellite systems already in operation which have a limited life expectancy and must therefore be replaced with new systems offering potentially improved technology or efficiency.

### I. SPACE SYSTEMS SEGMENT

Business in the Space Systems segment is chiefly characterized by long-term projects which are generally awarded by public-sector customers. As expected, the order backlog of EUR 1,654 million (December 31, 2019) was down on the previous year. The ESA Ministerial Council, which makes budget decisions of decisive importance for the European space industry every two or three years, was held in November 2019. As a rule, only few institutional contracts are awarded in the years in which the conference is held.

#### The Galileo European satellite navigation constellation

All 22 satellites built and supplied by OHB System in Lot 1 and Lot 2 were launched and put into operation before 2019. OHB is providing the constellation operator with the necessary operational support for these satellites. In summer 2016, OHB System AG submitted a bid for the twelve Galileo FOC Lot 3 satellites. The European Commission and, acting on its behalf, the European Space Agency ESA awarded the contract for an initial eight satellites in April 2017. At the same time, the European Commission ordered a further four satellites in October 2017. Consequently, OHB System AG is supplying a total of 34 Galileo satellites worth around EUR 1.3 billion. Development and assembly work on the Lot 3 satellites is proceeding according to plan, with all satellites in varying phases of production. In December 2019, the first satellite was shipped from Bremen to the ESA testing center in Noordwijk for final environmental impact testing. In order to allay the possible effects of a "hard Brexit", all security-related activities have been relocated to the continent with the consent of ESA and/or the European Commission. Following the completion of studies on the follow-up generation of the current Galileo satellites, OHB System embarked in 2019 on the bidding process for the next generation of Galileo satellites featuring the latest technology, known as the "Galileo Transition Satellites". In accordance with the tendering procedure, two bids have already been prepared and at least one further bid is planned. The European Commission and, working on its behalf, ESA plan to award a contract in 2020 for a transition batch in the form of Lot 4, which will already feature some of these new technologies offering expanded capabilities. The new satellites will differ substantially from the Lot 1–3 satellites in terms of size, electrical output etc. Given the great success that it has achieved with the previous satellite lots and the intensive preparatory work performed, OHB is very well positioned for the next generation.

### **Earth observation and reconnaissance**

Developed and built by OHB System and put into operation in 2007, the SAR-Lupe system with its five radar satellites, ground segments and the combined German-French reconnaissance satellite system made up of SAR-Lupe (radar images) and Helios 2 (optical images) is still operating with a high degree of stability. The contract signed by OHB System AG for the operation of the system over a period of ten years duly expired on November 30, 2017 after the satellites reached the end of their contractually guaranteed service life. The customer (Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw)) and the German Armed Forces took this opportunity to express their extreme satisfaction with the system and the partnership with OHB System AG. At the same time, an amendment to the contract was signed, providing for continued operation of the system until at least 2020 with the option of a further extension. Work on the SAR-Lupe successor SARah, which offers substantially improved performance and for which OHB has also been awarded a contract, proceeded according to plan, with the scheduled milestones duly achieved in 2019. The system comprises three satellites, namely two satellites based on OHB System AG's reflector antenna technology and one satellite using phased-array technology, work on which has been subcontracted out to Airbus Defence and Space GmbH. OHB System AG has supplied the necessary ground equipment, which has also been used for the operation of the SAR-Lupe satellites since the end of January 2018. In response to a customer request, OHB had submitted a comprehensive modification proposal covering new IT security requirements. The corresponding contract was signed in August 2019.

In October 2018, OHB System AG signed a further contract with BAAINBw for the development and assembly of the French SARah Partner Ground Segment (F-SPGS) in Koblenz. Work was commenced after OHB System was awarded the contract, continuing in 2019. F-SPGS is a ground segment which is linked to the German SARah radar satellite system and gives France access to radar images. In connection with the operation of the F-SPGS system, there is a possibility of OHB being contracted to deliver the data in two five-year options that have already been negotiated. In return, Germany will be able to submit imaging requests to the French Composante Spatiale Optique (CSO) optical system via its own ground segment.

Commissioned at the end of 2017, the development and construction of the electro-optical reconnaissance system for the Federal Republic of Germany is progressing according to plan. With a budget framework of up to EUR 400 million, this system will be used for global electro-optical reconnaissance. Alongside the SAR-Lupe and SARah programs, OHB has thus been able to additionally position itself as a supplier and partner for security-relevant space-based optical reconnaissance systems for the Federal Republic of Germany. Here, as well, the project and payment milestones were reached on schedule last year.

The development and construction activities for the third-generation European weather satellite Meteosat Third Generation (MTG) are continuing, with the satellites now in the production phase. OHB is responsible for two complete satellites with infrared instruments (IR Sounder, IRS) as well as a further four platforms for satellites with imaging instruments to be integrated by partner Thales Alenia Space S.A. (TAS). The first satellite platform has been delivered to TAS and all further satellite platforms under contract are currently in various phases of production in OHB System AG's clean rooms in Bremen. In connection with the imaging satellites, the company is also responsible for the design, development, procurement, assembly and delivery of a prototype flight model and for three flight models of the instrument (Telescope Assembly of the Flexible Combined Imager (FCI-TA)) as a subcontractor to TAS. The first FCI-TA flight model was shipped to project partner TAS in Cannes, France, in June 2019 for the integration of the FCI imager instrument. This instrument will be supplying the familiar images used in weather forecasts but in a substantially greater quality. Work on the structural and thermal model of the IRS instruments being developed by OHB System is proceeding according to plan. The MTG satellites will permit a further significant improvement in the internationally leading European weather forecasting models.

OHB Italia S.p.A. is currently performing development work on the MicroWave Imager (MWI) for MetOp, a joint mission by ESA and EUMETSAT (European Organization for the Exploitation of Meteorological Satellites). The MWI instrument will provide Europe's national meteorological services as well as international users and the science community with meteorological and climatic data. OHB Italia S.p.A. is responsible for designing and developing the MWI through to final in-orbit verification of three flight models for delivery to an Airbus Group company, which is the principal contractor for this mission. In November 2019, OHB Italia S.p.A. completed the integration of the structural and thermal model (STM), subsequently shipping it to Toulouse for testing.

In October 2018, OHB Italia S.p.A. also signed a contract worth EUR 168.2 million with the Luxembourg Ministry of Foreign and European Affairs. The subject matter of this contract is the development of a high-resolution optical satellite together with the associated ground segment. A medium-sized reconnaissance satellite weighing about 600 kg, the NAOS satellite will be launched in 2022 on board the European Vega for a planned service life of seven years. The system consolidation review of the NAOS satellite was successfully completed on schedule in August 2019. All the necessary subcontracts for fitting the satellite with state-of-the-art equipment have been awarded, with work on the assembly of the satellite modules commencing on schedule.

In November 2016, OHB System AG was selected by principal contractor Leonardo S.p.A. as a core team partner for ESA's European earth exploration mission FLEX, which is to commence in 2023. Work on the integration phase (phase C/D) is in full swing. While production activities are still ongoing, the critical design review is expected to be reached by the middle of the year upon the completion of all activities.

The national optical earth observation program EnMAP (Environmental Mapping and Analysis Program) for the German Aerospace Center has now reached the integration phase at OHB System AG's clean rooms in Oberpfaffenhofen. The optical instrument has been completed. EnMap is scheduled for launch in 2021. With its new type of hyperspectral sensors, this environmental satellite is primarily designed to characterize and monitor the condition of the earth. It is an innovative system which can be used for many new applications, e.g. security. As the same time as the EnMAP activities, OHB Italia S.p.A. continued work on PRISMA (PRRcursor IperSpettrale della Missione Applicativa) in a project awarded by the Italian space agency ASI. As the prime contractor, OHB Italia S.p.A. is responsible for the platform as well as integration and testing of the aggregate system. Its partner Leonardo delivered an innovative hyperspectral instrument in 2019. Following successful integration, the satellite lifted off from the European launchpad in Kourou on March 22, 2019 on board a Vega launcher. In December 2019, ASI declared the successful completion of the operational qualification phase, upon which the satellite was handed over to operator Telespazio.

Under the Copernicus program of the European Commission and ESA, OHB SE subsidiaries are taking part in the ongoing tender procedures involving proposals for six new Copernicus expansion missions. The first bids were submitted in January 2020 for the "LSTM" (land surface temperature monitoring) and "CHIME" (Copernicus hyperspectral imaging mission for the environment) missions. All other bids (especially for "CO<sub>2</sub>M" (CO<sub>2</sub> Monitoring) and "CRISTAL" (Copernicus Polar Ice and Snow Topography Altimeter)) were submitted in February and March 2020. Alongside the Galileo navigation system, Copernicus is the European Commission's second main space program and is being co-financed by ESA. OHB is working resolutely on becoming a reliable and skilled long-term partner to the European Commission for earth observation, just as it already is in navigation. In this regard, OHB's experience gained over ten years in complex series-produced space systems is standing it in good stead. ESA is expected to announce the contract awards for all Copernicus missions in mid-2020. OHB System AG is already involved in the Copernicus program as a subcontractor to Airbus Defence and Space for the Sentinel-4 instrument. The company is responsible for designing, assembling and qualifying the instrument structure (OIMS) and for procuring three critical mechanisms as well as the thermal hardware and ground support equipment. The two flight models will be orbiting on board the MTG-S satellite built by OHB System.

With these activities, OHB SE subsidiaries are active in all areas of earth and weather observation and reconnaissance with a broad portfolio of products ranging from radar satellites to optical observation systems of many different sizes and performance classes.

**Satellite communications**

Launched on January 28, 2017, the H36W-1 geostationary telecommunications satellite has been in orbit for three years now, functioning flawlessly and to the complete satisfaction of the customer.

The EDRS-C data relay satellite from the SmallGEO product line was successfully placed in orbit on board an Ariane 5 launcher lifting off from Kourou on August 6, 2019. All functional testing was completed successfully, up which the satellite was placed in operational service. The expansion of the SmallGEO model for use as a specialized data relay satellite with laser-based ultra-high-speed satellite-to-satellite communications marks an important strategic goal for OHB System AG. Looking forward, optical technologies will play an increasingly important role in civil as well as military applications.

SmallGEO has also been chosen by the German Aerospace Center as the basis for the "Heinrich Hertz" national telecommunications mission. This mission will be used to test new types of satellite communications technology under real conditions to safeguard national system competence in geostationary communications satellites. In addition, it will also support the communications capabilities of the German Federal Armed Forces. The Heinrich Hertz mission is currently being implemented in the clean rooms of OHB System AG in Bremen.

OHB is leveraging the experience gained to date from the SmallGEO system and systematically applying it to the development of various technologies in the next evolutionary stage in the Electra platform development program. Electra will significantly increase the competitiveness of the SmallGEO platform and triple the payload capacity at the same overall system cost. The main innovation entails the use of an electric-only drive, which has a drastically reduced fuel consumption compared to chemical drive systems. The resulting reduction in mass will permit a corresponding increase in payload capacity and thus significantly improve efficiency. Electra is thus the most efficient version of the SmallGEO series for certain missions. Development work on the platform was continued with the completion of the design activities and the corresponding milestone (CDR) in the year under review and is expected to have progressed sufficiently in 2020 for the first mission to be planned and implemented. Talks are currently ongoing with various customers.

In view of the investments that it has made, OHB considers itself to be excellently positioned with the SmallGEO product line in general and the Electra platform in particular to address national demand for institutional satellite communications in geostationary orbits in the next step with a view to securing further long-term contracts in competition with international peers. Finally, the potential offered by the systematic application and use of the new technologies and the devices developed and tested on this basis as well as entire subsystems and the "building blocks" provided by the Electra platform should not go unmentioned. Many future European space programs funded by ESA and the EU are relying on the consistent and systematic exploitation of the advantages offered by electric-only propulsion systems.

**Platform concepts**

At the same time as the SmallGEO geostationary satellite range was established, Group company LuxSpace Sàrl was also selected by ESA to develop microsatellites in the 100-kg class in 2017. In addition to providing communication services, these satellites can also be used as a base for earth observation missions. With the development and assembly of inexpensive microsatellites known as "Triton-X" at its Luxembourg facility, the Group is thus readying itself for the "new space" market. Preliminary customer projects are being negotiated. The ESAIL microsatellite, a forerunner of the Triton-X platform, was completed and successfully tested during the year under review. The launch of the satellite is scheduled for 2020.

Working on behalf of the Swedish space agency SNSB, OHB Sweden AB is developing a platform known as "InnoSat" for the 50-kg class. The first satellite based on this platform is currently in an advanced stage of completion in the clean room, with a launch scheduled for 2020. A further contract for two microsatellites based on the InnoSat platform was signed in 2019.

OHB System AG is currently developing the "Nucleus" platform for earth observation satellites for contracts expected to be awarded under the Copernicus program. Consequently, OHB SE companies are addressing the entire gamut of platforms for communications and earth observation applications.

### Space exploration

The central unit for the Trace Gas Orbiter developed and built in 2016 under the ESA ExoMars 2016 program is continuing to operate perfectly. Development and assembly work on the second part of the ExoMars twin mission, for which OHB System is supplying the carrier and the central system for the payload in the Mars Rover, has been almost completed, with all elements shipped to the principal contractor in 2019. Under this mission, Antwerp Space N.V. is building the lander radio instrument, which uses sophisticated communications technologies to transmit data from Mars to the earth. The company is also involved in the Jupiter JUICE mission, for which it is supplying the communications subsystem.

### Space research and robotics

In 2018, OHB System prevailed in the competition for the ESA contract for the PLATO mission. The purpose of the mission is to search for exoplanets, i.e. planets that orbit around other stars, and to determine the extent to which they are comparable to the earth. The satellite is to be launched in 2026. All milestones have been reached on schedule so far. OHB SE companies were again involved in several studies in connection with ESA's upcoming European scientific research missions in 2019. In this way, it is also building up a position for itself in this classic segment of space technology. In the year under review, OHB Sweden AB worked intensively on subsystems for the ESA Solar Orbiter research satellite, which was successfully launched on February 10, 2020.

The purpose of ESA's EUCLID scientific mission is to map the geometry of the universe and to better understand the mysteries of dark matter and dark energy. In October 2019, OHB Italia S.p.A. completed delivery of the hardware which had been ordered by the main contractor Thales Alenia Space Italy. This concerned the visible instrument and the near-infrared spectrometer/photometer.

November 2019 saw a further TEXUS flight from the Esrange launch pad near Kiruna in the north of Sweden. OHB System AG has been participating in this national DLR program, which conducts research in weightless conditions, since 1976.

### Human spaceflight

OHB System AG continued to provide extensive support for work on board the ISS International Space Station in 2019. This included the management of experiments as well as maintenance and repair work for the equipment developed and supplied by OHB System AG. OHB System performed several studies analyzing possible scenarios for transporting supplies to the ISS after the expiry of the ATV program and exploring potential alternatives in microgravitation research following the decommissioning of the ISS in 2024 or later. One key aspect of this is a future major role in the "Lunar Gateway", a potential international partnership led by NASA with the participation of ESA. NASA plans to place a temporarily human-occupied space station in an orbit around the Moon in the late 2020s. This station is to serve as a gateway for a future landing on the Moon or as a "springboard" for later flights to Mars. On the basis of the resolutions passed at the Council of Ministers conference in November 2019 concerning European participation, OHB has been working together with partners on bids for submission to ESA, with OHB System playing a central role in the ESA definition study for the "ESPRIT" supply module. Subsidiaries Antwerp Space and OHB Sweden AG are also involved in the definition of the "ESPRIT" module. MT Aerospace is also participating in studies on the gateway and will be contributing its skills in complex structures in the "Habitat" – a human-occupied station module.

**Space situational awareness**

Growing attention is being paid to asteroid defense. With Hera, preliminary groundwork is to be completed for a mission which may become necessary at some time to shield the earth from the impact of an asteroid. Hera is investigating the possibilities for deflecting asteroids that are on a collision course with the Earth from their original orbit by means of a targeted impact on the asteroid. A decision was made at the ESA Conference of Ministers in 2019 to approve the funding for this program. OHB System AG is expected to be awarded principal contractor status for the mission in mid-2020. Other Group companies will also be involved in this mission, with OHB Italia S.p.A., for example, providing the electrical power subsystem.

A definition study for one of the Lagrange missions is also being conducted at OHB to improve observations of space weather. This involves a large satellite weighing about two tons, which will be positioned at Lagrange point L5, where it will observe the solar surface continuously and provide early warning of solar flares. These eruptions on the surface of the sun can severely disrupt or even destroy satellites and electronics on the ground. The Conference of Ministers is expected to approve full funding of the L5 mission in 2022.

In a contract awarded by the Italian space agency ASI as well as ESA, OHB Italia S.p.A. has developed and patented the core technology for a new and innovative telescope for pinpointing asteroids approaching the earth as well as for detecting space debris in low and geostationary orbits. Known as the "Flyeye", the telescope combines a very large field of view with very high resolution. The development work and testing of the astronomical camera was completed in December 2019, with ESA approving the production of the 16 cameras needed for the first telescope. Installation of the first telescope in Sicily will be commencing towards the end of 2020. ESA is currently designing an assembly for a global optical network comprising up to 27 telescopes to monitor space. The budget for the second telescope to be installed in the southern hemisphere was secured at the Conference of Ministers.

**Ground stations and operations**

The SAR-Lupe operations handled by OHB System AG came to their contractual end in late November 2017 as planned. A contract for the continuation of the activities was signed with the German Federal Armed Forces at an early stage to avoid any disruptions in the satellite operations. The SARah ground facilities went into operation at the end of January 2018, additionally assuming responsibility for the operation of the SAR-Lupe satellites in 2019. As part of the contract for the Heinrich Hertz satellite communications mission, OHB has received an order for a further ground segment, which will commence operations in 2021.

**II. AEROSPACE + INDUSTRIAL PRODUCTS SEGMENT**

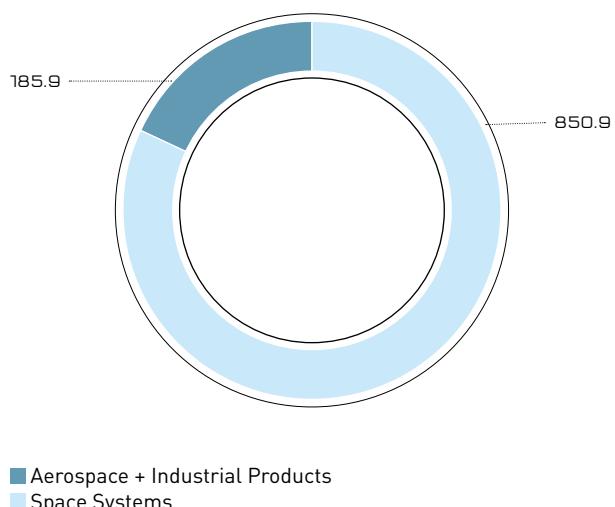
Business in the Aerospace + Industrial Products segment is chiefly characterized by long-term projects. The order backlog of EUR 186 million (December 31, 2019) together with projects that have already been approved but not yet awarded ensures forward planning visibility.

2019 saw four Ariane-5 launches. As expected, the scheduled production and shipment of four flight sets by MT Aerospace AG resulted in a reduction in capacity utilization in this area. Production of the booster assemblies was completed successfully, with the final components for the tanks and structures of Ariane 5 to be manufactured before the end of 2020. The maiden flight of the new-generation Ariane 6 is scheduled for the end of 2020. As the company holding system responsibility, MT Aerospace AG accounts for around 50% of the German share of a total of 23% in the development and production of the Ariane 6. Production of the components for the first flight model was completed successfully, so that these were shipped to the customer as planned in 2019. Series production orders for shipsets two to ten were also received and production of the corresponding assemblies has duly begun. MT Aerospace AG was able to further expand its business as a supplier in the US market for components for heavy launch vehicles in the year under review.

In the aviation area, volume production of the fresh and waste water tanks for the Airbus A320/330 program continued in accordance with plans. In general, aviation tank business is facing increased competitive pressure, which is being addressed with an efficiency enhancement program.

In the area of antennas and telescopes, MT Mechatronics received new orders worth EUR 60 million for the Giant Magellan Telescope in the year under review. Under this contract, the company is responsible for designing the telescope structure, supplying special drives and bearings and for providing the control electronics and software. The project for the National Astronomical Research Institute of Thailand, which entails the construction of a 40-meter radio telescope, continued according to schedule in 2019. The telescope is to be completed and handed over to the customer at the end of June 2020.

### [07] TOTAL REVENUES by segments before consolidation and Holding 2019, in EUR million



### [0] RESULTS OF OPERATIONS

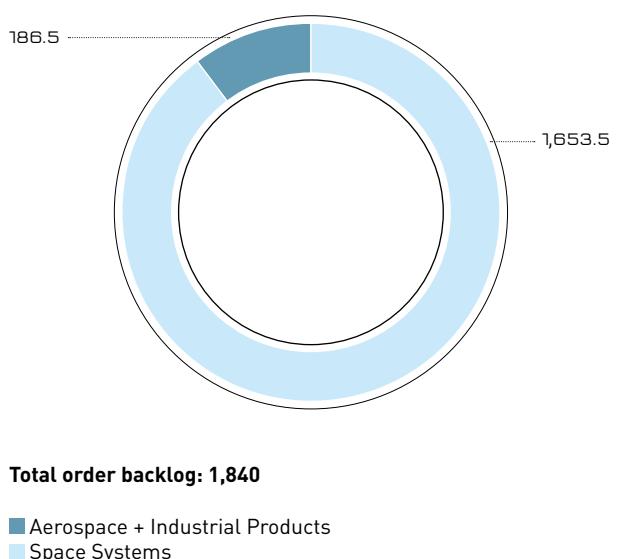
In 2019, the OHB Group's total revenues rose by EUR 29.7 million or 3% over the previous year to EUR 1,030.1 million. Consolidated sales came to EUR 1,004.6 million (previous year: EUR 976.6 million), with the relative share of the two segments moving in opposite directions as in the previous year. Non-consolidated total revenues SEE CHART [07] in the Space Systems segment reached EUR 850.9 million in 2019 (previous year: EUR 809.5 million) due to the progress made on key satellite projects. Non-consolidated sales increased by 5% to EUR 831.2 million (previous year: EUR 788.9 million). At EUR 185.9 million in 2019, non-consolidated total revenues in the Aerospace + Industrial Products segment were down 6% on the previous year due to expiring development work and the reduction in the production rate for the Ariane program compared with the previous year. Non-consolidated sales dropped from EUR 194.3 million in the previous year to EUR 180.0 million.

Reflecting the slightly higher consolidated total revenues, the subcontractor services included in the cost of materials (EUR 650.0 million) remained at the previous year's level. The increase of 164 in the Group headcount to 2,933 employees caused staff costs to increase by 9% to EUR 247.2 million.

Depreciation and amortization rose by 69% over the previous year to EUR 29.2 million. This was partially due to the additional amortization of intangible assets which were recognized in the first full year. Moreover, the initial application of IFRS 16 also had a significant impact (EUR 10.3 million). The change in accounting methods had a counteracting effect on other operating expenses, which fell by 15% to EUR 54.5 million as rents and lease payments are no longer included in this item.

Valued at EUR 1,840.0 million as of the reporting date, the OHB Group's order backlog SEE CHART [08] fell short of the previous year EUR 2,398.7 million. Of this, Space Systems accounted for EUR 1,653.5 million (previous year: EUR 2,231.0 million) and Aerospace + Industrial Products for EUR 186.5 million (previous year: EUR 167.7 million). The expected reduction in the consolidated order backlog is attributable to the ESA Conference of Ministers which took place in the fourth quarter of 2019. The budget decisions made at this conference form the basis for future contract awards, which usually do not arise to any significant extent in the quarters preceding the conference.

### [08] ORDER BACKLOG by segments as of December 31, 2019 in EUR million

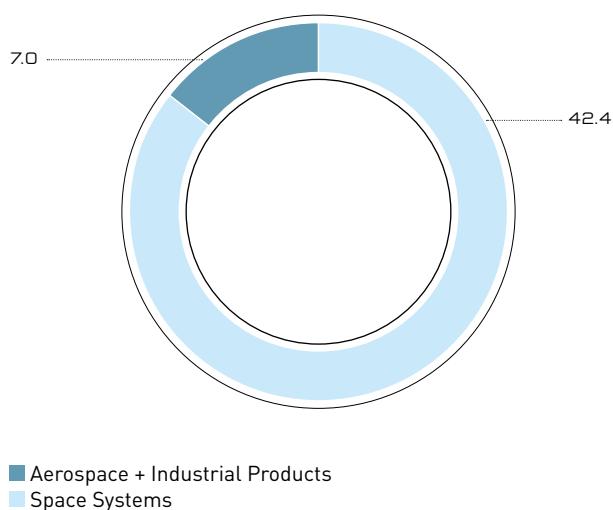


In the period under review, the OHB Group generated EBITDA **SEE CHART [09]** of EUR 78.3 million. The substantial increase over the previous year (EUR 65.0 million) was primarily due to accounting effects. EBIT **SEE CHART [11]** came to EUR 49.1 million (previous year: EUR 47.8 million). Net profit after tax and non-controlling interests stood at EUR 25.5 million in the year under review and was thus higher than in the previous year (EUR 25.0 million). Consequently, earnings per share came to EUR 1.47 in the year under review (previous year: EUR 1.44). EBIT before consolidation in the Space Systems segment **SEE CHART [10]** increased significantly from EUR 32.6 million in the previous year to EUR 42.4 million due, among other things, to work performed on the order backlog. Development work on the "SmallGEO" satellite platform for communications applications, which is already being used as a basis for various satellite programs, has resulted in greater capitalized development activities over the last few years in this segment. These were valued at EUR 10.5 million at the Group level in the year under review (previous year: EUR 16.7 million). EBIT in the Aerospace + Industrial Products segment dropped from EUR 15.7 million to EUR 7.0 million due to lower revenues from the Ariane program. The OHB Group recorded net financial expense of EUR 10.0 million in 2019 (previous year: EUR 3.7 million). This includes financial expense of EUR 7.1 million (previous year: EUR 5.6 million) chiefly comprising interest expense of EUR 2.2 million (previous year: EUR 2.0 million) on retirement benefit provisions and interest of EUR 3.7 million (previous year: EUR 3.0 million)

on financial liabilities. In addition, expense of EUR 3.7 million was incurred in 2019 from the recognition of an investment company using the equity method of accounting. The Management Board considers the year under review to be generally successful.

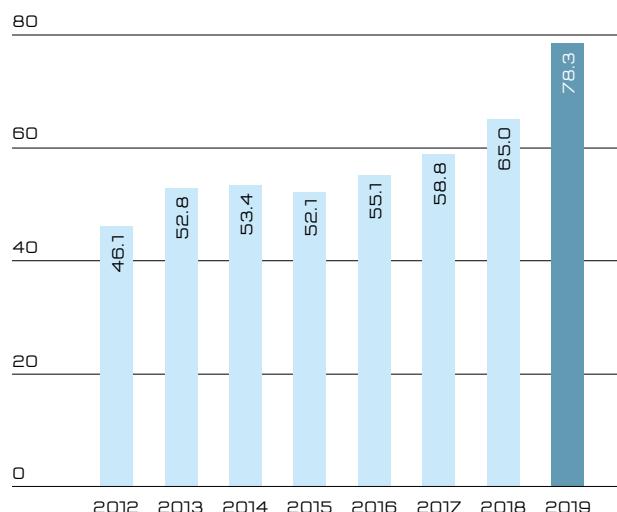
### [10] EBIT

by segment before consolidation and holding  
in EUR million



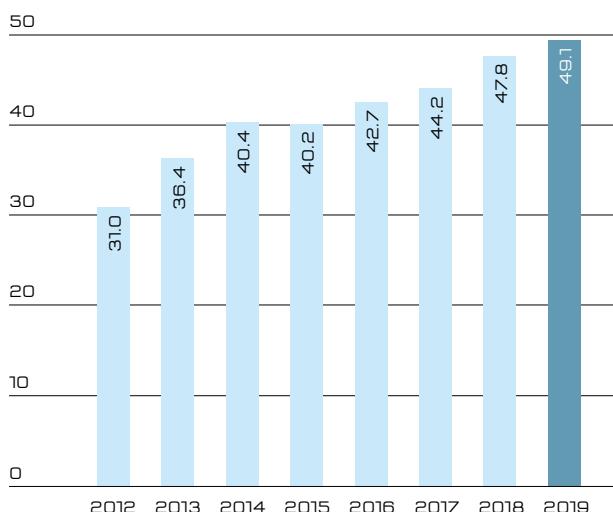
### [09] DEVELOPMENT OF EBITDA

2012–2019 in EUR million



### [11] DEVELOPMENT OF EBIT

2012–2019 in EUR million



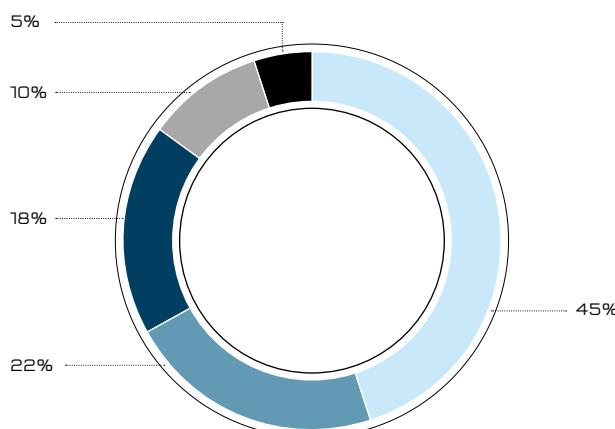
## [E] FINANCIAL AND ASSET SITUATION

In the year under review, the OHB Group's total assets widened considerably from EUR 753.6 million to EUR 931.0 million. Total trade receivables and contract assets came to EUR 416.7 million and were thus up on the previous year (EUR 348.1 million) due to the progress made on completing projects. Trade payables stood at EUR 166.7 million on the reporting date, thus falling short of the previous year (EUR 177.0 million). Contract liabilities increased from EUR 100.4 million in the previous year to EUR 155.7 million in the year under review due to the progress made on completing projects. The initial application of IFRS 16 caused assets to increase by EUR 54.9 million. With equity coming to EUR 200.8 million, meaning that it was virtually unchanged over the previous year (EUR 200.0 million), the equity ratio contracted from 26.5% in the previous year to 21.6%. The equity ratio was negatively impacted by other comprehensive income as a result of increased allocations to retirement benefit provisions and impairments recognized on financial assets of a total of EUR 15.8 million. Group capital spending on property, plant and equipment and intangible assets (excluding right-of-use assets under IFRS 16) totaled EUR 29.2 million in 2019 (previous year: EUR 38.4 million). Of this, the Space Systems segment accounted for EUR 21.5 million (previous year: EUR 23.3 million). This includes a sizeable amount of EUR 10.5 million for capitalized development activities, primarily in connection with a telecommunications platform. The Aerospace + Industrial Products segment accounted for EUR 7.7 million

(previous year: EUR 21.3 million), most of which was attributable to production capacities for components for launchers. Inventories increased from EUR 50.2 million to EUR 53.3 million. Cash and cash equivalents including securities were valued at EUR 85.5 million as of December 31, 2019, compared with EUR 48.7 million in the previous year. A detailed analysis of the cash flow can be found in the cash flow statement in the consolidated financial statements. At EUR 22.9 million, the cash flow from operating activities was in positive territory as of the reporting date primarily as a result of the consolidated net profit. The retirement benefit provisions of EUR 108.3 million at the end of 2019 continue to constitute a material item on the right-hand side of the balance sheet. Current financial liabilities increased from EUR 25.4 million to EUR 88.3 million as of the reporting date. These liabilities continue to arise from drawdowns on part of a credit facility obtained in December 2013. This facility was modified in May 2016 and renewed by a further two years until 2023. At the same time, the original amount was lowered from EUR 250 million to EUR 225 million, thus ensuring that any financial requirements can still be covered inexpensively. The loan facility is related to the timing differences between the services completed under long-term projects and the corresponding payment schedules for these projects. In addition, a loan for EUR 30 million, part of which is long term, was provided by the European Investment Bank, Luxembourg, in March 2017 to finance the Electra project at OHB System AG. The loans are not secured but are subject to three covenants, none of which were breached in the year under review.

### [12A] BALANCE SHEET STRUCTURE - ASSETS

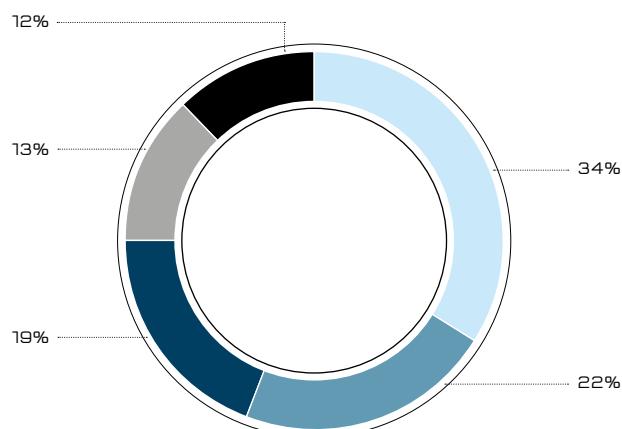
as at December 31, 2019



- Trade receivables and contract assets
- Other fixed assets
- Other non-current assets
- Property, plant and equipment
- Other current assets

### [12B] BALANCE SHEET STRUCTURE - EQUITY AND LIABILITIES

as at December 31, 2019



- Trade payables and contract liabilities
- Equity
- Other current liabilities
- Other non-current liabilities
- Provisions for retirement benefits and similar obligations

The cyclical nature of project business in the space industry calls for flexible funding structures. The company pursues the goal of securing its irregular liquidity requirements to finance current assets by means of corresponding credit facilities on which it can draw at any time. In the light of this goal, the Management Board generally considers OHB SE's net assets and financial condition to be solid.

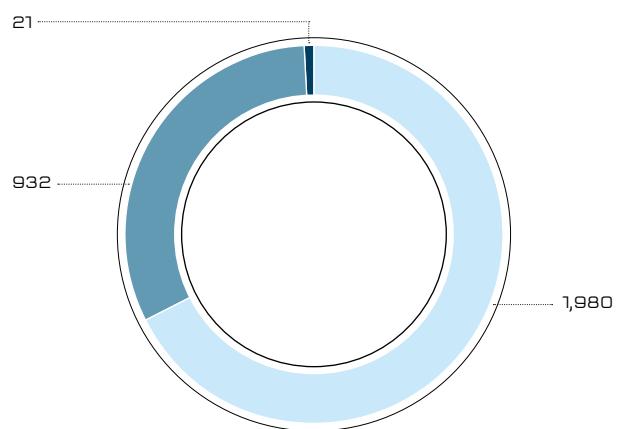
## [F] EMPLOYEES

Following the recruitment of 349 new employees in the previous year, OHB SE also recorded substantial growth in its workforce in 2019 with a total of 164 new employees [SEE CHART \[13\]](#). As in the previous year, the Space Systems segment was the main driver of this growth in new recruits.

Consequently, a total of 2,933 people were employed by the Group as of December 31, 2019, 2,403 of them in Germany and 530 in other countries [SEE CHART \[14\]](#). The fact that it was possible to achieve the above-mentioned recruitment rate despite a still tight employment market for engineers is due to a series of highly targeted personnel marketing measures in addition to the high level of press attention that space technology and particularly OHB is attracting. The already high percentage of non-German employees increased again by roughly 2 percentage points to about 27% as a result of the new recruitment drive. The average age of the workforce dropped again to 42.0 years. The regular dialog with OHB SE employee representatives, which has been in place since November 2015, was held in two scheduled meetings in Bremen and Antwerp in 2019.

### [13] NUMBER OF EMPLOYEES BY SEGMENT

as at December 31, 2019

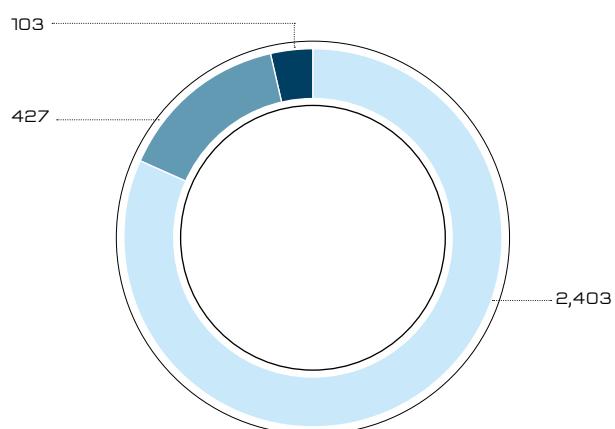


**Total personnel: 2,933**

- Holding
- Aerospace + Industrial Products
- Space Systems

### [14] NUMBER OF EMPLOYEES BY REGION

as at December 31, 2019



**Total personnel: 2,933**

- Rest of the world
- Europe without Germany
- Germany

## GROUP PARENT OHB SE

As the parent company, OHB SE assumes the function of an active holding company for the OHB Group. OHB SE's main task is to provide administrative services, particularly in the areas of finance, controlling, legal, communications and Group strategy for various subsidiaries. In addition, OHB SE grants or procures loans for individual Group companies to fund their operations.

## Results of operations

The company's business performance in 2019 was materially determined by the earnings contributions of its subsidiaries, particularly OHB System AG, which is linked by a profit transfer agreement. An individual billing-related effect resulted in a profit transfer of EUR 10.5 million, which exceeded expectations. Net profit for the year came to EUR 20.511 million in 2019 (previous year: EUR 5.447 million). The earnings are primarily due to the profit of EUR 28.647 million (previous year: EUR 10.013 million) transferred from the wholly owned subsidiary OHB System AG, with which a profit transfer agreement is in force. Staff costs and other operating expenses are mostly recharged to the Group companies under transfer pricing arrangements. This generated revenues of EUR 9.637 million in the year under review (previous year: EUR 9.108 million). In addition, other income of EUR 0.174 million (previous year: EUR 0.159 million) was recognized. In 2019, OHB SE achieved net financial income including earnings under profit transfer agreements and investment income of EUR 29.959 million (previous year: EUR 9.252 million). This increase was underpinned by the profit of EUR 28.647 million received from OHB System AG. As one major project was invoiced in full in accordance with German GAAP, the profit transferred included a substantial non-recurring effect. In addition, a dividend of EUR 2.0 million was received from MT Holding GmbH in 2019.

Income taxes came to EUR 9.452 million (previous year: EUR 3.473 million). The income tax expense in the previous year had been reduced by unused tax losses which were utilized in full in that year. OHB SE achieved an unappropriated surplus of EUR 24.403 million (previous year: EUR 11.375 million). The Management Board considers the year under review to be generally successful. A dividend of EUR 0.43 per share was paid to the shareholders in the year under review.

## Financial and asset situation

Total assets rose by EUR 24.487 million to EUR 132.527 million primarily as a result of the increased profit transfer. There was no material capital spending on non-current assets in the year under review. The equity of EUR 64.032 million is equivalent to 48.3% of total assets. As in the previous year, the financial assets of EUR 60.507 million (previous year: EUR 59.344 million) account for the greatest proportion of assets. As of the reporting date, there was an outstanding loan receivable of EUR 24.050 million (previous year: EUR 27.408 million) against the Group company OHB Italia S.p.A. Receivables from affiliated companies increased due to the aforementioned profit transfer. Cash and cash equivalents stood at EUR 0.498 million as of the reporting date (previous year: EUR 1.141 million). Since 2013, OHB SE has had a credit facility agreement with seven different banks, providing the OHB Group with liquidity for project finance. This agreement was prematurely renewed in May 2016 on more favorable terms and increased to EUR 225 million. It was renewed again in 2018 until May 2023. As of the end of the year, OHB SE had drawn EUR 40 million. The cyclical nature of project business in the space industry calls for flexible funding structures. The company pursues the goal of securing its irregular liquidity requirements to finance current assets by means of corresponding credit facilities on which it can draw at any time. The Management Board generally considers OHB SE's net assets and financial condition to be solid.

## RELATED PARTIES REPORT

The OHB Group is effectively controlled by the Fuchs family via its direct and indirect equity interests. For this reason, the Management Board has prepared a related parties report in accordance with Section 312 of the German Stock Corporation Act, which was audited and certified as part of the audit procedures for the annual financial statements. In this related parties report, the Management Board makes the following declaration: "The Management Board declares that with respect to the transactions described in the related parties report OHB SE received reasonable remuneration for each transaction in the light of the circumstances of which it was aware at the point in time at which the described transactions were executed with affiliated companies as defined in Section 312 of the German Stock Corporation Act. In the period under review, no legal transactions with third parties or measures were either executed or omitted at the instigation of or in the interests of the above-mentioned persons or an affiliated company."

## III. OUTLOOK, RISK AND OPPORTUNITY REPORT

### [A] OUTLOOK

#### I. SPACE SYSTEMS SEGMENT

In 2020 and beyond, the Space Systems segment will be concentrating on the continuation of its successful work on the Galileo, SARah, Meteosat Third Generation, Electra, EnMAP, NAOS, Heinrich Hertz, electro-optical satellite system OptSat and PLATO projects. Numerous feasibility studies are currently being conducted in areas of research to be addressed by ESA's earth observation and exploration missions and corresponding proposals are being prepared. The focus is on the future Sentinel earth observation missions within the Copernicus program, in which OHB System AG and OHB Italia S.p.A. in particular are involved through study contracts and which are expected to yield new orders for missions. Further activities and studies will concentrate on space surveillance, asteroid defense and the ongoing operation of the ISS and the Lunar Gateway successor program. Depending on the program, OHB companies are acting either as a principal contractor or a subcontractor. OHB System AG is also currently preparing extensive bids for the next-generation Galileo satellites and expects to receive orders in 2020. With respect to national Italian programs, OHB Italia S.p.A. intends to systematically broaden its role as second player in Italy for satellite missions, both for science and remote sensing. Budgetary decisions on the part of the European Commission, ESA and in the national space programs in Germany and Italy as well as the other countries in which OHB companies are located point to largely positive underlying conditions and provide a sufficiently firm basis for future planning. With its current and planned projects and programs, the Management Board believes that OHB SE's Space Systems segment is ideally positioned to sustain the broad-based project portfolio which it has achieved and to continue growing successfully thanks to above-average order intake in 2020.

#### II. AEROSPACE + INDUSTRIAL PRODUCTS SEGMENT

In 2020, the program transition from Ariane 5 to Ariane 6 will be continued in the Aerospace + Industrial Products division. The Ariane 5 program, which has secured substantial portions of the division's production output and sales in recent years, will be phased out in the current year. Development of Ariane 6 will be completed in 2020, after which production will be ramped up to an annual cadence of four for tanks and structures. At the ESA Conference of Ministers held in November 2019, the Federal Republic of Germany committed around EUR 600 million for launcher engineering in the Ariane Transition, Ariane 6 Product Improvement, FLPP technology programs and Commercial Space Transportation segments. MT Aerospace will be participating in proposed programs in 2020 in close consultation with DLR and ESA.

### III. OUTLOOK FOR OHB SE

Assuming stable economic conditions, the company expects moderate growth in total revenues for 2020, with largely comparable earnings contributions from the subsidiaries and a continued very good order situation. Net profit for 2020 should reach a level between the figures recorded for 2018 and 2019 in view of the very high net profit recorded in the previous year due to billing effects.

### IV. OUTLOOK FOR THE GROUP

The Management Board expects consolidated total revenues for the OHB Group of EUR 1.1 billion in 2020 largely due to the order backlog existing at the end of 2019. EBITDA should come to EUR 80 million and EBIT to EUR 44 million in 2020. One important non-financial performance indicator is the fluctuation rate, for which a target of less than 5% has been defined.

It should be expressly noted in connection with forward-looking statements that actual events may differ materially from expectations of future performance. This particularly applies in the light of the corona pandemic that has now been identified by the World Health Organization, which – as explained in the risk report – will have a more or less adverse effect on OHB's earnings depending on the duration of the stress to which the European economy is exposed.

### [B] RISK AND OPPORTUNITY REPORT

#### I. RISK AND OPPORTUNITY MANAGEMENT SYSTEM

OHB SE's Management Board permanently monitors the Group's operating, market and financial risks in order to safeguard the Group's sustained business success. Assisted by the central departments, the Management Board observes and analyzes trends in the sector, markets and economy as a whole on an ongoing basis. In this connection, OHB SE's risk management system responds to the uncertainties to which the Group companies are exposed by identifying and evaluating opportunities and risks systematically and regularly and, if necessary, defining and implementing suitable measures and precautions. This applies to operating risks as well as project-related and technical risks. In this connection, product and quality assurance officers continuously monitor design, construction and integration activities as well as deliveries received from upstream suppliers.

As OHB SE is closely linked with the companies of the OHB Group through its holding or management function as well as its direct and indirect investments in the subsidiaries, its risk and opportunity profile is materially dependent on the OHB Group's risk and opportunity profile. Accordingly, the statements on the risk and opportunity profile made by management for the Group largely match the statements made on OHB SE's risk and opportunity profile.

In addition to the aforementioned systematic identification, evaluation and management of risks, a detailed monthly report for tracking orders and costs provides important input for overall risk management. Reporting also covers all business acquisition, research and development activities and allows potential opportunities and risks to be identified at an early stage. The subsidiaries submit standardized monthly or quarterly reports to OHB SE covering all processes, opportunities and risks of relevance for the Group. The individual subsidiaries deploy different software systems for generating reports, e.g. SAP or business intelligence solutions. We consider the following types of risk to be relevant for OHB SE's business activities.

## II. INDIVIDUAL RISKS

### Sector risks, risks in underlying conditions

The Space Systems segment primarily works for public-sector customers at a national and European level. Order intake is exposed to risks arising from the budgets of public-sector customers (chiefly the European Commission, the European Space Agency ESA, national ministries such as the German Federal Ministries of Economics, Defense and Transportation as well as the national space agencies of the other Member countries). However, this situation is becoming increasingly favorable for OHB SE in view of its special standing as a German and European systems provider for space technology with a special focus on security.

Further significant growth is possible within the confines of this market, which is expected to continue growing in the foreseeable future. Other opportunities beyond this are primarily to be found in the commercial and export markets. This segment has been closely observed and analyzed for a number of years and preliminary activities in this direction are in the acquisition phase. The focus is on projects in the areas of telecommunications satellites, radar satellites and electro-optical and multispectral satellites for earth observation. Given the large order backlog and, resulting from this, the high-level utilization of existing capacities as well as the good potential for growth in the European institutional market, the company has not yet given top priority to market entry in this currently price-sensitive segment.

In the Aerospace + Industrial Products segment, the greatest risk continues to come from the heavy dependence on the space sector and, in particular, on the European Ariane program, contract awards for which will largely determine the utilization of production capacity in the coming years. The relevant demand for geostationary satellites has stabilized at a low level. It is crucial to continue strengthening European competitiveness in view of the emergence of US competitors, particularly SpaceX, which has now secured a firm place for commercial satellite launches as a result of successful launches.

### Strategic risks

The Space Systems segment is exposed to risks related to the on-time and in-budget completion of the currently ongoing programs particularly in the principal contractor role with overall responsibility under the agreed schedule and budget. Advance outlays were again made in 2019 for the development of strategically important product segments, the costs of which must be recouped from the development of business in the corresponding applications. In the medium term, a balanced book-to-bill ratio is required to maintain the current high order backlog. In the short term, there may also be a decline in the order backlog in view of the nature of project business and the budget approval cycles, especially on the part of ESA. However, this does not have an adverse effect on the business outlook.

The Aerospace + Industrial Products segment is still heavily dependent on the Ariane program, with the successful market launch of Ariane 6 being of particular relevance. In addition, project delays in this program mean that development and production risks continue to apply to the delivery of components for the Ariane 6 maiden flight, leading to tight delivery schedules for suppliers. Turnaround and sourcing times are analyzed and tracked carefully to minimize these risks. In this way, the impact of any changes on the schedule are known in good time and can be addressed jointly with the customer if necessary.

### Sourcing risks

Risks arise from the late delivery of components and subsystems, which could lead to project delays. The company optimizes its supply chain by observing the buy-side market continually, monitoring suppliers on an ongoing basis and increasingly taking measures to safeguard the local availability of supplies. In addition, efforts are being stepped up to identify alternative procurement sources on a global basis. This must be done in the light of any restrictions which may be stipulated by customers for specific products, reducing the scope for free selection of suppliers. The Space Systems segment is exposed to sporadic supply-side risks in the sourcing of subsystems. This includes scheduling and development risks. These possible risks are already minimized by means of an intensive selection process for the corresponding suppliers.

The Aerospace + Industrial Products segment is generally exposed to similar risks and takes similar measures to mitigate these. In particular, suppliers are subject to continuous observation and regular audits are performed. The risks arising from development projects are generally higher, whereas more selective or disruptive disturbances may occur in the series production phase.

**Project risks**

The risk management system used for bid-costing and ongoing project management involves regular escalated reporting to the project managers, the management of the operating companies and OHB SE. All projects are integrated in a continuous controlling and monitoring process. Projects exceeding a certain size threshold are additionally subject to regular reviews by the responsible management to specifically monitor and manage technical performance as well as schedule, cost and budget compliance and project risks. Given the systems underlying our business model, there are inherent risks in the observance of schedules as well as development risks liable to cause considerable project delays and costs. In individual cases, the OHB companies define project targets within existing contracts which are at the limits of what is technically possible and which are the first of their kind in the world to be realized in a specific way.

**IT risks**

The continuous improvement process for information services and systems has heightened the standards achieved in data protection and quality to maximize confidentiality, availability and integrity. The Group companies are permanently modernizing and expanding the security features of their hardware and software solutions by using best-in-class components sourced from renowned OEMs.

The threat posed by cyber risks has continued to increase over the past year. For this reason, the IT security mechanisms and related IT procedures and processes have been continuously expanded and optimized to avert external and internal threats. IT is working on comprehensive security solutions, covering such aspects as firewalls, endpoint security, network segmentation and monitoring. This ensures data integrity and protects data confidentiality and, hence, the companies' intellectual property. The effectiveness of the measures is verified by penetration tests, which were carried out at the end of 2019 and at the beginning of the current year. All measures necessary to additionally increase security are initiated.

With the establishment of OHB Infosys GmbH as an internal IT service provider and the definition of a Group CIO function, the organizational basis has been created for further standardization, harmonization and effectiveness of IT processes and procedures.

**Financial risks**

Most goods and services procured are invoiced in euro. Foreign-currency transactions in the dollar region may result in translation gains or losses. As a general rule, the Aerospace + Industrial Products segment hedges dollar-denominated orders and receivables. The securities entail long-term investments with manageable risks. Working capital requirements can be reduced substantially by means of progress billings. However, as this cannot be achieved continuously in all project phases, liquidity may fluctuate sharply. The credit facility agreement signed in December 2013 with a syndicate of seven banks to avert liquidity risks was expanded in May 2016 and renewed until 2023 in May 2018. In addition, a supplementary loan contract was entered into with the European Investment Bank EIB in Luxembourg in 2017 with a term expiring in 2024. With respect to retirement benefit provisions, we expect to see a smaller change in the interest rate than was the case in 2019.

**Personnel risks**

The main risk with respect to human resources remains the recruitment of new employees in a timely manner and in line with qualification requirements, primarily in engineering. As the high demand of recent years has been met thanks to intensified personnel marketing initiatives, the personnel recruitment risk described above is now ceding to the risk of a gap between entry-level knowledge and the industry-specific experience essential in the space sector. In order to close this gap as quickly as possible, various learning initiatives in the form of inhouse training and targeted individual sharing of expertise were launched in 2019.

### **Management assessment of the risk situation**

Throughout 2019, the OHB Group's exposure was for the most part confined to the risks described. In the light of current market trends in the areas of the greatest relevance for the company and the outlook for its business, order backlog and financial situation, the Management Board considers future risks to the Group to be manageable. No risks to the Group's going-concern status are currently discernible. The OHB Group's exposure to global risk factors is very limited (particularly due to its very low dependence on global logistics chains and supplies outside Europe).

A pandemic of the type that has now been identified by the World Health Organization in the form of the coronavirus could have an adverse effect on the OHB Group's business, which is highly dependent on the dense network of European space technology suppliers. A further risk may arise from delays in the Group's own production due to illnesses or governmental lockdowns. OHB regularly monitors the situation and is attempting to identify potential impacts on its supply chains and its own production at an early stage as a basis for taking appropriate countermeasures. The overall extent of the possible effects – particularly on our Milan site at the moment – cannot be estimated due to the constantly changing government response to the spread of the virus and the uncertain time horizon. There was no impact as of December 31, 2019.

### **III. MATERIAL OPPORTUNITIES**

The space market offers OHB companies in the Space Systems, Aerospace + Industrial Products segments and, in the future, the Digital segment a prospering growth market with a steady stream of new applications. Systematic observation of all relevant requests for proposals on a European and also a national level allows the OHB companies to take part in virtually all relevant institutional bidding processes in Europe. With its European-wide presence and strong national companies specializing in selected technologies and applications in the space industry, OHB additionally has the opportunity of bidding for space contracts which are awarded to individual nations in accordance with the geographic return principle within ESA alongside EU-wide bids. In the individual Member countries, the Group's national companies are additionally able to bid for contracts and projects awarded by the national space agencies. The high degree of specialization of the individual companies within the OHB Group together with the system leadership

capabilities demonstrated in many contracts generally means that when the individual companies bid for a major ESA project they receive the status of lead-manager or subcontractor to the lead-manager. With the growing establishment of satellite platforms, the OHB Group is now increasingly also entering the field of commercial missions.

The future new OHB Digital segment will be substantially increasing the OHB Group's activities in space-related services such as satellite operations or launch services as well as software solutions based on space-generated data. This offers growth potential beyond institutional business with new customer groups in agriculture, fisheries, environmental monitoring, IoT, autonomous mobility, etc.

Secular trends such as the Internet of Things, future mobility, global digitalization and broadband communications in remote areas, climate and environmental protection and preservation of our planet are spurring demand for space-based solutions. In addition to public-sector contracts and development projects, this will additionally drive the commercialization of space worldwide. Telecommunications, navigation, cartography and the increasing exploration of the earth by means of space technology are of key importance in this connection for the future development of the space industry. OHB also sees good opportunities for entering the nascent "new space economy" market. For this purpose, the Group will also apply its own funds in close consultation with its customers.

The OHB companies' specific space expertise is based on the long-standing experience of the responsible persons within the Group as well as basic research and development performed in this area allowing promising future areas and developments in space flight to be identified and responses to them adopted. Recent studies expect more than two thirds of satellite orders in the period from 2019 to 2028 to come from civil or military public budgets, i.e. the area in which OHB is particularly strongly positioned. The largest single market will be earth observation, which is another strong field for the OHB Group. Growth will also be spurred by widening budgets in Germany for civil and military space travel as well as larger ESA budgets.

As with business risks, project management may also generate opportunities from systematic claim management based on the project review process.

## IV. INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

The control and risk management system forms an integral part of the corporate, planning, accounting and control processes and constitutes a material element of the management system of OHB SE and the Group companies. OHB SE's risk management system addresses the uncertainties to which the Group companies are exposed by identifying and evaluating opportunities and risks systematically and regularly and, if necessary, defining and implementing suitable measures and precautions. This applies to operating risks as well project-related and technical risks. In this connection, product and quality assurance officers continuously monitor design, construction and integration activities as well as deliveries received from upstream suppliers.

Monthly and quarterly reporting forms an integral part of OHB Technology's risk management operations and has been additionally improved. Group-wide controlling instruments supported by business intelligence software are used for reporting purposes. This primarily entails comparisons of the actual/required figures and deviation analyses. Budgeting, regular forecasts and ongoing reporting discussions supplement standardized reporting.

OHB SE secures the process for preparing the consolidated financial statements in several different ways. In addition to an accounting manual which all subsidiaries must observe, this entails regular evaluations of the quarterly and monthly reports and ad-hoc detailed analyses on matters and developments at the level of the individual subsidiaries as well as for the Group as a whole. In addition, the consolidation process as well as the process for preparing the management report and the notes to the consolidated financial statements are reviewed by the finance department and the Management Board. Appropriate precautions are taken in the accounting process to ensure full implementation of the double-sign-off principle. Access restrictions in the information management system ensure a high degree of data security. These and other measures are subject to regular review by Group Internal Auditing. In addition, the accounting system used by subsidiaries complies with the requirements of public-sector contract awarding rules. Customer payment practices are monitored on an ongoing basis to minimize financial risks. In addition to a multi-level reminder system, controlling methods include regular reports to the responsible management. The OHB Group's

customer base comprises a large proportion of public-sector customers both directly and indirectly. For this reason, the risk of payment defaults is very small. Over the past few years, there have been virtually no payment defaults. Prepayments received comprise part payments remitted upon the completion of specific project milestones. In this way, it is possible to minimize liquidity risks and working capital requirements.

## V. REMUNERATION REPORT

The remuneration paid to the Members of the Management Board comprises fixed and variable components. The service contracts of the Members of the Management Board have the following expiry dates: Marco Fuchs' contract expires on June 30, 2021, Klaus Hofmann's contract expires on October 31, 2023, Kurt Melching's contract expires on March 31, 2023 (service contract with OHB System AG) and Dr. Lutz Bertling's contract expires on March 31, 2022. In the case of Marco Fuchs and Dr. Lutz Bertling, the variable compensation is calculated solely as a percentage of the company's business performance (percentage of EBT); in the case of Klaus Hofmann and Kurt Melching, it is based on a combination of agreed personal targets and the company's business performance. Share-based remuneration components with a long-term incentive are only provided for in the service contract with Dr. Lutz Bertling. In the event of the death of a Management Board Member, his surviving dependents are entitled to receive continued payment of that Member's fixed remuneration for a further period of up to six months.

Management Board Members Marco Fuchs, Klaus Hofmann and Dr. Lutz Bertling were entitled to the use of a company car in 2019. The remuneration paid to the Members of the Management Board breaks down as follows: The total fixed remuneration plus benefits such as an advance towards health and pension insurance as well as private use of a company car and activities on internal group supervisory boards paid in 2019 came to EUR 1.262 million (previous year: EUR 1.482 million). Expected variable remuneration stands at EUR 1.660 million (previous year: EUR 1.425 million).

Marco Fuchs received a sum of EUR 0.375 million (previous year: EUR 0.365 million) as fixed remuneration plus all benefits such as advances towards health and pension insurance. Variable remuneration is expected to equal EUR 0.700 million in 2019 (previous year: EUR 0.600 million). Klaus Hofmann received a sum of EUR 0.306 million (previous year: EUR 0.293 million) as fixed remuneration including all benefits such as advances towards health and pension insurance. Variable remuneration for Klaus Hofmann is expected to equal EUR 0.150 million in 2019 (previous year: EUR 0.130 million). Kurt Melching received a sum of EUR 0.243 million (previous year: EUR 0.182 million, for nine months) as fixed remuneration including all benefits such as advances towards health and pension insurance. In addition, the variable remuneration accruing to Kurt Melching is expected to equal EUR 0.110 million for 2019 (previous year: EUR 0.100 million). Dr. Lutz Bertling received a sum of EUR 0.338 million (previous year: EUR 0.253 million as ongoing remuneration and EUR 0.195 million as a once-only payment after signing the contract) as fixed remuneration including all benefits such as advances towards health and pension insurance. His variable remuneration is expected to equal EUR 0.700 million for 2019. In addition, he was granted a long-term incentive commitment in 2018 in the form of an allocation of 12,500 OHB SE shares for each year from 2018 to 2021, which was not utilized in 2019.

Christa Fuchs received surviving-dependents benefits of EUR 22 thousand from OHB System AG for the Management Board Member Prof. Manfred Fuchs, who had passed away in 2014.

Robert Wethmar, who has been Chairman of the Supervisory Board since April 1, 2018, received EUR 29 thousand (previous year: EUR 25 thousand), Christa Fuchs (Chairwoman of the Supervisory Board until March 31, 2018) received EUR 23 thousand in 2019 for her duties in 2018 (previous year: EUR 30 thousand), Prof. Heinz Stoewer received EUR 25 thousand (previous year: EUR 20 thousand) and Ingo Kramer (Member of the Supervisory Board since June 19, 2018) received EUR 12 thousand. Variable remuneration components were dispensed with for the Members of the Supervisory Board. Provisions of EUR 95 thousand were recognized for 2020.

Under a contract with the law firm Taylor Wessing, of which Robert Wethmar is a partner, fees of a total of EUR 0.288 million were paid in consideration of advisory services provided for the benefit of Group companies.

## VI. DISCLOSURES IN ACCORDANCE WITH SECTION 289A (1) AND SECTION 315A (1) OF THE GERMAN COMMERCIAL CODE

### [A] BREAKDOWN OF SUBSCRIBED CAPITAL (NO. 1)

Issued capital stood at EUR 17,468,096.00 on the reporting date and was divided into 17,468,096 no-par-value bearer shares.

### [B] RESTRICTIONS TO VOTING RIGHTS OR THE TRANSFER OF SHARES (NO. 2)

Prof. Dott. Ing. h.c. Manfred Fuchs, Christa Fuchs and Marco Fuchs, (who are also shareholders of VOLPAIA Beteiligungs-GmbH), and VOLPAIA Beteiligungs-GmbH in their capacity as shareholders of OHB Teledata AG (as the company was then known), entered into a pooling contract on December 20, 2001 providing for the coordinated exercise of voting rights with respect to present and future share holdings.

On February 4, 2009, the parties signed an addendum to this pooling contract imposing on them restrictions with respect to the sale of the shares held in the pooling contract. On July 10, 2009, the parties signed a revised version of the pooling contract. Romana Fuchs Mayrhofer joined this pool in January 2010. A total of 69.72% of the company's issued capital is held in this pooling contract. There were no changes in the total number of pooled voting rights as a result of Prof. Manfred Fuchs' death in April 2014. The pooling contract between Marco Fuchs, Romana Fuchs Mayrhofer, Christa Fuchs and VOLPAIA Beteiligungs-GmbH was revised on February 21, 2017, although there were no material changes in the main elements outlined above.

### I. SHARES EXCEEDING 10% OF THE VOTING CAPITAL (NO. 3)

As of the reporting date, Marco Fuchs held 34.62% of OHB SE's subscribed capital (6,046,610 shares). VOLPAIA Beteiligungs-GmbH holds a further 21.35% of the company's shares. Together with the shares held by Christa Fuchs (8.03%, 1,401,940 shares) and Romana Fuchs Mayrhofer (5.72%, 1,000,000 shares), 69.72% (12,178,720 shares) of the company's shares are subject to a pooling contract providing for the coordinated exercise of voting rights as of the balance sheet date. Romana Fuchs Mayrhofer holds an additional 378,626 shares in OHB SE (2.17%) outside the scope of the pooling contract.

## **II. STATUTORY STIPULATIONS AND PROVISIONS CONTAINED IN THE COMPANY'S BYLAWS WITH RESPECT TO THE APPOINTMENT AND DISMISSAL OF MEMBERS OF THE MANAGEMENT BOARD AND AMENDMENTS TO THE BYLAWS (NO. 6)**

With respect to the appointment and dismissal of Members of the Management Board, reference is made to the provisions contained in Article 39 and Article 9 (1) c) ii] of the Statute for a European company (SE) in connection with Sections 84 and 85 of the German Stock Corporation Act. Under Article 8 (2), the Supervisory Board is empowered to appoint a Member of the Management Board as Chairman and further Members of the Management Board as Deputy Chairman. The procedure for amending the bylaws is governed by Sections 133, 179 of the German Stock Corporation Act. Article 21 of OHB SE's bylaws also authorizes the Supervisory Board to make amendments to the bylaws affecting only their wording.

## **III. POWERS OF THE MANAGEMENT BOARD TO ISSUE OR BUY BACK SHARES (NO. 7)**

At the annual general meeting held on May 21, 2015, the shareholders passed a resolution authorizing the Management Board to buy back up to 10% of the company's share capital in existence as of the date of the resolution on or before May 20, 2020. Authorization was granted to use the company's shares for all purposes permitted by law including but not limited to:

- the placement of the company's shares in foreign stock exchanges,
- the acquisition of all or parts of other companies or shares therein,
- offering and transferring shares to the employees of the company or other companies related with it in accordance with Sections 15 et seq. of the German Stock Corporation Act,
- redeeming treasury stock without any need for a resolution of the shareholders.

The company held 67,996 shares as treasury stock as of the reporting date. This is equivalent to around 0.39% of the share capital. At the annual general meeting held on May 21, 2015, the shareholders authorized the Management Board to increase with the Supervisory Board's approval the company's share capital by up to EUR 8,734,048.00 on a cash or non-cash basis by issuing new shares once or several times on or before May 20, 2020. The new shares may also be issued to the company's employees. In addition, the company's Management Board was authorized – subject to the Supervisory Board's approval – to exclude the shareholders' subscription rights

- for fractional amounts;
- for part of the authorized capital up to a maximum of EUR 1,746,809.00 provided that the new shares are issued on a cash basis at a price not materially less than the stock-market price;
- for a part of the authorized capital up to a maximum of EUR 8,734,048.00 provided the new shares
  - are issued as consideration for the acquisition of all or part of other companies or entities or other assets and such acquisition is in the interests of the company; or
  - are issued on a cash basis to have the company's stock listed in a foreign market in which it has previously not been admitted to trading.

The Management Board is additionally authorized subject to the Supervisory Board's approval to determine the extent and nature of the option rights and the other conditions of issue. Please refer to the corresponding parts of the notes on the consolidated financial statements for further information.

## **VII. CORPORATE GOVERNANCE DECLARATION**

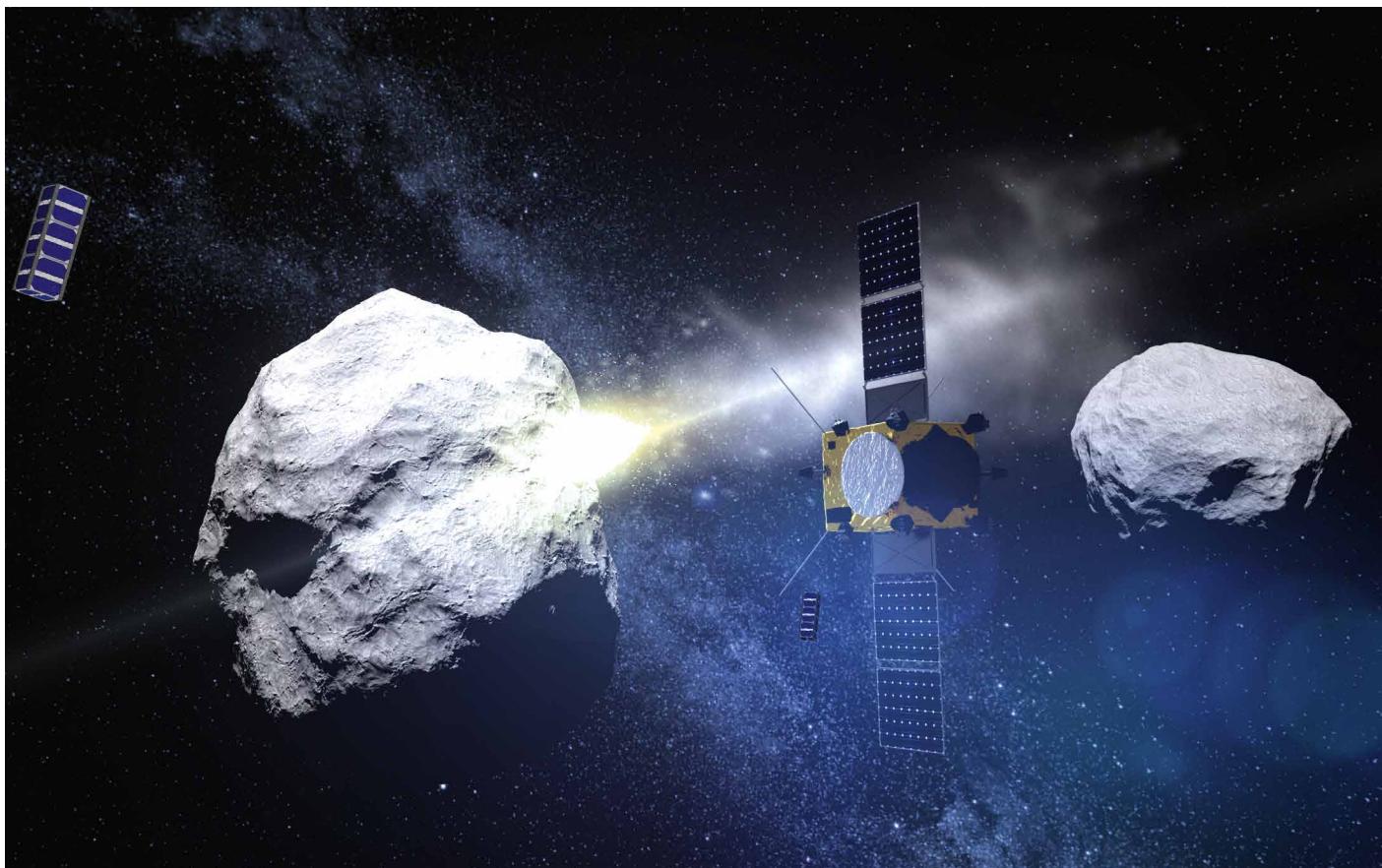
The corporate governance declaration was officially published on OHB SE's website on March 17, 2020.

The Internet address is:

<https://www.ohb.de/en/investor-relations/corporate-governance/corporate-governance-declaration/>

# CONSOLIDATED FINANCIAL STATEMENTS

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# I. CONSOLIDATED INCOME STATEMENT

in EUR 000	Notes	2019	2018
Sales	1	1,004,618	976,551
Reduction in inventories of finished goods and work in progress	2	-1,889	-3,327
Other own work capitalized		11,554	16,697
Other operating income	3	15,803	10,471
<b>Total revenues</b>		<b>1,030,086</b>	<b>1,000,392</b>
Cost of materials	4	649,966	645,588
Personnel costs	5	247,246	226,836
Depreciation and amortization of property, plant and equipment, intangible assets and right-of-use assets	12, 13, 14	29,222	17,262
Impairment expense/income	32	68	-869
Other operating expenses	6	54,475	63,824
<b>Operating profit (EBIT)*</b>		<b>49,109</b>	<b>47,751</b>
Interest and similar income	7	1,393	1,609
Interest and other borrowing costs	7	7,142	5,580
Currency translation losses/gains		-348	-263
Share of profit of associates	8, 15	-3,708	820
Net income from investments		-160	-245
<b>Net financial income/expense</b>		<b>-9,965</b>	<b>-3,659</b>
<b>Earnings before taxes (EBT)**</b>		<b>39,144</b>	<b>44,092</b>
Income taxes	9	13,515	15,699
<b>Consolidated net profit for the year</b>		<b>25,629</b>	<b>28,393</b>
Share of OHB SE shareholders in net profit for the year		25,543	24,998
Minority interests	10	86	3,395
Average number of shares (in units)		17,400,100	17,394,718
Earnings per share (basic, EUR)	11	1.47	1.44
Earnings per share (diluted, EUR)	11	1.47	1.44

\* EBIT = Earnings Before Interest and Taxes

\*\* EBT = Earnings Before Taxes

## II. CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

in EUR 000	Notes	2019	2018
<b>Consolidated net profit for the year</b>		<b>25,629</b>	<b>28,393</b>
Remeasurement of defined benefit pension plans	25, 27	-8,200	-2,199
Remeasurement of defined benefit pension plans of associates	25	-472	-130
Net gains/losses from the measurement of financial assets through other comprehensive income (equity instruments)	16, 25	-7,597	-2,811
<b>Items that will not be recycled to profit and loss</b>		<b>-16,269</b>	<b>-5,140</b>
Foreign currency translation differences	25	-96	-141
Foreign currency translation differences of associates	25	-12	0
Cash flow hedges	25	283	-433
Cash flow hedges of associates	25	70	-118
<b>Items that may be subsequently recycled to profit and loss</b>		<b>245</b>	<b>-692</b>
<b>Other comprehensive income after tax</b>		<b>-16,024</b>	<b>-5,832</b>
<b>Comprehensive income</b>		<b>9,605</b>	<b>22,561</b>
Attributable to:			
Equity holders of OHB SE		11,774	19,604
Non-controlling interests		-2,169	2,957

### III. CONSOLIDATED BALANCE SHEET

in EUR 000	Notes	31/12/2019	31/12/2018
<b>ASSETS</b>			
Goodwill	12	7,366	7,131
Other intangible assets	12	116,309	113,204
Right-of-use assets under leases	13	54,878	0
Property, plant and equipment	14	95,440	88,252
Shares in associates	15	0	2,960
Other financial assets	16	25,112	31,973
Other non-current receivables and financial assets	19	30,491	30,913
Deferred taxes	9	19,029	16,905
<b>Non-current assets</b>		<b>348,625</b>	<b>291,338</b>
Inventories	17	53,302	50,192
Trade receivables	18	92,469	69,092
Contract assets	1	324,228	278,995
Income tax receivables		4,394	4,458
Other financial and non-financial assets	19	22,463	10,880
Securities	20	448	335
Cash and cash equivalents	21	85,090	48,316
<b>Current assets</b>		<b>582,394</b>	<b>462,268</b>
<b>Total assets</b>		<b>931,019</b>	<b>753,606</b>

in EUR 000	Notes	31/12/2019	31/12/2018
<b>EQUITY AND LIABILITIES</b>			
Subscribed capital	22	17,468	17,468
Share premium	23	15,778	15,462
Retained earnings	24	521	521
Unrealized gains and losses recognized under equity	25	-21,681	-7,747
Treasury stock	26	-710	-710
Consolidated net profit		170,321	152,315
<b>Shareholders' equity excluding minority interests</b>		<b>181,697</b>	<b>177,309</b>
Non-controlling interests	10	19,133	22,710
<b>Equity</b>		<b>200,830</b>	<b>200,019</b>
Provisions for retirement benefits and similar obligations	27	108,252	99,583
Other non-current provisions	28	3,310	2,156
Non-current financial liabilities	29	23,749	30,363
Lease liabilities		42,561	0
Non-current prepayments received on orders		8,032	6,704
Deferred tax liabilities	9	38,319	37,543
<b>Non-current liabilities</b>		<b>224,223</b>	<b>176,349</b>
Current provisions	28	31,168	29,820
Current financial liabilities	30	88,254	25,374
Lease liabilities		12,891	0
Trade payables		166,651	176,964
Contract liabilities	1	155,725	100,431
Income tax liabilities		10,355	5,101
Financial and non-financial liabilities	31	40,922	39,548
<b>Current liabilities</b>		<b>505,966</b>	<b>377,238</b>
<b>Total equity and liabilities</b>		<b>931,019</b>	<b>753,606</b>

## IV. CONSOLIDATED CASH FLOW STATEMENT

in EUR 000	Notes	31/12/2019	31/12/2018
EBIT		49,109	47,751
Income taxes paid		-5,720	-7,681
Other expenses (+)/income (-) not recognized in the cash flow statement		316	610
Depreciation and amortization of property, plant and equipment, intangible assets and right-of-use assets	12, 13, 14	29,222	17,262
Changes in retirement benefit provisions	27	-5,755	-3,857
Profit (-)/loss (+) from the disposal of assets		64	582
<b>Gross cash flow</b>		<b>67,236</b>	<b>54,667</b>
Increase (-)/decrease (+) in own work capitalized		-10,488	-16,555
Increase (-)/decrease (+) in inventories		-2,558	-1,355
Increase (-)/decrease (+) in receivables and other assets		-79,384	-48,582
Increase (+)/decrease (-) in liabilities and provisions		-8,379	112,949
Increase (+)/decrease (-) in contract liabilities and progress billings		56,457	-40,945
<b>Net cash generated by/used in operating activities</b>		<b>22,884</b>	<b>60,179</b>
Payments made for investments in intangible assets, property, plant and equipment and other financial assets	12, 14	-20,946	-24,181
Payments received from the disposal of assets		393	350
Consolidation-related changes to cash and cash equivalents		158	1,585
Interest received	7	1,393	1,216
<b>Net cash generated from/used in investing activities</b>		<b>-19,002</b>	<b>-21,030</b>
Dividends distributed		-7,482	-6,955
Payment made for the settlement of financial liabilities	29, 30, 33	-9,136	-39,748
Payment made for the settlement of lease liabilities	29, 30, 33	-9,726	0
Payments received from new loans	29, 30, 33	65,183	1,185
Dividend distributed to non-controlling interests		-1,001	0
Interest paid	7	-4,534	-3,388
<b>Net cash generated from/used in financing activities</b>		<b>33,304</b>	<b>-48,906</b>
Changes to cash and cash equivalents recognized in the cash flow statement		37,186	-9,757
Exchange-rate-induced change in cash and cash equivalents		-412	-505
Cash and cash equivalents at the beginning of the period		48,316	58,578
<b>Cash and cash equivalents at the end of the period</b>	21	<b>85,090</b>	<b>48,316</b>

## V. CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

in EUR 000	Sub- scribed capital	Share premium	Retained earnings	Unreal- ized gains and losses recog- nized under equity	Con- solidated profit	Treasury stock	Equity excluding minority interests	Non-con- trolling interests	Total equity
See Note	22	23	24	25		26		10	
<b>Balance on January 1, 2018</b>	<b>17,468</b>	<b>14,923</b>	<b>521</b>	<b>-2,099</b>	<b>133,778</b>	<b>-781</b>	<b>163,810</b>	<b>19,649</b>	<b>183,459</b>
Dividend payment (EUR 0.40 per share)	0	0	0	0	-6,955	0	-6,955	0	-6,955
Consolidated comprehensive income	0	0	0	-5,394	24,998	0	19,604	2,957	22,561
Changes to consolidated companies	0	0	0	-254	494	0	240	104	344
Share-based payments	0	539	0	0	0	71	610	0	610
<b>Balance on December 31, 2018</b>	<b>17,468</b>	<b>15,462</b>	<b>521</b>	<b>-7,747</b>	<b>152,315</b>	<b>-710</b>	<b>177,309</b>	<b>22,710</b>	<b>200,019</b>
Dividend payment (EUR 0.43 per share)	0	0	0	0	-7,482	0	-7,482	0	-7,482
Consolidated comprehensive income	0	0	0	-13,770	25,544	0	11,774	-2,168	9,606
Transactions with non-controlling interests	0	0	0	-164	572	0	408	-408	0
Changes to consolidated companies	0	0	0	0	-628	0	-628	0	-628
Dividend distributed to non-controlling interests	0	0	0	0	0	0	0	-1,001	-1,001
Share-based payments	0	316	0	0	0	0	316	0	316
<b>Balance on December 31, 2019</b>	<b>17,468</b>	<b>15,778</b>	<b>521</b>	<b>-21,681</b>	<b>170,321</b>	<b>-710</b>	<b>181,697</b>	<b>19,133</b>	<b>200,830</b>

# NOTES

## VI. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS **GENERAL INFORMATION**

The company has its head office at Manfred-Fuchs-Platz 2-4 in 28359 Bremen, Germany. It is entered in the commercial register of the Local Court of Bremen under the number HRB 30268. OHB SE exercises the function of an active holding company which manages the subsidiaries within the OHB Group. At the same time, it is the ultimate parent company. The Group is primarily engaged in the production and distribution of products and projects as well as the provision of high-technology services particularly in the areas of space and aeronautic technology, telematics and satellite services. OHB SE comprises two segments: Space Systems and Aerospace + Industrial Products.

The Space Systems segment focuses on developing and executing space projects. In particular, it is responsible for developing and fabricating low-orbiting and geostationary small satellites for navigation, research, communications, earth and weather observation and reconnaissance including scientific payloads. Its human space flight activities chiefly entail projects for the assembly and outfitting of the International Space Station ISS. The exploration segment works on studies and models for exploring our solar system, primarily the Moon, asteroids and Mars. Reconnaissance satellites and broadband wireless transmission of image data form core technologies for security and reconnaissance.

The Aerospace + Industrial Products segment is primarily responsible for fabricating aviation and space products as well as other industrial activities. In this area, OHB has established itself as a significant supplier of aerospace structures for the aviation and space industry; among other things, it is the largest German supplier of components for the Ariane program and an established producer of structural elements for satellites. In addition, OHB is an experienced vendor of mechatronic systems for antennas and telescopes and is involved in major radio telescope projects.

## **ACCOUNTING PRINCIPLES AND METHODS**

In accordance with Regulation (EC) 1606/2002 issued by the European Parliament and the Council on July 19, 2002, OHB SE is required to prepare consolidated financial statements in accordance with international accounting standards (IFRS/IAS). The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS/IAS) applicable in the EU in the light of the interpretations of the International Financial Reporting Interpretations Committee (IFRIC/SIC) as well as the supplementary provisions contained in Section 315 e of the German Commercial Code.

The consolidated financial statements have been prepared on the basis of the going-concern assumption and the historical cost principle with the exception of derivative financial instruments used for hedging purposes and available-for-sale financial instruments, which are measured at fair value. In addition to the consolidated balance sheet, consolidated income statement and the consolidated statement of comprehensive income, the consolidated annual financial statements include the consolidated cash flow statement and the consolidated statement of changes in equity. The notes contain the declaration required by Section 285 No. 16 of the German Commercial Code confirming that the disclosures stipulated by Section 161 of the German Stock Corporation Act have been duly made. The income statement has been compiled using the total-cost method. The reporting currency is the euro. Unless otherwise stated, all amounts are reported in millions of euros (EUR million). It should be noted that the use of rounded figures and percentages may result in differences due to commercial rounding.

## **CONSOLIDATION METHODS**

The purchase method of accounting is used to account for the acquisition of subsidiaries by the Group. All material subsidiaries under the legal or constructive control of OHB SE have been consolidated.

Any remaining positive difference between the cost of acquiring the shareholdings and the net assets calculated at their fair values is recognized as goodwill under IAS 3.32. The full goodwill method is applied.

Sales, expenses, income as well as receivables and liabilities between consolidated companies are netted and any inter-Group profits eliminated. The accounting methods and the reporting period applied by the subsidiaries are the same as those used by OHB SE.

The carrying values of companies consolidated at equity, which initially equal their historical cost, are adjusted to allow for prorated profit/loss attributable to such companies. Unrealized gains from transactions between the Group and the companies accounted for at equity are eliminated in an amount equaling the Group's share in such companies. The accounting methods applied by associates have been modified where this is necessary to ensure consistency with the methods applied by the Group. Associates have the same reporting period as the Group. The carrying amount of the investments accounted for using the equity method is tested for impairment where there is any evidence of this.

## **ACQUISITIONS**

No acquisitions were executed during this period.

## **CHANGES IN SHAREHOLDINGS**

All of the shares in MT Mechatronics GmbH, Mainz, which had been fully held by MT Aerospace AG in the previous year, were acquired by OHB System AG, Bremen, in the year under review. The acquisition of these shares by OHB System AG did not result in any changes with respect to the exercise of control over MT Mechatronics GmbH, although it did have an impact on the non-controlling interests held by MT Aerospace Holding GmbH, Bremen. The Group treats transactions with non-controlling interests that do not result in any loss of control as straight equity transactions. They are included in the line item entitled "Transactions with non-controlling interests" in the statement of changes in equity. A change in shareholdings results in an adjustment to the carrying amount of the non-controlling interests to reflect the size of the share in the subsidiary in question. Any differences between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is reported within equity in a separate reserve attributable to the owner.

## **COMPANIES CONSOLIDATED**

OHB SE's consolidated financial statements include OHB SE, ten domestic and seven non-domestic subsidiaries and a further domestic associate accounted for at equity. The table entitled "Companies consolidated" sets out the subsidiaries and associates together with the relative size of the share held.

In addition, shares were held in other companies (see table entitled "Further investments and financial assets" in this section).

MT Mecatrònica SpA was consolidated for the first time as of January 1, 2019 following a revised consideration of its materiality. Incorporated in 2012, MT Mecatrònica SpA is a wholly owned subsidiary of MT Mechatronics GmbH. First-time consolidation did not give rise to any goodwill. The company's net loss of EUR 0.317 million as of the date of initial consolidation was included in full in cumulative consolidated net profit.

OHB Digital Solutions GmbH (formerly: TeleConsult Austria GmbH) was consolidated for the first time from January 1, 2019. OHB Digital Solutions GmbH is a wholly owned subsidiary of OHB SE and was acquired in 2018. Initial consolidation yielded goodwill of EUR 0.235 million that was recognized within intangible assets as an addition from business combinations. No net profit or loss was recognized. Effective January 1, 2019, M2M Europe Network and Solutions Ges. mbH, a subsidiary of OHB SE domiciled in Bregenz, Austria, was merged with OHB Digital Solutions GmbH. The company's net loss of EUR 0.856 million as of the date of the merger was included in full in cumulative consolidated net profit.

OHB Satellitenbetrieb GmbH was consolidated for the first time as of January 1, 2019 following a revised consideration of its materiality. OHB Satellitenbetrieb GmbH is a wholly owned subsidiary of OHB System AG. Consolidation did not give rise to any goodwill. The company's net profit of EUR 0.572 million as of the date of initial consolidation was included in full in cumulative consolidated net profit.

## COMPANIES CONSOLIDATED

Name of company	Percentage share %	Consolidation
OHB System AG, Bremen, Germany	100.0	Fully consolidated
ORBCOMM Deutschland Satellitenkommunikation AG, Bremen, Germany <sup>1</sup>	100.0	Fully consolidated
MT Mechatronics GmbH, Mainz, Germany <sup>1</sup>	100.0	Fully consolidated
MT Mecatrònica SpA, Santiago de Chile, Chile <sup>4</sup>	100.0	Fully consolidated
OHB Satellitenbetrieb GmbH, Bremen, Germany	100.0	Fully consolidated
OHB Italia S.p.A., Milan, Italy	100.0	Fully consolidated
OHB Sweden AB, Stockholm, Sweden	100.0	Fully consolidated
Antwerp Space N.V., Antwerp, Belgium	100.0	Fully consolidated
LuxSpace Sàrl, Betzdorf, Luxembourg	100.0	Fully consolidated
MT Aerospace Holding GmbH, Bremen, Germany	70.0	Fully consolidated
MT Aerospace AG, Augsburg, Germany <sup>2</sup>	100.0	Fully consolidated
MT Aerospace Grundstücks GmbH & Co. KG, Augsburg, Germany <sup>3</sup>	100.0	Fully consolidated
MT Aerospace Guyane S.A.S., Kourou, French Guyana <sup>3</sup>	100.0	Fully consolidated
MT Management Service GmbH, Augsburg, Germany <sup>2</sup>	100.0	Fully consolidated
Aerotech Peissenberg GmbH & Co. KG, Peissenberg, Germany <sup>2</sup>	43.3	Consolidated at equity
OHB Teledata GmbH, Bremen, Germany	100.0	Fully consolidated
OHB Digital Solutions GmbH, Graz, Austria	100.0	Fully consolidated
OHB Digital Services GmbH, Bremen, Germany	74.9	Fully consolidated

1 Held by OHB System AG

2 Held by MT Aerospace Holding GmbH

3 Held by MT Aerospace AG

4 Held by MT Mechatronics GmbH

In accordance with the principle of materiality pursuant to the IFRS/IAS framework, the companies stated in the table, which are fundamentally subject to compulsory consolidation (OHB share of greater than 20%), are not consolidated. These companies' cumulative current sales and EBIT are not considered to make any material contributions to consolidated earnings. Subsidiaries with discontinued or

minimal business activities which are of only minor importance for obtaining a true and fair view of the OHB Group's net assets, financial condition and results of operations as well as its cash flow are not consolidated. The share holdings shown in the tables entitled "Companies consolidated" and "Further investments and financial assets" correspond to the voting rights held.

## FURTHER INVESTMENTS AND FINANCIAL ASSETS

Name of company	Percentage share % **
OHB France S.A.S, Paris, France*	100.0
OHB Venture Capital GmbH, Wessling, Germany*	100.0
visioboxx Logistic Solutions GmbH (formerly: OHB Logistic Solutions GmbH), Bremen, Germany*	55.0
OHB Infosys GmbH (formerly: KT Verwaltungsgesellschaft mbH), Bremen, Germany*	100.0
MT Dezentrale Energiesysteme GmbH, Augsburg, Germany*	70.0
MT Mecatronic s.r.l., Cagliari, Italy*	100.0
MT Satellite Products Ltd., Wolverhampton, United Kingdom*	70.0
MILET Grundstücks-Verwaltungsgesellschaft mbH, Augsburg, Germany*	70.0
Aerotech Beteiligungs GmbH, Peissenberg, Germany*	30.1
Rocket Factory Augsburg AG, Augsburg, Germany*	46.4
OHB COSMOS Space Systems AG, Bremen, Germany*	66.7
COSMOS International Launch Services GmbH (formerly: COSMOS International Launch Services GmbH), Bremen, Germany*	100.0
Antares S.c.a.r.l., San Giorgio Del Sannio, Italy*	24.0
beos GmbH i.L., Bremen, Germany	12.0
Arianespace Participation, Evry, France	5.8
ORBCOMM Inc., Rochelle Park NJ, United States	2.8
ORBCOMM Europe LLC, Delaware, United States*	50.0
Blue Horizon s.à r.l., Betzdorf, Luxembourg*	100.0
Blue Horizon Deutschland GmbH, Bremen, Germany*	100.0
Institut für angewandte Systemtechnik Bremen GmbH, Bremen, Germany	5.0
OHB Hellas Single Member L.L.C., Athens, Greece*	100.0
Nexus Space LLC, Centennial CO, United States*	45.0
OHB Uzay, Teknolojileri Limited Sirketi, Ankara, Turkey*	100.0
OHB Czechspace s.r.o., Klatovy, Czech Republic*	100.0
OHB Digital Maritime Services GmbH, Bremen, Germany*	37.5

\* Not consolidated in the year under review for materiality reasons

\*\* Numerical OHB SE share

## CURRENCY TRANSLATION

Most outgoing invoices are denominated in euro. Incoming and outgoing invoices denominated in a foreign currency are converted and recognized on the reporting date. Any hedges in existence are translated at the hedge rate. Foreign-currency bank balances were translated at the end-of-year exchange rate. The annual financial statements of the independent non-domestic subsidiary OHB Sweden AB were prepared in its domestic currency (SEK) and translated using the functional currency principle in accordance with IAS 21. The annual financial statements of the independent non-domestic subsidiary MT Mecatrònica SpA were prepared in its domestic currency (CLP) and translated using

the functional currency principle in accordance with IAS 21. The foreign-currency difference arising from translation of equity is recorded in "Currency translation differences" within other comprehensive income.

## SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### NEWLY ISSUED STANDARDS AND INTERPRETATIONS

The International Accounting Standards Board (IASB) and IFRIC have revised the following standards and interpretations which are subject to compulsory application from 2019:

■ Leases (IFRS 16)

- The standard provides guidance on accounting for leases. IFRS 16 replaces IAS 17 as well as three interpretations that provided guidance on leases. Application of IFRS 16 is mandatory for all IFRS preparers. The standard applies to all leases with the exception of contracts for the exploration of minerals, oil, gas and similar non-regenerative resources, rights under license agreements for films, video recordings, plays, manuscripts, patents and copyrights falling within the scope of IAS 38, leases for biological assets coming within the scope of IAS 41, service agreements coming within the scope of IFRIC 12 and license agreements on intellectual property from a lease coming within the scope of IFRS 15.

■ Uncertainty over Income Tax Treatments (IFRIC 23)

- The IASB has published IFRIC 23, an interpretation developed by the IFRS Interpretations Committee to provide guidance on accounting for uncertainties over income tax treatments.

■ Investments in Associates (IAS 28)

- The amendments clarify that a company is required to apply IFRS 9 Financial Instruments including the guidance which it contains on the recognition of impairments to long-term investments in associates and joint ventures that materially constitute a part of the net investment in the associate or joint venture and that they are not to be recognized using the equity method of accounting. Accordingly, the application of IFRS 9 takes precedence over the application of IAS 28.

■ Financial Instruments (IFRS 9)

- Minor amendment to IFRS 9 for financial assets with symmetrical termination rights to ensure that they are measured at amortized cost or at fair value through other comprehensive income. In addition, a clarification is provided on modifications to financial liabilities that do not result in derecognition.

■ Measurement of defined benefit net obligations under plans for retirement benefits with employee contributions (IAS 19)

- The amendments to IAS 19 stipulate that in the event of an amendment, curtailment or settlement of a defined benefit plan the current service cost and the net interest for the remaining accounting period must be recalculated using updated actuarial assumptions that were used for the necessary remeasurement of the net debt (asset). As well as this, the

IASB has included in IAS 19 additional guidance to clarify the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling.

■ Various amendments under the annual IFRS improvement cycle 2015–2017

- The improvements affect the following standards:

  - IFRS 3 Business Combinations
  - IFRS 11 Joint Arrangements
  - IAS 12 Income Taxes
  - IAS 23 Borrowing Costs

The Group applied all the accounting standards which were mandatory for accounting periods commencing on or after January 1, 2019. The application of IFRS 16 had a material impact on these consolidated financial statements, which is described in detail in the section entitled "Changes in accounting policies". The other standards applied for the first time did not have any material effects on the consolidated financial statements.

**NEWLY ISSUED STANDARDS AND INTERPRETATIONS THAT HAVE NOT YET BEEN APPLIED**

The IASB has issued standards, interpretations and revisions to existing standards which are not yet compulsory and do not become so until future reporting periods and which OHB SE has not adopted on a voluntary early basis.

IFRS endorsed by the EU	Date of first application (EU)
Amendments to IFRS 9, IAS 39 and IFRS 7: Interest Rate Benchmark Reform	January 1, 2020
Changes to references to the conceptual framework in IFRS standards	January 1, 2020
Amendment to IAS 1 and IAS 8: Definition of material	January 1, 2020
<b>Not yet endorsed by the EU</b>	
IFRS 3 – Change in the Definition of a Business	January 1, 2020
IFRS 17 Insurance Contracts	January 1, 2020

## CHANGES IN ACCOUNTING POLICIES

In January 2016, the IASB issued IFRS 16 Leases, which must be applied in accounting periods beginning on or after January 1, 2019 for the first time. IFRS 16 abolishes the distinction between operating and finance leases on the part of the lessee. Instead, IFRS 16 introduces a uniform lessee accounting model under which the lessee is required to recognize assets (for the right of use) and the lease liabilities in the case of leases with a duration of more than 12 months. This means that leases that were previously not accounted for must be recognized in the balance sheet as right-of-use assets. The OHB Group applies the practical expedients for short-term leases and assets of a minor value.

OHB utilizes the modified retrospective method in connection with the initial application of IFRS 16. Assets and liabilities under leases are initially recognized at their present value at the same amount. The weighted average incremental borrowing rate applied to the lease liabilities as of January 1, 2019 is 2.0%. The right-of-use assets and lease liabilities are shown as separate items on the face of the balance sheet. OHB Group companies generally do not act as lessors.

OHB expects the application of IFRS 16 to have a material impact due to the inclusion of the leases for real estate used for business purposes. Leases for non-real-estate assets are of only subordinate importance for the OHB Group. As a result of the initial application of IFRS 16 from January 1, 2019, OHB recognized right-of-use assets and lease liabilities of EUR 59.7 million. Depreciation of right-of-used assets came to EUR 10.3 million in 2019. The weighted average incremental borrowing rate applied to the lease liabilities as of January 1, 2019 is 2.0%.

The Group made use of the following accounting conveniences for the purposes of the initial application of IFRS 16:

- The application of a single discount rate to a portfolio of leases with similar characteristics
- The recognition of leases that had a residual term of less than 12 months on January 1, 2019 as short-term leases.

The Group decided not to reassess leases that had been entered into prior to the date of transition to determine whether a contract is or contains a lease on the date of initial application. Instead, it retained the previous assessment that had been made under IAS 17 and IFRIC 4.

## MEASUREMENT OF LEASE LIABILITIES

**in EUR 000**

Liabilities under operating leases disclosed as of December 31, 2018	71,444
Discounted at the lessor's incremental borrowing rate at the date of initial application of IFRS 16	63,907
Less short-term leases recorded as expense on a straight-line basis	-3,796
Less leases for low-value assets recorded as expense on a straight-line basis	-422
<b>Lease liabilities as of January 1, 2019</b>	<b>59,689</b>

Of which:

Current lease liabilities	9,726
Non-current lease liabilities	49,963

The changes to the accounting methods impacted the following items of the balance sheet as of January 1, 2019 as follows: right-of-use assets – increase of EUR 59.689 million, lease liabilities – increase of EUR 59.689 million.

## RECOGNITION OF REVENUES

Revenue is recognized according to the principle that revenue equaling the consideration is not recognized until control of the goods or services is transferred to the customer. The contractual provisions and all relevant facts and circumstances must be taken into account in this connection. As a general rule, individual contracts with a customer are accounted for unless the conditions for combining contracts are satisfied. The guidance provided by the standard is applied uniformly to similarly structured contracts and under similar circumstances.

## DEVELOPMENT CONTRACTS

Development contracts usually involve a longer period of time and many individual development phases. These are so closely interrelated and interdependent that often only a single performance obligation can be identified when the individual contract is assessed. In this case, the transaction price is assigned to only a single performance obligation. When the transaction price is determined, variable consideration in the form of performance bonuses or contractual penalties may have to be taken into account in individual cases. The amount of the variable consideration is regularly estimated by applying a suitable method, or constraints on the estimate are taken into account.

The transaction price reflects the present value of money if the contract contains a significant financing component, regardless of whether this is explicitly or implicitly stated in the contract. If there is a financing component, the transaction price is calculated on the basis of the nominal value of the consideration, adjusted for the financing effect. The Group does not identify a significant financing component

if, at the inception of the contract, the period between transfer of the goods or services to the customer and payment by the customer is not expected to exceed one year.

Long-term development contracts generally satisfy the prerequisites for revenue recognition over time. Input-based "cost-to-cost" methods are used to determine the progress towards complete satisfaction of the performance obligation. For this purpose, the degree of completion is determined on the basis of the contract costs which have arisen as of the balance sheet date relative to the expected total contract costs. Revenues from contracts are calculated by multiplying the percentage of completion with the contractually agreed proceeds including any subsequently agreed additions. Long-term projects in progress on the reporting date (remaining durations of between one and seven years) are recognized as revenue on the basis of production costs plus refundable administrative overhead costs if a partial profit cannot be estimated with a reasonable degree of reliability on account of the early stage of the project. The corresponding contract costs are included in the cost of materials and other costs in the year under review.

Any receivables resulting from the application of the "cost-to-cost" method generally entail a conditional payment claim, which is shown separately on the face of the balance sheet as a contract asset. The Group has fulfilled its contractual obligations by transferring goods and services to the customer before payment is made or become due. The simplified model of expected credit losses in accordance with IFRS 9 is applied to contract assets (see section on financial investments and other financial assets). An unconditional claim arises from a final invoice or a partial settlement with the result that a trade receivable is recognized.

Depending on the earlier payment or due date, a contract liability must be reported separately on the face of the balance sheet if a customer has paid consideration (e.g. prepayment) or if the OHB Group company has an unconditional right to consideration (i.e. a receivable or right to receive prepayment) and before a good or service has been transferred to the customer.

Contract assets and contract liabilities arising from one and the same contract must be shown net and broken down into settlement periods (non-current and current).

Where contract performance costs do not fall within the scope of another standard, they are capitalized provided that the conditions for capitalization are met and amortized over the expected period of performance of the obligation.

Provisions are recognized for individual obligations of the Group to repair or replace defective products under statutory or standard warranty conditions (see "Other provisions"). IFRS 15 does not provide any guidance on the recognition of provisions for impending losses from orders, but instead references IAS 37. Reference is made to the contract itself and not to the individual performance obligations.

### **SALE OF GOODS AND SERVICES**

In addition, revenue, mainly from the sale of goods and the provision of services, is recognized on a point-in-time basis if the performance obligation is not fulfilled over time in accordance with IFRS 15.35–37. In this connection, the guidance for determining the date of transfer of control including a wide variety of indicators for this are taken into account.

As a rule, payment of the transaction price falls due in 30 days. Receivables due for settlement in more than one year are classified as non-current.

### **CUSTOMER-SPECIFIC CONTRACT PRODUCTION**

Revenues from customer-specific contract production in the Aerospace segment are largely recognized on a point-in-time basis. In this connection, each ship set is normally classified as a performance obligation which is almost exclusively customer-specific but to which the conditions for over-time revenue recognition do not apply. Consequently, revenues are generally recognized upon transfer of control after final acceptance testing.

### **OWN WORK CAPITALIZED**

Development expenditure is recognized as an asset pursuant to IAS 38.57 if a newly developed product or process can be clearly delineated, is technically feasible and is intended either for the company's own use or for sale. A further condition is that it must be sufficiently likely for the development expenditure to be recouped from future cash flows. Such expenditure is recognized on the basis of the production costs incurred, primarily development hours multiplied by the applicable hourly rate. In the year under review, research and development costs of EUR 6.3 million (previous year: EUR 5.8 million) were recorded as expense as the criteria provided for in IAS 38.57 were not satisfied. Of the total development costs of EUR 18.8 million (previous year: EUR 25.4 million), an amount of EUR 10.4 million (previous year: EUR 16.5 million) was capitalized. An amount of EUR 2.1 million (previous year: EUR 3.1 million) was received in the form of non-repayable grants to support development projects, e.g. for the development of new

propulsion systems and improvements to launchers. The grants were primarily provided by ESA, DLR and national institutions. The income from development grants is recognized upon the occurrence of the related costs. Income from grants is reported gross, i.e. it is not netted with expenses. At the moment, there is no evident indicating that the conditions imposed by the providers of grants cannot be satisfied.

### **NET FINANCIAL INCOME/EXPENSE**

Net financial income/expense includes the share of profits of associates accounted for at equity as well as other investments including profit from the sale of financial assets, adjustments to the value of financial assets, other interest expenditure on liabilities, dividends, interest income on receivables and currency gains and losses. Interest income is taken to the income statement in accordance with the effective interest method. Dividends are reported in the income statement upon a resolution to distribute a dividend being passed. Interest expense on retirement benefit provisions is also reported as other interest expenditure.

As of 2019, net financial income/expense also includes interest expenses arising from the application of IFRS 16.

### **INTANGIBLE ASSETS**

Intangible assets acquired from third parties primarily comprise software programs and licenses. These are recognized at historical cost and amortized on a straight-line basis over a useful life of between one and 15 years.

As of each reporting date, OHB reviews the carrying amounts of its intangible assets to identify any evidence of impairment. In this case, the recoverable amount of the asset in question is calculated to determine the amount of any impairment. The recoverable amount is defined as the fair value less possible costs of sale or the value in use, whichever is the greater. Internally generated assets, which are capitalized with the directly attributable costs, are written down on a straight-line basis over the expected useful life of four to 15 years. For the purpose of identifying any impairment, goodwill must be allocated to each cash-generating unit within the Group expected to derive any benefit from the synergistic effects of the business combination. Cash-generating units to which part of the goodwill is allocated are tested for impairment at least annually. If the recoverable amount of a cash-generating unit is less than its carrying amount, the impairment loss is initially

assigned to the carrying amount of all goodwill allocated to the unit and then on a proportionate basis to the other assets on the basis of the carrying amount of each asset within the unit.

### **RIGHT-OF-USE ASSETS UNDER LEASES**

OHB applies IFRS 16, which provides guidance on the recognition, measurement, presentation and disclosure of individual leases. Under this guidance, OHB Group companies must recognize the main leases as right-of-use assets on their balance sheets in their capacity as lessees. The OHB Group does not apply IFRS 16 to intangible assets. If a lease has a term of less than 12 months or has a value that is considered to be minor (under EUR 5 thousand), no right-of-use asset is recognized. Instead, the lease payments are recognized as expense through profit and loss on a straight-line basis.

The duration of the lease includes the non-cancellable basic term as well as any periods covered by an option to extend the lease provided that it is reasonably certain that the option will be exercised. An assessment as to whether an option to extend or terminate a lease is reasonably certain, takes account of factors relating to the contract, asset, company and market. The exercise of options to extend leases is assessed once a year. In the event of any change in the assessment over the previous year, the right-of-use asset and the corresponding lease liability are duly adjusted.

Right-of-use assets are recognized at historical cost and lease liabilities at their present value upon initial recognition. A right-of-use asset is recognized at historical cost together with a lease liability. The cost of the right-of-use asset chiefly comprises the amount derived from the initial measurement of the lease liability, all lease payments made prior to the provision of the leased asset and all initial costs incurred by the OHB Group company. Lease payments are all payments made for the right to use the leased asset during the term of the lease. Generally speaking, there are no purchase options or residual value guarantees. Any variable lease payments agreed are recognized through profit and loss upon being paid. Lease payments are discounted using the interest rate underlying the lease as far as this can be determined without difficulty. The OHB Group assumes that this interest rate cannot be determined without difficulty unless it is disclosed separately by the lessor or is stated in the lease contract. Accordingly, the incremental borrowing rate is applied upon the commencement of the

lease. Lease payments are split into payments of principal and payments of interest. The interest component is recognized through profit and loss for the duration of the lease.

Any changes in lease payments that arise, for example, from a change in an index are not included in the lease liability until they take effect. As soon as these changes take effect, the lease liability for the right-of-use asset in question is adapted using the interest rate applied on the date on which the lease was initially recognized.

If the duration of the lease is reassessed, the adjusted lease liability is discounted using the interest rate applicable on the date of the adjustment.

The OHB Group reports right-of-use assets separately on the face of its balance sheet. Lease liabilities are reported separately on the face of the balance sheet. For this purpose, the current/non-current distinction is applied.

The depreciation of right-of-use assets is calculated on a straight-line basis over the useful life of the asset or the duration of the underlying lease, whichever is the shorter. Right-of-use assets are also subject to the impairment provisions of IAS 36 and are tested for impairment if there are any indications of impairment. For this purpose, the right-of-use assets are generally assigned to the corresponding cash-generating units.

## PROPERTY, PLANT AND EQUIPMENT

Assets classed as property, plant and equipment are carried at historical cost less scheduled straight-line depreciation over their expected useful lives. Subsequent expenditure on assets which does not increase their value or materially extend their useful lives is expensed. Material additions and improvements are recognized as assets. Disposals are reflected in historical acquisition costs as well as accumulative depreciation. Gains and losses from the disposal of assets are recorded within operating income/expenses. The following depreciation periods are applied to property, plant and equipment: between ten and 33 years for buildings, five to ten years for machinery and technical equipment and three to ten years for other equipment as well as operating and business equipment.

As of each reporting date, OHB reviews the carrying amounts of its property, plant and equipment to identify any evidence of impairment. In this case, the recoverable amount of the asset in question is calculated to determine

the amount of any impairment. The recoverable amount is defined as the fair value less possible costs of sale or the value in use, whichever is the greater.

## ASSOCIATES

Shares in associates are reported at historical cost with due allowance made for the share in its profit/loss for the year (profit/loss, other comprehensive income). Dividends received are recognized as a reduction of the carrying amount. In an impairment test, the carrying amount of the associate is compared with the recoverable amount and, if it is lower than the carrying amount, an impairment equaling the difference recognized.

## INVENTORIES

Inventories are recognized at historical cost or the lower net recoverable value prevailing on the reporting date. Production costs comprise the individual costs of material and production, overhead costs of material and production as well as depreciation and amortization expense in connection with the production equipment. They also include overhead administration costs. Part of the inventories are measured using the moving average method.

## FINANCIAL INVESTMENTS AND OTHER FINANCIAL ASSETS

Financial assets are assigned to the following categories depending on the business model:

- those subsequently measured at fair value (either through other comprehensive income – FVOCI – or through profit or loss – FVPL), and
- those measured at amortized cost (AmC).

In the case of assets measured at fair value, gains and losses are recognized either in profit and loss or in other comprehensive income. With respect to investments in equity instruments that are not held for trading, this depends on whether the Group irrevocably decides upon initial recognition to measure the equity instruments at fair value through other comprehensive income.

A customary purchase or sale of financial assets is recognized on the trading day, i.e. the day on which the Group undertakes to buy or sell the asset. Financial assets are derecognized when the rights to receive cash flows from

the financial assets expire or have been transferred together with substantially all risks and opportunities arising from ownership.

Financial assets are initially measured at their fair value plus – in the case of financial assets that are not subsequently measured at fair value through profit and loss – the transaction costs directly attributable to the purchase of this asset. The transaction costs of financial assets measured at fair value through profit and loss are recognized as expense in profit and loss.

The Group assigns its debt instruments to the following three categories: AmC, FVOCI or FVPL. No financial assets are currently classified as FVOCI.

**AmC:** Assets that are held to collect the contractual cash flows and for which these cash flows constitute solely payments of principal and interest are measured at amortized cost. Interest income from these financial assets is reported within finance income using the effective interest method. Gains and losses from the derecognition of the asset are reported directly in profit and loss and – together with currency translation gains and losses – included in other operating expenses and income. Trade receivables, cash and cash equivalents, loans and other financial assets are allocated to this category.

**FVPL:** Assets that do not meet the criteria for measurement at amortized cost or at fair value through other comprehensive income are measured at their fair value through profit and loss. Gains and losses from a debt instrument that is subsequently measured at fair value through profit and loss are netted within profit and loss and reported in other operating expenses and income for the period in which they arise. Derivatives that are not part of a hedging relationship and securities that are classified as debt instruments are allocated to this category.

The Group subsequently measures all equity instruments that it holds at their fair value. If management has decided to include the effects of any change in the fair value of equity instruments in other comprehensive income, these gains and losses are not subsequently recycled to profit and loss when the instrument is derecognized. Accumulated balances in the FVOCI reserve are recycled to consolidated net profit. The dividends from such instruments are still reported through profit and loss and included in other income provided that the Group's claim to receive payments has been established. The decision on allocation to this

category is made for each equity instrument upon initial recognition. Currently, all equity instruments are measured at fair value through other comprehensive income.

Any changes in the fair value of financial assets measured at fair value through profit and loss are reported through profit and loss and included in other income/(expenses). Impairments (and reversals of impairments) of equity instruments at fair value through other comprehensive income are not presented separately from other changes in fair value.

#### **Impairments of financial assets and contract assets**

The Group has four types of financial assets that are subject to the credit loss model defined by IFRS 9:

- Trade receivables
- Contract assets
- Debt instruments, loans measured at amortized cost
- Debt instruments measured at fair value through other comprehensive income (FVOCI)

Cash and cash equivalents are also subject to loss allowances under IFRS 9. However, the loss allowances identified were immaterial and therefore not recognized. Lease receivables are also subject to the impairment provisions of IFRS 9. However, there were no lease receivables at the year under review.

The Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments that are measured at amortized cost or at fair value through other comprehensive income. The loss allowance method depends on whether there is a significant increase in credit risk (general model). The expected credit losses approach uses a three-step process for allocating loss allowances. All instruments are assigned to level 1 on receipt. In this case, the present value of the expected credit losses resulting from possible default events within the next 12 months after the reporting date must be recognized as expenses. Interest is recognized on the basis of the gross carrying amount, i.e. the effective interest method is applied on the basis of the carrying amount before risk provisions are taken into account. Level 2 includes all instruments that exhibit a significant increase in credit risk at the reporting date compared with the date of acquisition. In level 3, there is additionally objective evidence of a credit loss. No instruments were

allocated to level 2 or level 3 at the reporting date. As debt instruments measured at amortized cost and at fair value through other comprehensive income are considered to have a low risk of default, the loss allowance was calculated on the basis of expected 12-month credit loss. With respect to trade receivables, the Group applies the simplified approach permitted under IFRS 9, under which the life-time expected credit losses are recorded upon initial recognition of the receivables. Contract assets are subject to the guidance on loss allowances contained in IFRS 9 in accordance with IFRS 15, as are lease receivables in accordance with IFRS 16. The simplified model is applied in the calculation of loss allowances.

Trade receivables and contract assets were combined on the basis of common credit risk characteristics and days past due to measure the expected credit losses. Contract assets relate to work in progress that has not yet been invoiced and have essentially the same risk characteristics as trade receivables for the same contract types. The Group has therefore concluded that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for contract assets.

The regularly reviewed expected loss rates are based on historical default rates adjusted for future-oriented components relating to the creditworthiness of customers. In the light of the Group's customer structure, historical default rates are minimal. Loss allowances are reported in the income statement under net operating profit.

## DEFERRED TAXES

Under IAS 12, temporary differences between the carrying amount of assets or liabilities on the balance sheet and their tax base in accordance with IFRS/IAS give rise to deferred taxes. The OHB Group applies a uniform domestic tax rate of 32% (previous year: 32%) for calculating deferred taxes. Income taxes in 2019 were calculated in detail using different tax rates. Deferred tax assets are recognized pursuant to IAS 12.

Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized. This also applies to deferred tax assets on unused tax losses. If the deferred income tax assets are unlikely to be realized, they are impaired by the appropriate amount.

Deferred income tax assets and liabilities are only offset if they relate to income taxes levied by the same taxation authority and the actual income tax assets can be offset against the actual income tax liabilities.

## EQUITY

IAS 32 (Financial Instruments: Disclosure and Presentation) stipulates that equity must not include any contractual obligation to deliver cash or any other financial asset to another entity. Equity is composed of subscribed capital, the share premium, unrealized gains and losses recognized within other comprehensive income, retained earnings and accrued profit brought forward.

## PROVISIONS FOR RETIREMENT BENEFITS AND SIMILAR OBLIGATIONS

Obligations under defined-benefit plans are calculated using the projected unit credit method in accordance with IAS 19 (Employee Benefits). The expected benefits are deferred over the entire period of service of the employees.

Remeasurement gains and losses from adjustments to assumptions based on historical data or actuarial data are recognized within other comprehensive income and reported on a cumulative basis in equity under the reserve for retirement benefit provisions. The net interest expense is recorded as interest expense within net financial income/expense in the income statement.

In the case of defined contribution plans, the Group makes contributions to public pension insurance institutions on the basis of statutory requirements. The Group has no further payment obligations once the employer contributions have been paid. The contributions are recognized as employee benefit expense upon falling due for payment.

## OTHER PROVISIONS

Other provisions have been reliably assessed for matters resulting in an outflow of enterprise resources to settle present obligations in accordance with IAS 37. Estimates are primarily based on detailed calculations. Provisions for which a cash outflow is not expected before 12 months are classified as non-current and recognized at the present value of the future cash outflows.

## **FINANCIAL LIABILITIES**

Liabilities comprise financial liabilities, trade payables and other liabilities and are classified as financial liabilities at amortized cost ("FLAC"). Financial liabilities are recognized at amortized cost using the effective interest method. They are initially recognized at their fair value including transaction costs. Financial liabilities are derecognized when the contractual obligations are settled or suspended or expire. If the financial liabilities are not due for settlement within 12 months of the end of the reporting period, they are classified as non-current, otherwise as current.

## **LEASE LIABILITIES**

In the previous year, leases were measured and recognized in the OHB Group in accordance with the guidance contained in IAS 17. This was described in sufficient detail in the previous year. The application of the new standard IFRS 16 for recognizing and measuring leases in 2019 is described in Note 13.

The Group is a lessor to only a minor extent.

## **ESTIMATES**

Proper and full preparation of the consolidated financial statements requires to some degree the use of estimates and assumptions, which affect the assets and liabilities reported, the disclosure of contingent liabilities and receivables on the balance sheet and the income and expenses recognized. The actual amounts may vary from these estimates and assumptions in individual cases. Any adjustments are taken to the income statement upon further knowledge becoming available.

Internally funded development expenses are assessed on the basis of estimated future cash flows. The value of goodwill is determined in an annual impairment test. This test involves estimates of future cash inflows. Future changes in the general economic environment and the conditions within the sector or the company may result in a reduction in net cash inflows and, hence, impair the value of the goodwill. Technical progress, deterioration in the market situation or damage may necessitate non-scheduled depreciation of property, plant and equipment. A sensitivity analysis can be found in the disclosures on impairment testing (Note 12).

In identifying the performance obligations in a contract with a customer, the Group makes judgments as to the extent to which the contractual obligations are significantly interrelated, highly interdependent and interconnected. The input-based cost-to-cost method is applied to long-term construction contracts provided that the applicable conditions are satisfied. For this purpose, the costs incurred are divided by the total costs to calculate the percentage of completion. Direct changes may arise from changed estimates with respect to hours or costs or as a result of contract addenda. The estimate of the amount of variable consideration over the period in which services are provided or constraints on the estimate are also estimating uncertainties.

Retirement benefit provisions are calculated on the basis of a number of premises and assumed trends, the application of biometric probabilities as well as generally accepted approximation methods to determine pension obligations. Actual payment obligations arising over time may vary from these (see note 27 on retirement benefits for possible changes).

Tax provisions and impairment testing of deferred tax assets are also based on estimates. In determining the value of deferred tax assets, uncertainty may arise with respect to the interpretation of complex tax legislation as well as the amount and timing of future taxable income.

Other provisions are recognized in the light of available knowledge and using the customary scope for discretion.

In view of the current conditions in the economy and the financial markets, it is not possible at this stage to make any reliable assumptions on the range of possible adjustments which may need to be made to the estimates in 2020.

Impairments of financial assets are based on assumptions about default risk and expected loss rates. The Group uses its discretionary judgment in making these assumptions and selecting input factors for calculating impairments based on the Group's historical experience, existing market conditions and forward-looking estimates at the end of each reporting period.

In connection with IFRS 16, the assessment of leases to determine whether there is sufficient certainty that options to extend or terminate leases will be exercised involves a certain degree of uncertainty. The same thing applies to the determination of the interest rate to be applied.

## VII. NOTES ON THE CONSOLIDATED INCOME STATEMENT

### [1] SALES

2019 in EUR 000	Space technology			Aviation		
	Germany	EU	Other	Germany	EU	Other
Sales	382,026	601,169	7,778	12,691	4,528	0
Less intercompany revenues	-24,515	-1,523	0	-281	-399	0
<b>External sales</b>	<b>357,511</b>	<b>599,646</b>	<b>7,778</b>	<b>12,410</b>	<b>4,129</b>	<b>0</b>
Timing of revenue recognition						
Point in time	9,270	81,424	2,771	12,690	1,348	0
Over time	348,241	518,221	5,008	-281	2,781	0
	<b>357,511</b>	<b>599,646</b>	<b>7,778</b>	<b>12,409</b>	<b>4,129</b>	<b>0</b>
2018						
Sales	330,001	628,788	5,187	14,206	518	0
Less intercompany revenues	-22,021	-1,103	0	-220	0	0
<b>External sales</b>	<b>307,980</b>	<b>627,685</b>	<b>5,187</b>	<b>13,986</b>	<b>518</b>	<b>0</b>
Timing of revenue recognition						
Point in time	27,088	47,528	2,424	13,986	518	0
Over time	280,892	580,157	2,763	0	0	0
	<b>307,980</b>	<b>627,685</b>	<b>5,187</b>	<b>13,986</b>	<b>518</b>	<b>0</b>

Contract assets and contract liabilities:

in EUR 000	31/12/2019	31/12/2018
Contract assets	324,501	279,208
Less loss allowances*	-273	-213
<b>Contract assets</b>	<b>324,228</b>	<b>278,995</b>
Contract liabilities	155,725	100,431

\* See Note 32

The total outstanding transaction price for the performance obligations not met in full or met only partially at the end of the reporting period amounts to EUR 1,840 million (previous year: EUR 2,399 million). OHB SE expects to recognize around 50% of these amounts in 2020 and around 24% in 2021.

Contract liabilities increased over the previous year chiefly due to prepayments received in the Aerospace + Industrial Products segment.

### [2] REDUCTION IN INVENTORIES OF FINISHED GOODS AND WORK IN PROGRESS

The reduction in inventories of finished goods and work in progress primarily relates to the decrease of EUR 0.741 million (previous year: EUR 3.145 million) in the Aerospace + Industrial Products segment. Total inventories decreased by EUR 1.889 million (previous year: decrease of EUR 3.327 million).

Antennas			Other			TOTAL
Germany	EU	Other	D	EU	Other	
4,635	780	5,024	10,510	832	1,363	1,031,336
0	0	0	0	0	0	-26,718
<b>4,635</b>	<b>780</b>	<b>5,024</b>	<b>10,510</b>	<b>832</b>	<b>1,363</b>	<b>1,004,618</b>
17	384	-47	2,810	772	1,363	112,802
4,618	396	5,071	7,700	60	0	891,815
<b>4,635</b>	<b>780</b>	<b>5,024</b>	<b>10,510</b>	<b>832</b>	<b>1,363</b>	<b>1,004,618</b>
1,216	2,758	9,077	8,144	0	0	999,895
0	0	0	0	0	0	-23,344
<b>1,216</b>	<b>2,758</b>	<b>9,077</b>	<b>8,144</b>	<b>0</b>	<b>0</b>	<b>976,551</b>
176	114	1,266	388	0	0	93,488
1,040	2,644	7,811	7,756	0	0	883,063
<b>1,216</b>	<b>2,758</b>	<b>9,077</b>	<b>8,144</b>	<b>0</b>	<b>0</b>	<b>976,551</b>

### [3] OTHER OPERATING INCOME

The other operating income of EUR 15.803 million (previous year: EUR 10.471 million) comprises income from grants of EUR 2.076 million (previous year: EUR 3.070 million), income from the reversal of provisions of EUR 4.379 million (previous year: EUR 3.226 million) and insurance compensation of EUR 3.948 million (previous year: EUR 0.246 million). Income from subleases came to EUR 0 in the year under review (previous year: EUR 0).

### [4] COST OF MATERIALS

in EUR 000	2019	2018
Cost of raw materials and supplies	105,406	88,186
Cost of services bought	544,560	557,402
<b>Total</b>	<b>649,966</b>	<b>645,588</b>

### [5] STAFF COSTS

in EUR 000	2019	2018
Wages and salaries	208,985	190,699
Social security charges and expenditure on old age pensions and support	38,261	36,137
<b>Total</b>	<b>247,246</b>	<b>226,836</b>

Retirement benefits came to EUR 7.377 million (previous year: EUR 4.658 million). In 2019, the Group paid contributions of EUR 13.706 million (previous year: EUR 12.434 million) to the German statutory pension scheme. These are classified as a defined contribution plan.

## [6] OTHER OPERATING EXPENSES

Other operating expenses primarily comprise travel expenses of EUR 7.850 million (previous year: EUR 7.650 million), consulting services of EUR 6.279 million (previous year: EUR 4.507 million), building expenses of EUR 5.532 million (previous year: EUR 11.272 million), other external services of EUR 5.753 million (previous year: EUR 4.833 million) and IT infrastructure costs of EUR 5.441 million (previous year: EUR 4.251 million).

## [7] NET INTEREST INCOME/EXPENSES AND OTHER NET FINANCE INCOME/EXPENSES

in EUR 000	2019	2018
<b>Finance income</b>		
Other interest income from financial assets AmC	1,120	1,276
Return on plan assets	148	135
Other financial income	125	198
<b>1,393</b>	<b>1,609</b>	
<b>Financial expenses</b>		
Interest expense from liabilities at amortized cost	3,681	3,047
Interest expense on retirement benefit provisions and similar obligations	2,228	2,039
Interest expense on lease liabilities (IFRS 16)	1,233	0
Other borrowing costs	0	494
<b>7,142</b>	<b>5,580</b>	

## [8] SHARE OF PROFIT OF ASSOCIATES

The proportionate share in the profit or loss of Aerotech Peissenberg GmbH & Co. KG stands at EUR -3.708 million in 2019 (previous year: EUR 0.820 million). This associate contributed EUR -0.413 million (previous year: EUR -0.248 million) to other comprehensive income.

## [9] INCOME TAXES

### RECONCILIATION OF TAX EXPENSE

in EUR 000	2019	2018
Expected taxes at a tax rate of 32.00% (previous year: 32.00%)	12,526	14,130
Reductions in tax expenses as a result of partially tax-exempt income	-16	-21
Transfer of tax result of associates	-62	312
Unused tax losses	361	1,092
Non-deductible operating expenses	459	534
Other tax effects	396	279
Change in the recognition of deferred income taxes due to changes in tax rates	173	-1,004
Off-period tax expense	172	195
Difference in domestic and non-domestic tax rate	-494	182
<b>Total</b>	<b>13,515</b>	<b>15,699</b>

Tax expense breaks down as follows:

in EUR 000	2019		2018	
	Actual taxes	Deferred taxes	Actual taxes	Deferred taxes
Domestic	10,386	2,291	8,871	6,635
Non-domestic	490	348	144	49
<b>10,876</b>	<b>2,639</b>		<b>9,015</b>	<b>6,684</b>

No deferred tax assets were recognized on unused tax losses and interest expenses carried forward of EUR 22.207 million (previous year: EUR 17.604 million). The unused tax losses do not expire.

The change in deferred income taxes recognized through equity stands at EUR 3.840 million (previous year: EUR 1.126 million).

## ANALYSIS OF DEFERRED INCOME TAXES AND ASSETS

in EUR 000	31/12/2019		31/12/2018		2019	2018
	Deferred income tax assets	Deferred tax liabilities	Deferred income tax assets	Deferred tax liabilities	Change recognized through profit and loss	Change recognized through profit and loss
Intangible assets and property, plant and equipment	41	29,395	0	28,347	-1,006	-2,259
Financial assets	0	451	0	506	-69	-115
Right-of-use assets under leases	0	12,228	0	0	-12,228	0
Current assets	2,122	27,230	2,876	24,983	-3,001	-7,739
Provisions	19,899	0	16,559	51	-614	-298
Liabilities	8,538	0	7,699	0	973	4,001
Lease liabilities	12,391	0	0	0	12,391	0
Tax losses and credits	7,338	315	6,435	320	915	-274
Offsetting	-31,300	-31,300	-16,664	-16,664	0	0
<b>Total</b>	<b>19,029</b>	<b>38,319</b>	<b>16,905</b>	<b>37,543</b>	<b>-2,639</b>	<b>-6,684</b>
Of which current	1,727	4,776	300	2,990		

## [10] MINORITY INTERESTS

Minority interests in the net profit of EUR 86 thousand (previous year: EUR 3.395 million) primarily relate to MT Aerospace Holding GmbH.

The minority interests of EUR 19.133 million (previous year: EUR 22.710 million) mainly comprise the co-shareholders in the MT Aerospace subgroup. At the end of August 2019,

MT Aerospace AG sold all of the shares in MT Mechatronics GmbH to OHB System AG. Minority shareholders hold 30% of the capital of MT Aerospace Holding GmbH, the parent of MT Aerospace AG. Consequently, the minority interests dropped by EUR 0.408 million. At the same time, consolidated net profit rose by EUR 0.572 million, while other reserves declined by EUR 0.164 million. The minority interests received dividends of EUR 1.001 million in the year under review (previous year: EUR 0).

in EUR 000	2019	2018	2019	2018
	OHB Digital Services GmbH	OHB Digital Services GmbH	MT Aerospace Holding GmbH [subgroup]	MT Aerospace Holding GmbH [subgroup]
<b>Assets</b>				
Non-current assets	498	604	119,290	117,536
Current assets	1,925	2,207	125,990	110,920
<b>Total</b>	<b>2,423</b>	<b>2,811</b>	<b>245,280</b>	<b>228,456</b>
<b>Equity and liabilities</b>				
Equity	2,088	2,359	43,911	54,687
Non-current liabilities	154	207	108,952	107,960
Current liabilities	181	245	92,417	65,809
<b>Total</b>	<b>2,423</b>	<b>2,811</b>	<b>245,280</b>	<b>228,456</b>
<b>EBIT</b>	<b>89</b>	<b>-239</b>	<b>9,856</b>	<b>15,340</b>

### [11] EARNINGS PER SHARE UNDER IFRS/IAS

Basic earnings per share are calculated by dividing the post-tax earnings attributable to the shares in question by the total number of shares with dividend entitlement. This indicator may be diluted by so-called potential shares – particularly options and subscription rights. There were no comparable rights as of the balance sheet date. Accordingly, there is no difference between basic and diluted earnings per share. The company's share capital stands at EUR 17,468,096.00. The calculations were based on 17,400,100 shares (previous year: 17,394,718 shares) as the company held an annual average of 67,996 treasury shares (previous year: 73,378 shares). In the absence of any change in the number of outstanding shares, this equals the weighted average of the outstanding shares. The consolidated net profit of EUR 25.543 million (previous year: EUR 24.998 million) after non-controlling interests was applied for calculation purposes.

Earnings per share for 2019 came to EUR 1.47 (previous year: EUR 1.44).

## VIII. NOTES ON THE CONSOLIDATED BALANCE SHEET

### [12] GOODWILL AND OTHER INTANGIBLE ASSETS

#### GOODWILL

in EUR 000	2019	2018
Goodwill from Consolidation of		
OHB System AG	5,684	5,684
OHB Italia S.p.A.	801	801
OHB Digital Services GmbH	646	646
OHB Digital Solutions GmbH	235	0
<b>Total</b>	<b>7,366</b>	<b>7,131</b>

#### CHANGES IN INTANGIBLE ASSETS - HISTORICAL COST

in EUR 000	Goodwill	Concessions and industrial property rights	Intangible assets acquired	Internally generated intangible assets	Total
<b>Balance on January 1, 2018</b>	<b>8,957</b>	<b>2,069</b>	<b>18,534</b>	<b>137,190</b>	<b>166,750</b>
Changes to consolidated companies	0	0	129	0	129
Additions	0	0	2,203	16,555	18,758
Disposals	0	0	4,642	0	4,642
<b>Balance on December 31, 2018 / January 1, 2019</b>	<b>8,957</b>	<b>2,069</b>	<b>16,224</b>	<b>153,745</b>	<b>180,995</b>
Changes to consolidated companies	235	0	115	0	350
Additions	0	131	2,257	10,488	12,876
Disposals	0	8	44	0	52
<b>Balance on December 31, 2019</b>	<b>9,192</b>	<b>2,192</b>	<b>18,552</b>	<b>164,233</b>	<b>194,169</b>

## CHANGES IN INTANGIBLE ASSETS - CUMULATIVE AMORTIZATION

in EUR 000	Goodwill	Concessions and industrial property rights	Intangible assets acquired	Internally generated intangible assets	Total
Balance on January 1, 2018	1,826	2,008	14,102	38,466	56,402
Additions	0	3	2,046	6,851	8,900
Disposals	0	0	4,642	0	4,642
Balance on December 31, 2018 / January 1, 2019	1,826	2,011	11,506	45,317	60,660
Changes to consolidated companies	0	0	115	0	115
Additions	0	3	2,394	7,366	9,763
Disposals	0	0	44	0	44
Balance on December 31, 2019	1,826	2,014	13,971	52,683	70,494
Net carrying amount on December 31, 2019	7,366	178	4,581	111,550	123,675
Net carrying amount on December 31, 2018	7,131	58	4,718	108,428	120,335

Goodwill was tested for impairment at the level of the cash generating units as designated in the above table. Goodwill underwent impairment testing as of December 31, 2019. In addition, stable business performance with due allowance made for expected inflation effects on earnings and expenses was assumed during the forecast period. The recoverable amount was calculated on the basis of the value in use, which in turn was determined by using a discounted cash flow method. This was based on the forecasts covering a period of five years approved by management for the companies concerned. A growth rate of 1% (previous year: 1%) based on historical data and applying a risk discount was assumed for the period after the forecast horizon. A pre-tax weighted average cost of capital (WACC) of 8.11% (previous year: 8.47%) was applied to domestic goodwill and of 11.19% (previous year: 11.55%) to non-domestic goodwill. An increase of 1 percentage point in the WACC and for possible changes in the other assumptions would not result in any further impairment.

The largest item within intangible assets is capitalized expense for the development of a range of geostationary communications satellites (carrying amount: EUR 77.582 million, previous year: EUR 72.267 million).

## [13] RIGHT-OF-USE ASSETS UNDER LEASES

The Group's leases are predominantly for office and production facilities and mostly have an initial fixed duration of between five and 15 years, although they may also include options to extend or terminate the leases. A decision must be made to exercise the options to extend or terminate the leases a certain time before the date of exercise or if it is reasonably certain that the Group will exercise the option. Most of the existing options to extend leases can only be exercised unilaterally by the Group. Most of the options to extend the leases have currently not been included in the determination of the duration of the respective lease. As a rule, there are no residual value guarantees or variable lease payments.

If contracts include a lease and a non-lease component, these are duly separated. A significant portion of the leases for office buildings has been entered into with related parties. However, these are subject to arms-length terms. More information can be found in section XI "Management Board and Supervisory Board".

Leases of operating and business equipment are mostly for vehicles and office equipment with fixed terms of between three and five years and include options to extend or terminate the lease.

Short-term leases of EUR 3.796 million and leases for minor-value assets of EUR 0.153 million were included in other operating expenses in 2019. More information on the interest expenses for leases can be found in Note 7.

Total lease payments equaled EUR 14.908 million in 2019.

As of December 31, 2019, possible cash outflows of EUR 9 million (undiscounted) are not included in lease liabilities as it is not reasonably certain that the leases will be extended (not terminated).

#### CHANGES IN RIGHT-OF-USE ASSETS - HISTORICAL COST

in EUR 000	Operating and business equipment	Technical equipment and machinery	Land and buildings	Total
Balance on January 1, 2019 (adoption of IFRS 16)	5,904	0	53,785	59,689
Changes to consolidated companies	0	0	76	76
Additions	2,550	49	2,814	5,413
Disposals	0	0	19	19
<b>Balance on December 31, 2019</b>	<b>8,454</b>	<b>49</b>	<b>56,656</b>	<b>65,159</b>

#### CHANGES IN RIGHT-OF-USE ASSETS - CUMULATIVE DEPRECIATION

in EUR 000	Operating and business equipment	Technical equipment and machinery	Land and buildings	Total
Balance on January 1, 2019 (adoption of IFRS 16)	0	0	0	0
Additions	2,277	2	8,021	10,300
Disposals	0	0	19	19
<b>Balance on December 31, 2019</b>	<b>2,277</b>	<b>2</b>	<b>8,002</b>	<b>10,281</b>
Net carrying amount on December 31, 2019	6,177	47	48,654	54,878
Net carrying amount on January 1, 2019	5,904	0	53,785	59,689

#### [14] PROPERTY, PLANT AND EQUIPMENT

#### CHANGES IN PROPERTY, PLANT AND EQUIPMENT - HISTORICAL COST

in EUR 000	Operating and business equipment	Technical equipment and machinery	Land and buildings	Total
Balance on January 1, 2018	66,349	58,940	55,395	180,684
Changes to consolidated companies	0	15	0	15
Additions	9,412	10,150	431	19,993
Disposals	7,933	3,443	15	11,391
Reclassified	120	-142	22	0
<b>Balance on December 31, 2018/January 1, 2019</b>	<b>67,948</b>	<b>65,520</b>	<b>55,833</b>	<b>189,301</b>
Changes to consolidated companies	71	68	11	150
Additions	10,901	5,357	88	16,346
Disposals	2,637	505	2	3,144
<b>Balance on December 31, 2019</b>	<b>76,283</b>	<b>70,440</b>	<b>55,930</b>	<b>202,653</b>

## CHANGES IN PROPERTY, PLANT AND EQUIPMENT – CUMULATIVE DEPRECIATION

in EUR 000	Operating and business equipment	Technical equipment and machinery	Land and buildings	Total
Balance on January 1, 2018	40,894	35,491	26,601	102,986
Currency-translation changes	50	0	0	50
Additions	5,435	1,701	1,226	8,362
Disposals	6,893	3,441	15	10,349
Reclassified	27	-27	0	0
Balance on December 31, 2018/January 1, 2019	39,513	33,724	27,812	101,049
Currency-translation changes	29	4	0	33
Additions	6,305	1,712	1,142	9,157
Disposals	2,537	489	2	3,026
<b>Balance on December 31, 2019</b>	<b>43,310</b>	<b>34,951</b>	<b>28,952</b>	<b>107,213</b>
Net carrying amount on December 31, 2019	32,973	35,489	26,978	95,440
Net carrying amount on December 31, 2018	28,435	31,796	28,021	88,252

Additions in the year under review relate primarily to production machinery for technical equipment. These primarily entail technical/electronic laboratory equipment, hardware, other operating and business equipment and minor-value assets. There are unrestricted ownership rights to the remaining assets classed as property, plant and equipment with the exception of land charges which currently have no value.

## [15] SHARES IN ASSOCIATES

This item comprises the share in the equity of associated company Aerotech Peissenberg GmbH & Co. KG, Peissenberg, (ATP) which is recognized at amortized cost. The majority shareholder exercises a controlling influence on this entity's business model. It is recognized at equity. In 2019, ATP recorded total revenues of EUR 121.874 million (previous year: EUR 147.273 million), EBIT of EUR -7.084 million (previous year: EUR 5.761 million) and EBITDA of EUR -2.986 million (previous year: EUR 9.420 million). It had non-current assets of EUR 48.121 million (previous year: EUR 38.990 million) and current assets of EUR 40.021 million (previous year: EUR 47.593 million) as of December 31, 2019. Non-current and current liabilities stood at EUR 93.021 million (previous year: EUR 81.356 million). This item breaks down as follows:

in EUR 000	2019	2018
January 1	2,960	2,388
Share in net profit/loss	-2,664	820
Share in other comprehensive income	-296	-248
<b>December 31</b>	<b>0</b>	<b>2,960</b>

The Group's share in the total loss posted by the associate Aerotech Peissenberg GmbH & Co. KG came to EUR 4.121 million in the year under review. Of this, EUR -3.708 million was recognized through profit and loss and EUR -0.413 million through other comprehensive income. The total loss exceeding the carrying amount of the investment (EUR -1.161 million) was deducted from non-current financial receivables from associates (EUR -1.044 million recognized through profit and loss and EUR -0.117 million recognized through other comprehensive income).

## [16] OTHER FINANCIAL ASSETS

The decrease is due to the fair value recognized through other comprehensive income of EUR -7.721 million (previous year: EUR -2.857 million) in connection with the remeasurement of the shares held in ORBCOMM Inc. It was remeasured on the basis of the stock market price of ORBCOMM Inc. as of December 31, 2019 and the USD/EUR exchange rate as of the same date.

## [17] INVENTORIES

Inventories increased over the previous year to EUR 53.302 million (previous year: EUR 50.192 million). Prepayments received were not netted with inventories.

in EUR 000	31/12/2019	31/12/2018
Raw materials, supplies and consumables	25,964	22,599
Work in progress	16,290	20,157
Finished goods	920	769
Prepayments	10,128	6,667
<b>Total</b>	<b>53,302</b>	<b>50,192</b>

Prepayments made were allocated to inventories due to their close relationship.

The main impairments of inventories came to EUR 1.933 million at the end of the year (previous year: EUR 1.629 million). Impairments of EUR 0.492 million (previous year: EUR 0.138 million) are reported as expense.

## [18] TRADE RECEIVABLES

Receivables were predominantly denominated in euros as of the reporting date. The maximum default risk equals the carrying amount of the receivables reported on the face of the balance sheet.

in EUR 000	31/12/2019	31/12/2018
Trade receivables	92,618	69,249
Less impairments	-149	-157
	<b>92,469</b>	<b>69,092</b>

## [19] FINANCIAL AND NON-FINANCIAL OTHER ASSETS (CURRENT AND NON-CURRENT)

in EUR 000	31/12/2019		31/12/2018	
	Current	Non-current	Current	Non-current
<b>Non-financial assets</b>				
VAT refund claims	7,012	0	1,939	0
Deferrals	3,894	0	3,776	0
Other	5,548	0	5,088	0
<b>Financial assets</b>				
Loans to associates*	0	28,707	0	28,758
Derivatives in hedge relationships	19	0	0	0
Other financial assets*	5,990	232	77	248
Deposits	0	1,552	0	1,907
<b>Total</b>	<b>22,463</b>	<b>30,491</b>	<b>10,880</b>	<b>30,913</b>

\* See Note 32 on loss allowances

The maximum default risk equals the carrying amount of the financial assets reported on the face of the balance sheet.

## [20] SECURITIES

As of the reporting date, the securities portfolio was valued at EUR 0.448 million (previous year: EUR 0.335 million). As in the previous year, all the securities are measured at fair value through profit and loss. The maximum default risk equals the carrying amount reported on the face of the balance sheet.

## [21] CASH AND CASH EQUIVALENTS

Cash and cash equivalents were valued at EUR 85.090 million on the reporting date (previous year: EUR 48.316 million) and primarily comprise cash in hand and cash at banks. The cash at banks is due within three months and is exposed to only a minimal risk of any change in value. Cash and cash equivalents are the same as the cash and cash equivalents included in the cash flow statement.

## [22] SUBSCRIBED CAPITAL

Since September 30, 2009, the company's issued capital has equaled EUR 17,468,096.00 and is divided into 17,468,096 no-par-value ordinary bearer shares equivalent to a notional share of EUR 1.00 each in the company's issued capital. Of the total of 17,468,096 shares, OHB SE holds treasury stock comprising 67,996 shares (previous year: 67,996 shares), meaning that 17,400,100 (previous year: 17,400,100 shares) have been issued and are fully paid up (see Note 26). Of these shares, 5,221,380 shares (previous year: 5,221,380 shares) are free float. There is one vote for each share held.

## [A] CONTINGENT CAPITAL

At their annual general meeting held on January 23, 2001, the company's shareholders increased the company's share capital by approving the issue of a total of EUR 516,404.00 in the form of up to 516,404 bearer shares on a contingent basis. The contingent capital increase is to be used for granting options to entitled persons under a staff compensation system. No such staff compensation systems are currently in operation. The contingent capital increase may only be implemented if the holders of such options exercise these. The new shares are dividend-entitled for the first time in the fiscal year in the course of which they are issued. The Management Board is authorized subject to the Supervisory Board's approval to determine the specific conditions for such contingent capital increase. In the event that options are granted to Members of the company's Management Board, the Supervisory Board is authorized to determine the specific conditions for such contingent capital increase.

## **[B] AUTHORIZED CAPITAL**

At their annual general meeting held on May 21, 2015, the shareholders passed a resolution authorizing the company's Management Board – with the Supervisory Board's approval – to raise the share capital once or repeatedly by a total of up to EUR 8,734,048.00 on a cash or non-cash basis on or before May 20, 2020 (authorized capital 2015). The new shares may also be issued to the company's employees. The company's Management Board was authorized – subject to the Supervisory Board's approval – to exclude the shareholders' subscription rights in the following cases:

**[1]** for fractional amounts;

**[2]** for part of authorized capital 2015 up to a maximum of EUR 1,746,809.00 provided that the new shares are issued in return for cash capital contributions at a price not materially less than the stock-market price (Section 186 (3) Sentence 4 of the German Stock Corporation Act);

**[3]** for a part of authorized capital 2015 up to a maximum of EUR 8,734,048.00 provided the new shares

- are issued as consideration for the acquisition of all or part of other companies or entities or other assets and such acquisition is in the interests of the company; or
- are issued as consideration for cash capital contributions to have the company's stock listed in a foreign market in which it has previously not been admitted to trading.
- The Management Board is additionally authorized subject to the Supervisory Board's approval to determine the extent and nature of the option rights and the other conditions of issue.

## **[C] AUTHORIZATION TO ACQUIRE AND SELL TREASURY STOCK**

At the annual general meeting held on May 21, 2015, the shareholders authorized the company to buy back treasury stock of up to a total of 10% of the company's share capital on or before May 20, 2020.

**a]** The company is authorized to buy back a total of up to 10% of its own share capital in the amount existing as of the date on which the resolution was passed. At no time may the shares acquired by the company together with other treasury stock already acquired or still held by it or attributable to it in accordance with Sections 71d, 71e of the German Stock Corporation Act exceed more than ten percent (10%) of its share capital. The authorization may be exercised by the company in full or in part, once or repeatedly or for different purposes and may also be exercised by dependent companies or

companies in which OHB SE holds a majority stake for their account or for third-party account.

**b]** The acquisition of shares must comply with the equal treatment principle (Section 53a of the German Stock Corporation Act) and is executed at the Management Board's discretion either via the stock market (1) or in a public offering addressed to all shareholders (2). In the second case, the provisions of the Securities Acquisition and Transfer Act must be observed where applicable.

**[1]** If the company buys back its own shares via the stock market, the purchase price paid per share (net of transaction costs) may not be any more than 10% above or below the average closing price of the stock in Xetra trading (or an equivalent replacement system) on the Frankfurt stock exchange on the last three trading days prior to acquisition of the shares.

**[2]** If the company buys back its own shares in a public offering addressed to all shareholders, the purchase price paid per share (net of transaction costs) may not be any more than 10% above or below the average closing price of the stock in Xetra trading (or an equivalent replacement system) on the Frankfurt stock exchange on the fifth, fourth and third trading days prior to the publication of the offer. If such a public offering is over-subscribed, the shares must be bought back on a quota system. Provision may be made for the preferred acceptance of a lower volume of up to 100 shares offered per shareholder and rounding in accordance with commercial provisions.

**c]** The Management Board is authorized to utilize the treasury stock acquired through the exercise of the authorization mentioned above for all purposes permitted by law, including but not limited to the following:

**[1]** Subject to the approval of the Supervisory Board it may use the treasury stock to have the company's stock traded on foreign stock exchanges to which it has hitherto not been admitted.

**[2]** Subject to the approval of the Supervisory Board, it may offer or transfer the treasury stock to third parties for the purpose of acquiring companies, parts of companies or equity interests including but not limited to additions to existing equity interests.

**[3]** It may offer the treasury stock to the employees of the company or other entities related to it in accordance with the definition in Sections 15 et seq. of the German Stock Corporation Act as employee shares.

- [4] Subject to the approval of the Supervisory Board, it may also redeem the treasury stock without any need for a resolution of the shareholders approving such redemption or related activities.
- d] The Management Board is authorized – subject to the approval of the Supervisory Board and without any obligation for a further resolution to be passed by the shareholders – to sell the treasury stock acquired in accordance with the above authorization or in any other manner either publicly or in the form of an offer to the shareholders provided that the sale is for cash and the price offered is not materially less than the price at which equivalent stock issued by the company is trading on the stock market on the date of the sale. For the purposes of the above rule, the stock market price is defined as the arithmetic mean of the price fixed for the company's stock in the closing auctions in Xetra trading (or an equivalent replacement system) on the Frankfurt/Main stock exchange on the last five trading days before the date of the sale. This authorization is limited to a total of 10% of the company's share capital. The maximum of 10% is reduced by the prorated share in the share capital accounted for by shares which are issued during the term of this authorization as part of an equity issue in which pre-emptive shareholder rights are excluded in accordance with Section 186 (3) Sentence 4 of the German Stock Corporation Act. The volume covered by the authorization is also reduced by an amount equaling the prorated share in the share capital accounted for by conversion and/or option rights under bonds issued on or after the date on which this authorization takes effect in connection with which pre-emptive shareholder rights are excluded in accordance with Section 186 (3) Sentence 4 of the German Stock Corporation Act.
- e] The aforementioned authorizations may be utilized once or repeatedly, in part or in full, individually or jointly.
- f] The shareholders' pre-emptive subscription rights with respect to the company's treasury stock are excluded in cases in which it is used in accordance with the authorizations described in c) (1) – (3) and d) above.

## **[23] SHARE PREMIUM**

The share premium primarily comprises the cash proceeds from the stock-market flotation. The change results from share-based payment commitments for one Member of the Management Board.

## **[24] RETAINED EARNINGS**

Retained earnings include the negative goodwill arising from the consolidation of newly acquired companies up until 2002.

## **[25] UNREALIZED GAINS AND LOSSES RECOGNIZED UNDER EQUITY**

This equity item mainly relates to a reserve for actuarial gains and losses from the measurement of retirement benefit obligations, which will not be recycled to profit and loss at a later date. The reserve for equity instruments measured at fair value through other comprehensive income mainly includes the cumulative gains and losses from the fair value measurement of the shares in ORBCOMM Inc. When the equity instruments are sold, the reserve will be recycled to consolidated profit and loss in an amount equaling the corresponding cumulative amount for the equity instrument concerned. The reserves (with and without recycling to profit or loss) for associates include the associates' pro rata cumulative other comprehensive income. The hedge reserve contains the cumulative amounts of the effective fair value changes of the designated components.

## CHANGES IN EQUITY NOT RECOGNIZED IN PROFIT AND LOSS

in EUR 000	Currency-translation differences	Financial assets at FVOCI	Measured through other comprehensive income financial assets	from associates				Total	
				Cash flow hedges	Actuarial gains/losses	Currency-translation differences	Cash flow hedges		
January 1, 2018	-269	11,286	0	20	-13,158	12	103	-93	-2,099
Other changes	-141	0	0	0	0	0	0	0	-141
Gains/losses from effective hedging relationships	0	0	0	-647	0	0	-118	0	-765
Reclassifications	0	0	0	9	0	0	0	0	9
Present value adjustments	0	-2,857	0	0	0	0	0	0	-2,857
Adjustment of actuarial assumptions	0	0	0	0	-3,074	0	0	-130	-3,204
Deferred taxes	0	46	0	205	875	0	0	0	1,126
Non-controlling interests	0	0	0	129	309	0	0	0	438
Changes to consolidated companies	0	0	0	0	-254	0	0	0	-254
December 31, 2018	-410	8,475	0	-284	-15,302	12	-15	-223	-7,747
Other changes	-96	0	0	0	0	-12	0	0	-108
Gains/losses from effective hedging relationships	0	0	0	417	0	0	70	0	487
Present value adjustments	0	-7,721	0	0	0	0	0	0	-7,721
Adjustment of actuarial assumptions	0	0	0	0	-12,040	0	0	-472	-12,512
Deferred taxes	0	124	0	-134	3,840	0	0	0	3,830
Non-controlling interests	18	0	0	-89	2,134	0	-21	213	2,255
Changes to consolidated companies	0	0	0	0	-165	0	0	0	-165
December 31, 2019	-488	878	0	-90	-21,533	0	34	-482	-21,681

## [26] TREASURY STOCK

On September 13, 2011, the Management Board of OHB SE decided to implement a stock buyback program and to acquire up to 250,000 of the company's shares in accordance with a resolution passed by the shareholders at the annual general meeting on May 19, 2010. This authorization expired on May 18, 2015. The purpose of the treasury stock was to place the company's shares in foreign stock markets, to pay for the acquisition of other companies, parts of companies or shares in such companies and to issue shares to the company's employees. As of December 31,

2019, OHB SE's treasury stock comprised a total of 67,996 shares, equivalent to 0.39% of its issued capital.

## NUMBER OF SHARES OUTSTANDING

in EUR 000	2019	2018
Balance on January 1	17,400,100	17,387,600
Transfer of treasury stock	0	12,500
<b>Balance on December 31</b>	<b>17,400,100</b>	<b>17,400,100</b>

## [27] PROVISIONS FOR RETIREMENT BENEFITS AND SIMILAR OBLIGATIONS

Provisions for retirement benefits and similar obligations break down as follows:

in EUR 000	31/12/2019	31/12/2018
Retirement benefits	100,077	93,503
Similar obligations	8,175	6,080
<b>Retirement benefit obligations</b>	<b>108,252</b>	<b>99,583</b>

The similar obligations primarily comprise lifetime work accounts and the support fund at OHB System AG.

OHB Group has made arrangements for post-retirement benefits for entitled employees in both segments. The amount of the future benefits is generally based on the length of service, amount of remuneration and position held within the company. The retirement age stipulated in the contracts is 65 years. The direct and indirect obligations encompass those under existing pensions and entitlement to future pensions and post-retirement benefits. Reinsurance has been taken out to cover retirement benefit obligations. Not all of these reinsurance policies satisfy the conditions for classification as plan assets. The latter are reported within other non-current assets. The reinsurance policies which satisfy the conditions for classification as plan assets are netted with the retirement benefit obligations. In addition there are plan assets of EUR 4.461 million (previous year: EUR 3.146 million) to cover the lifetime working accounts in the form of bank balances which are netted against the quasi-pension obligations. There were no extraordinary expenses or income as a result of the termination of any plans or on account of the curtailment or transfer of benefits in the year under review. The calculation of post-retirement benefit obligations takes account of market interest rates as well as trends in wages and salaries, pensions and fluctuations on the basis of the following actuarial assumptions:

- Discount rate: 1.20% (previous year: 2.00%)
- Wage/salary trend: 2.75% (previous year: 2.75%)
- Wage drift: 0.00% (previous year: 0.00%)
- Pension trend: 1.50% (previous year: 1.50%)

In some cases, differing assumptions were made for small volumes in foreign subsidiaries. These parameters are also applied in the following year to the calculation of the cost of the entitlement acquired. The total cost of defined benefit pension commitments breaks down as follows:

in EUR 000	2019	2018
Current service cost	1,041	871
Interest expense	2,228	2,039
Expected income (–) from plan assets	-183	-165
<b>Total</b>	<b>3,086</b>	<b>2,745</b>

The present values of the defined benefit obligations changed as follows:

in EUR 000	2019	2018
Present value of the defined benefit obligations on January 1	106,311	103,063
Changes to consolidated companies	206	1,893
Present value of the entitlement acquired in the year	568	871
Interest expenditure on entitlement already acquired	2,228	2,039
Payments from provisions	-7,377	-4,658
Actuarial gains (–)/losses (+)	12,004	3,103
<b>Present value of the defined benefit obligations on December 31</b>	<b>113,940</b>	<b>106,311</b>

The plan assets break down as follows:

in EUR 000	2019	2018
Value of plan assets on January 1	6,728	6,476
Payments received	190	124
Payments made	-1,377	-7
Expected income	183	165
Actuarial gains (–)/losses (+)	-36	-29
<b>Value of plan assets on December 31</b>	<b>5,688</b>	<b>6,728</b>

The remeasurements of EUR 0 (previous year: EUR 1.237 million) are based on changes to demographic assumptions, EUR 12.475 million (previous year: EUR 0.903 million) on changes in financial assumptions, EUR 0.232 million (previous year: EUR 0.733 million) on changes in historical data and EUR 36 thousand (previous year: EUR 29 thousand) on the remeasurement of income from plan assets.

The plan assets (EUR 3.936 million, previous year: EUR 4.994 million) chiefly comprise savings plans with insurance companies that are classified by the Belgian Financial Services and Markets Authority (FSMA) as Class 21 and Class 23 insurance policies and a support fund (EUR 1.751 million, previous year: EUR 1.568 million).

Actual income from plan assets came to EUR 0.148 million (previous year: EUR 0.135 million). The present value is reconciled with the defined benefit (defined benefit liability [+] / defined benefit asset [-]) as follows:

in EUR 000	31/12/2019	31/12/2018
Actual present value of the defined benefit obligation	113,940	106,311
Fair value of plan assets	-5,688	-6,728
<b>Retirement benefit obligations recorded on the balance sheet</b>	<b>108,252</b>	<b>99,583</b>

The retirement benefit obligation breaks down into a defined benefit liability and defined benefit asset as follows:

in EUR 000	31/12/2019	31/12/2018
Defined benefit asset	0	0
Defined benefit liability	108,252	99,583

Contributions of EUR 0.795 million are expected to be paid in 2020. The following cash outflows are expected in the following periods:

Year(s)	in EUR 000
2020	5,091
2021	5,379
2022	5,497
2023	5,677
2024	5,465
2025-2029	29,818

The present value of the defined benefit obligations of EUR 0.183 million (previous year: EUR 0.445 million) was calculated in accordance with the entry age normal method. The fractional values are computed using actuarial principles on the basis of the 2018 G biometric tables compiled by Prof. Dr. Klaus Heubeck and an interest rate of 2.71%. With respect to these provisions, it is assumed that the application of the projected unit credit method provided for in IAS 19 does not result in any major differences in this item. If the discount rate were 0.25% lower, the present value of the retirement benefit obligations would increase by EUR 4.037 million. If the discount rate were 0.25% higher, the present value of the retirement benefit obligations would decrease by EUR 3.823 million. If the rate by which retirement benefits rise were 0.25% higher, the present value of the retirement benefit obligations would increase by EUR 3.206 million. If the rate by which retirement benefits rise were 0.25% lower, the present value of the retirement benefit obligations would decrease by EUR 3.080 million.

## **[28] OTHER PROVISIONS (CURRENT AND NON-CURRENT)**

Non-current personnel-related provisions primarily comprise provisions for phased retirement scheme obligations in the Aerospace + Industrial Products segment. The phased retirement agreements expire in 2023. Plan assets in the form of funds (EUR 0.439 million, previous year: EUR 0.200 million) were netted with the provisions for phased retirement obligations (EUR 2.364 million, previous year: EUR 1.395 million), resulting in a netted figure of EUR 1.925 million (previous year: EUR 1.195 million). Other personnel-related provisions primarily relate to obligations towards employees of EUR 19.743 million (previous year: EUR 18.986 million) under recurring wage and salary obligations. An outflow in the current personnel-related provisions is expected in the first quarter of 2020.

in EUR 000	01/01/2019	Utilized	Reversed	Added	Added from first-time consolidation	31/12/2019	Of which non-current
Pending losses and risks	4,616	789	2,691	938	0	2,074	45
Remaining work on fully invoiced projects	2,949	566	1,049	1,792	0	3,126	0
Other provisions	4,229	2,686	202	3,697	145	5,183	1,340
Personnel-related provisions	20,182	15,132	437	19,482	0	24,095	1,925
	<b>31,976</b>	<b>19,173</b>	<b>4,379</b>	<b>25,909</b>	<b>145</b>	<b>34,478</b>	<b>3,310</b>

## [29] NON-CURRENT FINANCIAL LIABILITIES

This mostly entails non-current liabilities towards banks owed by the subsidiary OHB System AG in an amount of EUR 23.334 million (previous year: EUR 30 million). In addition, OHB Italia S.p.A. has bank borrowings of EUR 0.415 million (previous year: EUR 0.363 million). These liabilities are due for settlement in more than 12 months after the reporting date.

The loan contract for OHB System AG provides for three covenants, which were duly observed in the year under review. The initial application of IFRS 16 in 2019 did not have any impact on these covenants. The effect of IFRS 16 on the balance sheet has been eliminated and the accounting methods applicable on the date on which the contract was signed applied.

## [30] CURRENT FINANCIAL LIABILITIES

This entails current liabilities towards banks held by OHB SE (EUR 40 million, previous year: EUR 0), OHB System AG (EUR 41.333 million, previous year: EUR 15.008 million), MT Aerospace AG (EUR 5 million, previous year: EUR 0), OHB Italia S.p.A. (EUR 0, previous year: EUR 9.133 million), OHB Digital Solutions GmbH (EUR 0.298 million, previous year: not consolidated), OHB Sweden AB (EUR 1.289 million, previous year: EUR 1.158 million), LuxSpace Sàrl (EUR 0, previous year: EUR 26 thousand) and OHB Teledata GmbH (EUR 0, previous year: EUR 49 thousand).

The syndicated loan, which had a value of EUR 80 million as of the reporting date (previous year: EUR 15 million), provides for two covenants, which were duly observed in the year under review. The initial application of IFRS 16 in 2019 did not have any impact on these covenants. The effect of IFRS 16 on the balance sheet has been eliminated and the accounting methods applicable on the date on which the contract was signed applied.

## [31] CURRENT FINANCIAL AND NON-FINANCIAL OTHER LIABILITIES

The other non-financial liabilities primarily comprise outstanding invoices of EUR 29.466 million (previous year: EUR 25.429 million).

in EUR 000	31/12/2019	31/12/2018
<b>Non-Financial Liabilities</b>		
Value added tax	1,041	980
Social security and payroll tax liabilities	1,973	2,131
Other	29,875	25,759
<b>Financial Liabilities</b>		
Hedged derivatives	132	375
Other financial liabilities	7,901	10,303
<b>Total</b>	<b>40,922</b>	<b>39,548</b>

### [32] ADDITIONAL DISCLOSURES ON FINANCIAL INSTRUMENTS AND HEDGING RELATIONSHIPS

The financial instruments were allocated to the following categories:

in EUR 000	31/12/2019		31/12/2018	
	Current	Non-current	Current	Non-current
<b>Amortized cost (AmC)</b>				
Other financial assets	5,990	30,491	77	30,913
Cash and cash equivalents	85,090	0	48,316	0
Trade receivables	92,469	0	69,092	0
	<b>183,549</b>	<b>30,491</b>	<b>117,485</b>	<b>30,913</b>
<b>Measured at fair value through other comprehensive income (FVOCI)</b>				
Equity instruments traded on the active market	0	8,363	0	16,084
Other equity instruments	0	16,749	0	15,889
	<b>0</b>	<b>25,112</b>	<b>0</b>	<b>31,973</b>
<b>Measured at fair value through profit and loss (FVPL)</b>	<b>448</b>	<b>0</b>	<b>335</b>	<b>0</b>
	<b>448</b>	<b>0</b>	<b>335</b>	<b>0</b>
	<b>183,997</b>	<b>55,603</b>	<b>117,820</b>	<b>62,886</b>
<b>Amortized cost (AmC)</b>				
Trade payables	166,651	0	176,964	0
Financial liabilities	88,254	23,749	25,374	30,363
Lease liabilities	12,891	42,561	0	0
Other financial liabilities	7,901	0	10,303	0
	<b>275,697</b>	<b>66,310</b>	<b>213,016</b>	<b>30,363</b>

It is assumed that the carrying amount of other financial assets, trade receivables and cash and cash equivalents equals their fair value due to their short-term status.

The carrying amount of non-current financial assets measured at amortized cost of TEUR 30,491 (previous year: TEUR 30,913) approximates fair value. These chiefly comprise a loan of EUR 28.707 million to an associate and non-interest-bearing deposits of EUR 1.552 million. However, in view of the current low interest rates, there is virtually no difference.

The shares in ORBCOMM Inc., which are measured at fair value through other comprehensive income, are recognized at their fair value (EUR 8.363 million, previous year: EUR 16.084 million) as determined by the price of the shares quoted on the New York Stock Exchange on the reporting date (level 1 of the fair value hierarchy). There is no active market for determining the fair value of the shares

in Arianespace Participation (EUR 8.268 million), Rocket Factory Augsburg AG (EUR 3.963 million) MT Dezentrale Energiesysteme GmbH (EUR 1.022 million), MT Mecatronica srl (EUR 10 thousand) and other minor shareholdings. As in the previous year, they were recognized at historical cost unless there was any evidence of impairment as it was not possible to reliably calculate a fair value.

The securities measured at fair value through profit and loss were recognized at their fair value, meaning that the carrying amount equals the fair value. The fair value was derived from the listed stock exchange price on the reporting date.

The carrying amount of current financial liabilities measured at amortized cost as well as financial liabilities and trade payables equals their fair value due to their short-term nature.

Other financial liabilities include a loan of EUR 1.751 million (previous year: EUR 1.568 million) received from the support fund which is subject to interest of 5%. As the loan can be terminated at any time, the carrying amount is close to its fair value. The loan must be repaid in a single sum upon termination at the latest.

Non-current financial liabilities measured at amortized cost (FLAC) have a carrying amount of EUR 23.749 million (previous year: EUR 30.363 million), which is close to their fair value. It would currently be possible to raise a loan on the same terms.

It is not necessary to calculate the fair value of lease liabilities.

Net profit/loss does not include any interest income or interest expense. These are described in the section on net financial income/expense. Similarly, impairments are excluded from net profit/loss.

#### NET GAINS/LOSSES BY CATEGORY IN 2019

in EUR 000	Other income and expense items	
	31/12/2019	31/12/2018
Financial assets		
FVPL	Measured at fair value through profit and loss	114
AmC	Measured at amortized cost	0
FVOCI	Measured at fair value through other comprehensive income	-7,721
		126
		0
		-2,857

The OHB Group has two types of financial assets to which the expected credit loss model is applied: trade receivables and contract assets.

Cash and cash equivalents are generally also subject to the measurement requirements of IFRS 9, but are not included due to the expected insignificant effects.

OHB applies the simplified IFRS 9 approach for determining expected credit losses, which entails a loss allowance for all trade receivables and contract assets depending on their remaining term.

in EUR 000						
31/12/2019	Not yet due for settlement	Past due by up to 1 year	Past due by more than 1 year	Impaired	Total	
Expected loss rate	0.14%	0.24%	0.31%			
Carrying amount of trade receivables	78,433	8,496	5,689			92,618
Impairments	109	22	18			149
						<b>92,469</b>
Expected loss rate	0.08%					
Carrying amount of contract assets	324,501					324,501
Impairments	273					273
						<b>324,228</b>
<b>31/12/2018</b>						
Expected loss rate	0.11%	0.21%	0.10%			
Carrying amount of trade receivables	55,677	6,445	4,664	2,463		69,249
Impairments	60	14	5	79		157
						<b>69,092</b>
Expected loss rate	0.08%					
Carrying amount of contract assets	279,208					279,208
Impairments	213					213
						<b>278,995</b>

in EUR 000	Contract assets	Trade receivables
January 1, 2018	162	1,077
Added	51	0
Reversed	0	-920
<b>December 31, 2018</b>	<b>213</b>	<b>157</b>
Added	60	19
Reversed	0	-27
<b>December 31, 2019</b>	<b>273</b>	<b>149</b>

All other current debt instruments measured at amortized cost are considered to exhibit a low credit risk because the risk of non-fulfilment is low and it is assumed that the debtors will be able to meet their contractual payment obligations. No loss allowance has been recognized for 12-month credit losses (level 1).

With respect to non-current financial assets, no security deposits are overdue. These are predominantly based on the terms and conditions of the loan agreements and the entire amount of EUR 1.784 million (previous year: EUR 30.913 million, including security deposits of EUR 1.552 million, previous year: EUR 1.907 million) has been allocated to level 1 of the credit risk model. As there was no significant increase in the credit risk, no loss allowances were recognized.

In contrast to the previous year, the loan to associates of EUR 28.707 million (previous year: EUR 28.758 million) was assigned to level 2 of the credit risk model. An agreement was entered into to capitalize the interest until June 2023. Interest payments in a customary amount may be made provided that the total amount of the loan including interest rises to over EUR 30 million. The value of the loan was reduced by EUR 1.161 million in accordance with the equity method of accounting. There were no further impairments.

### MEASUREMENT HIERARCHY FOR FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT AND LOSS

Level 1: Financial instruments traded in active markets, the listed prices of which are applied for measurement purposes.

Level 2: Financial instruments are measured using methods with parameters which are derived directly or indirectly from observable market data.

Level 3: Financial instruments are measured using methods with parameters which are not based solely on observable market data.

The fair value of the securities is derived from their listed market price. There were no transfers between the individual hierarchical levels in the year under review.

### DERIVATIVES AND HEDGE RELATIONSHIPS

The OHB Group engages in buying and selling operations in foreign currencies, which expose it to a currency translation risk with a direct impact on profit and loss. In order to hedge this risk, OHB mainly uses forward exchange contracts, which must generally be designated as hedges. The Group Policy prohibits the use of derivatives for speculative purposes. The hedging relationship is formally designated at the time the derivatives are entered into by preparing the necessary hedge documentation.

The following table presents the time profile for the nominal amount and the average price of the derivatives.

in EUR 000	31/12/2019		
	Level 1	Level 2	Level 3
<b>Financial assets</b>			
Financial assets at fair value through profit and loss (FVPL)			
Securities	448	0	0
Financial assets at fair value through other comprehensive income			
Equity interest in ORBCOMM	8,363	0	0
Hedging derivatives – foreign currency forwards	0	19	0
<b>Total</b>	<b>8,811</b>	<b>19</b>	<b>0</b>
<b>Financial liabilities</b>			
Hedging derivatives – foreign currency forwards	0	132	0
<b>Total</b>	<b>0</b>	<b>132</b>	<b>0</b>

in EUR 000	31/12/2018		
	Level 1	Level 2	Level 3
<b>Financial assets</b>			
Financial assets at fair value through profit and loss (FVPL)			
Securities	335	0	0
Financial assets at fair value through other comprehensive income			
Equity interest in ORBCOMM	16,084	0	0
<b>Total</b>	<b>16,419</b>	<b>0</b>	<b>0</b>
<b>Financial liabilities</b>			
Hedging derivatives – foreign currency forwards	0	375	0
<b>Total</b>	<b>0</b>	<b>375</b>	<b>0</b>

in EUR 000	Remaining period			Total nominal volume	Total nominal volume	Average hedging rate
	Less than 1 year	1 to 5 years	More than 5 years	31/12/2019	31/12/2018	31/12/2019
Currency hedges						
Currency forwards USD	4,506	0	0	4,506	5,082	1.1597
Currency forwards GBP	312	0	0	312	300	0.8830
Currency forwards other currencies	0	0	0	0	161	n/a
<b>Total</b>	<b>4,818</b>	<b>0</b>	<b>0</b>	<b>4,818</b>	<b>5,543</b>	

Cash flow hedges are formed for anticipated future transactions.

## DISCLOSURES ON CASH FLOW HEDGES AND FAIR VALUE HEDGES

in EUR 000	31/12/2019				31/12/2018			
	Carrying amount	Balance sheet items	Change in fair value to calculate ineffectiveness	Nominal volume	Carrying amount	Balance sheet items	Change in fair value to calculate ineffectiveness	Nominal volume
	Cash flow hedges and fair value hedges				Cash flow hedges			
Currency hedges – currency forwards								
Derivatives – assets	19	Financial assets	19	1,472	0	n/a	0	0
Derivatives – liabilities	-132	Financial liabilities	-132	3,346	-375	Financial liabilities	-375	5,543

A prerequisite for applying hedge accounting under IFRS 9 is the prospective effectiveness of the hedge relationship, which OHB demonstrates on a periodic basis using the critical terms match method. As a rule, a derivative is entered into on identical contractual terms to the underlying transaction, so that it can be assumed that the hedging relationship is effective. The only source of ineffectiveness is the counterparty credit risk, which is not expected to play a dominant role in existing hedge relationships. In the case of cash flow hedges, the forward-to-forward designation applies, under which the spot and forward components of the FX forwards are designated in hedge accounting. In addition, OHB uses the dollar offset method and the hypothetical derivative method to retrospectively determine the effective portion of the designated components in the current period. The effective change in fair value of the designated components is recognized in the hedge reserve in equity (other comprehensive income) and the ineffective portion of the designated components and the change in fair value of the undesignated components are recognized directly through profit and loss.

The fair value of foreign-currency trade receivables was hedged using foreign-currency derivatives to a minor extent. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss.

Derivatives can turn into standalone derivatives, to which hedge accounting no longer applies, due to a postponement or even default of the underlying transactions. No such reasons occurred in previous periods for OHB to terminate hedge relationships.

## DISCLOSURES ON HEDGED TRANSACTIONS IN CASH FLOW HEDGES

in EUR 000	31/12/2019		
	Changes in the hedged transaction during the period to identify ineffectiveness	Balance of the hedge reserve and foreign currency reserve for active cash flow hedges	Balance of the hedge reserve and foreign currency reserve for terminated cash flow hedges
Currency hedges			
Designated components	111	-108	0
Non-designated components	0	0	0

	31/12/2018		
	Changes in the hedged transaction during the period to identify ineffectiveness	Balance of the hedge reserve and foreign currency reserve for active cash flow hedges	Balance of the hedge reserve and foreign currency reserve for terminated cash flow hedges
Currency hedges			
Designated components	365	-365	-165
Non-designated components	0	0	0

## GAINS AND LOSSES FROM CASH FLOW HEDGES

in EUR 000	Cash flow hedging gains or losses through other comprehensive income	Ineffectiveness recognized through profit and loss	Items in the statement of comprehensive income which include the ineffectiveness recognized	Cash flow hedge reserve recycled to profit and loss		Items in the statement of comprehensive income which include the recycled amount
				due to premature termination of the cash flow hedge	due to recognition of the hedged item through profit and loss	
			Other operating income/ expenses			31/12/2019
Currency hedges	-108	-3		0	482	Sales

31/12/2018						
			Net financial income/ expense			
Currency hedges	-365	-10		0	174	Sales

## DISCLOSURES ON HEDGED TRANSACTIONS IN FAIR VALUE HEDGES

in EUR 000	31/12/2019				
	Carrying amount	Cumulative hedge adjustments	Balance sheet items	Change in fair value to calculate ineffectiveness	Cumulative hedge adjustments from terminated hedging relationships
Currency hedges					
Assets	1,875	7.8	Trade receivables	-7.4	0
Liabilities	616	-3.6	Trade receivables	2.7	0

## GAINS AND LOSSES FROM FAIR VALUE HEDGES

in EUR 000	Ineffectiveness of hedging relationships recognized through profit and loss	Items in the statement of comprehensive income which include the ineffectiveness recognized
Currency hedges		
Net gains/losses from hedge accounting	2.84	Other operating income/expenses

## [33] CASH FLOW STATEMENT

### RECONCILIATION OF FINANCIAL LIABILITIES

in EUR 000	Non-current financial liabilities	Current financial liabilities	Lease liabilities*	Total liabilities from financing activities
January 1, 2019	30,363	25,374	59,689	115,426
Changes to consolidated companies	0	219	0	219
Cash flows				
Payments received from new loans	52	65,131	0	65,183
Repayments	0	-9,136	-9,726	-18,862
Reclassification	-6,666	6,666	0	0
Not recognized in the cash flow statement	0	0	5,489	5,489
<b>December 31, 2019</b>	<b>23,749</b>	<b>88,254</b>	<b>55,422</b>	<b>167,455</b>
January 1, 2018	30,414	63,886		94,300
Cash flows				
Payments received from new loans	0	1,185		1,185
Repayments of loans	-51	-39,697		-39,748
<b>December 31, 2018</b>	<b>30,363</b>	<b>25,374</b>		<b>55,737</b>

\* IFRS 16 applied from January 1, 2019

## IX. FINANCIAL RISK MANAGEMENT

### LIQUIDITY RISKS

Prudent liquidity risk management means maintaining sufficient cash and cash equivalents as well as having an appropriate amount of committed credit facilities available to meet due obligations. Management uses rolling forecasts

to monitor the Group's liquidity reserves (consisting of the following unused credit facilities) and cash and cash equivalents on the basis of expected cash flows. This is generally done locally at the level of the Group's operating companies in accordance with the Group's policies. Under the syndicated loan (Note 30), an open credit facility of EUR 145 million (previous year: EUR 210 million) was available at the end of the year. The agreement runs until May 2023. There are currently no indications of any liquidity shortfalls.

### SETTLEMENT PERIOD ANALYSIS FINANCIAL LIABILITIES INCLUDING INTEREST

in EUR 000	31/12/2019					31/12/2018				
	Less than one year	One to two years	Three to five years	More than five years	Total	Less than one year	One to two years	Three to five years	More than five years	Total
Non-current financial liabilities*	0	7,322	16,943	0	24,265	0	13,978	17,164	382	31,524
Current financial liabilities	88,254	0	0	0	88,254	25,374	0	0	0	25,374
Non-current lease liabilities	0	11,714	15,611	17,690	45,015	0	0	0	0	0
Current lease liabilities	12,891	0	0	0	12,891	0	0	0	0	0
Trade payables	166,651	0	0	0	166,651	176,964	0	0	0	176,964
Other current financial liabilities	5,107	0	0	0	5,107	10,678	0	0	0	10,678
<b>Total</b>	<b>272,903</b>	<b>19,036</b>	<b>32,554</b>	<b>17,690</b>	<b>342,183</b>	<b>213,016</b>	<b>13,978</b>	<b>17,164</b>	<b>382</b>	<b>244,540</b>

\* Including borrowing costs

#### CREDIT RISKS

Credit risks are generally considered to be small. However, general risks of default may always occur as a result of specific economic conditions. Receivables comprise a large proportion of amounts owed by public-sector customers free of any credit risk, while there is no risk clustering with respect to the other amounts owed. For this reason, the Group as a whole does not take out any credit insurance for receivables. The loss rates applied for the simplified loss allowance model are therefore based on historical loss rates to only an insignificant extent. The inclusion of current and forward-looking information is based on the Group's estimates with regard to its exposure to credit risk within its customer structure, in particular with regard to public-sector customers.

#### CURRENCY RISKS

The Group operates predominantly within the euro zone and is therefore exposed to low foreign currency risks from its operating activities. Sales in foreign currencies (USD, AED) are conducted to a limited extent. In the space segment, 100% of the expected future transactions are generally hedged, while in the aviation segment the hedging ratio of the planned future revenues at the end of the current fiscal year is approx. 64%, as the forecast revenues are compared with the planned purchases. As of the reporting date, these mainly comprise receivables denominated in USD equaling EUR 2.004 million (previous year: EUR 2.530 million). Purchases in a foreign currency (USD, GBP) are of a negligible amount. The USD/EUR exchange rate influences income and expenses in aviation business. All orders and receivables denominated in US dollars have been hedged by means of currency forwards for 2020 (see Note 32 on derivatives and hedge relationships).

#### INTEREST RISKS

Generally speaking, investments with low interest rates are preferred so as to avert interest risks and are subject to normal market fluctuation. Short-term loans are raised to cover requirements of current assets arising from project payment cycles. For this purpose, funds under a loan facility agreement with a market-based floating interest rate component depend on the observance of covenants are used. A 1% change in the interest rate on such drawings would result in additional expense of around EUR 1.120 million (previous year: EUR 0.560 million). There is unlikely to be any further decline in interest rates. The non-current financial liabilities expire in 2024 are subject to fixed interest rates. The interest rate risk is currently considered to be low. This also applies to interest expense arising from the initial application of IFRS 16 in 2019. The accrued interest expense of EUR 1.233 million is based on an interest rate of 2% in 2019.

#### CAPITAL RISK MANAGEMENT

One of the OHB Group's most important financial targets is to achieve sustained growth in enterprise value and to ensure solvency at all times in the interests of protecting its going-concern status and to achieve an optimum capital structure. In this connection, the creation of adequate liquidity reserves, while preserving the company's ability to pay out a dividend, is of crucial importance. These goals are achieved by means of an integrated controlling system in connection with which management receives various data on individual items of the balance sheet as part of a monthly analysis. This provides information on trends in the company's equity and also serves as a basis for necessary business decisions. As of December 31, 2019, the equity ratio dropped to 21.6% (previous year: 26.5%) due to the initial application of IFRS 16 and a substantially lower interest rate for retirement benefit provisions. The equity ratio was

calculated relative to the Group's total assets. The change in this ratio did not have any impact on the covenants agreed upon with lenders as they are based on constant accounting. The company is seeking an equity ratio of over 25%. The overall strategy pursued by the Group was unchanged over 2018.

## X. ADDITIONAL INFORMATION

### SEGMENT REPORTING

IFRS 8 stipulates that operating segments are to be defined on the basis of internal segment reporting which is regularly reviewed by the company's chief operating decision maker with respect to the allocation of resources to these segments and the assessment of their profitability. The main management indicators used within the OHB Group are total revenues, EBIT and EBITDA. Information reported to the Management Board as the chief operating decision maker for the purposes of allocating resources to the company's segments as well as the assessment of their profitability mostly covers the types of goods and services which are produced or provided. The Group comprises the following reportable (operating) segments as defined in IFRS 8:

- Space Systems
- Aerospace + Industrial Products

The Space Systems segment chiefly develops and executes space projects. The Aerospace + Industrial Products segment is primarily responsible for fabricating aviation and space products as well as other industrial activities. The segments are described in detail in the Group management report. Segment income, expenses and earnings also entail business relations between the segments. These transfers were netted in full. The measurement principles applied in segment reporting are identical to those applied in the preparation of the consolidated financial statements. The holding company is shown separately as most of the equity interests are held on this level. OHB SE exercises the function of an active holding company. Sales break down by product group and region as follows:

### SALES BY PRODUCT GROUP

in EUR 000	2019	2018
Space technology	964,935	940,852
Aviation	16,539	14,504
Antennas	10,439	13,051
Other	12,705	8,144
<b>Total</b>	<b>1,004,618</b>	<b>976,551</b>

### SALES BY GEOGRAPHIC REGION

in EUR 000	2019	2018
Germany	385,066	331,325
Rest of Europe	605,387	630,962
Rest of the world	14,165	14,264
<b>Total</b>	<b>1,004,618</b>	<b>976,551</b>

With sales of EUR 410.656 million (both segments), EUR 141.431 million (Space Systems segment) and EUR 112.031 million (Space Systems segment), three customers each account for more than 10% of the total sales of the respective segment.

Total non-current assets (excluding financial instruments and deferred tax assets) amount to EUR 256.204 million (previous year: EUR 171.187 million) in Germany and EUR 49.441 million (previous year: EUR 37.401 million) abroad. This includes non-current assets of EUR 40.929 million (previous year: EUR 31.566 million) attributable to the subsidiary in Italy. Post-employment benefits stand at EUR 106.424 million (previous year: EUR 97.100 million) in Germany and EUR 1.828 million (previous year: EUR 2.482 million) abroad.

Non-current right-of-use assets (IFRS 16) were valued at EUR 54.878 million as of December 31, 2019 (Germany: EUR 38.448 million; abroad: EUR 16.430 million).

## SEGMENT REPORTING

in EUR 000	Space Systems		Aerospace + Industrial Products	
	2019	2018	2019	2018
Sales	831,209	788,861	180,022	194,349
of which internal sales	121	170	6,492	6,489
Total revenues	850,894	809,482	185,871	197,649
Cost of materials and services purchased	580,671	566,077	73,926	85,914
<b>EBITDA</b>	<b>65,003</b>	<b>44,015</b>	<b>13,545</b>	<b>21,426</b>
Depreciation and amortization	22,618	11,461	6,545	5,774
<b>EBIT</b>	<b>42,385</b>	<b>32,554</b>	<b>7,000</b>	<b>15,652</b>
Non-current assets	208,241	145,621	130,114	124,349
Current assets	455,849	410,988	149,850	116,991
<b>Total assets</b>	<b>664,090</b>	<b>556,609</b>	<b>279,964</b>	<b>241,340</b>
Equity	116,362	111,445	58,174	63,960
Liabilities	547,728	445,164	221,790	177,380
<b>Total assets</b>	<b>664,090</b>	<b>556,609</b>	<b>279,964</b>	<b>241,340</b>
Investments (net of financial assets, excluding IFRS 16)	21,535	23,419	7,662	12,855

## OTHER FINANCIAL OBLIGATIONS

Following the initial application of IFRS 16, OHB recognized all previous leases as right-of-use assets and corresponding lease liabilities in 2019.

### 2018

in EUR 000	Less than 1 year	1 to 5 years	More than 5 years	Total
Rental contracts (operating leases)	9,891	31,872	27,417	69,180
Leases (operating leases)	1,013	1,235	16	2,264
<b>Total</b>	<b>10,904</b>	<b>33,107</b>	<b>27,433</b>	<b>71,444</b>

## CONTINGENT LIABILITIES

As of the reporting date, there were obligations under guarantees of EUR 47.001 million (previous year: EUR 38.558 million). The participating companies have assumed joint and several liability for obligations under the credit facility.

## EMPLOYEES

The average head count stood at 2,864 in the year under review (previous year: 2,616). There was an average of 1,942 employees in the Space Systems segment (previous year: 1,761), 903 employees in the Aerospace + Industrial Products segment (previous year: 843) and 19 employees in the holding company (previous year: 12).

## XI. MANAGEMENT BOARD AND SUPERVISORY BOARD

The company's Management Board comprises:

- Mr. Marco Fuchs, Lilienthal; Chairman of the Management Board
- Mr. Klaus Hofmann, Bremen; Human Resources
- Dr. Lutz Bertling, Bremen; Corporate and Business Development, Digitalization and Services
- Mr. Kurt Melching, Bremen; Finance

Reconciliation				Total	
Holding		Consolidation		2019	2018
2019	2018	2019	2018		
0	0	-6,613	-6,659	1,004,618	976,551
0	0	-6,613	-6,659	0	0
9,810	9,267	-16,489	-16,005	1,030,086	1,000,393
0	0	-4,631	-6,403	649,966	645,588
<b>-217</b>	<b>-428</b>	<b>0</b>	<b>0</b>	<b>78,331</b>	<b>65,013</b>
59	27	0	0	29,222	17,262
<b>-276</b>	<b>-455</b>	<b>0</b>	<b>0</b>	<b>49,109</b>	<b>47,751</b>
61,064	67,322	-50,794	-45,954	348,625	291,338
71,971	48,653	-95,276	-114,364	582,394	462,268
<b>133,035</b>	<b>115,975</b>	<b>-146,070</b>	<b>-160,318</b>	<b>931,019</b>	<b>753,606</b>
64,442	58,805	-38,148	-34,191	200,830	200,019
68,593	57,170	-107,922	-126,127	730,189	553,587
<b>133,035</b>	<b>115,975</b>	<b>-146,070</b>	<b>-160,318</b>	<b>931,019</b>	<b>753,606</b>
25	2,119	0	0	29,222	38,393

The company's Supervisory Board comprises:

- Mr. Robert Wethmar, Hamburg; Partner at Law Firm Taylor Wessing, Chairman
- Mrs. Christa Fuchs, Bremen; Managing Shareholder of VOLPAIA Beteiligungs-GmbH, Bremen
- Prof. Heinz Stoewer, Munich; Professor em. Space Systems Engineering, Technical University of Delft, Netherlands, Managing Director of SAC Space Associates Beratungs GmbH, Munich
- Mr. Ingo Kramer, Bremerhaven; Businessman

Offices held by Members of the company's Management Board and Supervisory Board in other Supervisory Boards and Management Bodies in 2019:

- Mr. Marco Fuchs

Group mandates:

- MT Aerospace AG, Augsburg; Chairman of the Supervisory Board
- ORBCOMM Inc., Rochelle Park, NJ, United States; Member of the Board of Directors
- OHB Italia S.p.A., Milan, Italy; Chairman of the Board of Directors
- OHB Sweden AB, Stockholm, Sweden; Chairman of the Board of Directors

- Antwerp Space N.V., Antwerp, Belgium; Chairman of the Board of Directors
- LuxSpace Sàrl, Betzdorf, Luxembourg; Chairman of the Board of Directors

Non-group mandates:

- SV Werder Bremen GmbH & Co. KGaA., Bremen; Deputy Chairman of the Supervisory Board
- ZARM Technik AG, Bremen; Chairman of the Supervisory Board
- Jacobs University Bremen gGmbH, Bremen; Member of the Supervisory Board

- Mrs. Christa Fuchs

- ORBCOMM Deutschland Satellitenkommunikation AG, Bremen; Chairwoman of the Supervisory Board (Group mandate)
- COSMOS Space Systems AG, Bremen; Chairwoman of the Supervisory Board (Group mandate)
- OHB System AG, Bremen; Chairwoman of the Supervisory Board (Group mandate)

- Mr. Ingo Kramer

- Lenze SE, Aerzen; Member of the Supervisory Board

### **SECURITIES HELD BY MEMBERS OF THE COMPANY'S MANAGEMENT BOARD AND SUPERVISORY BOARD**

<b>as of December 31, 2019</b>	<b>Shares</b>	<b>Changes 2018/2019</b>
Christa Fuchs, Member of the Supervisory Board	1,401,940	-
Prof. Heinz Stoewer, Member of the Supervisory Board	1,000	-
Marco Fuchs, Chairman of the Management Board	6,046,610	-
Dr. Lutz Bertling, Member of the Management Board	14,500	-

### **DISCLOSURE AND EXEMPTION FROM THE DUTY TO DISCLOSE THE FINANCIAL STATEMENTS OF THE GROUP COMPANIES**

The consolidated financial statements have been submitted to Bundesanzeiger for publication.

At their meeting of May 24, 2019, the shareholders of OHB System AG passed a resolution to adopt the exemption provisions in Section 264 (3) of the German Commercial Code with respect to disclosure of the annual financial statements.

At their meeting of December 19, 2019, the shareholders of ORBCOMM Deutschland AG passed a resolution to adopt the exemption provisions in Section 264 (3) of the German Commercial Code with respect to disclosure of the annual financial statements.

### **RELATED PARTIES DISCLOSURES**

Related parties as defined in IAS 24 comprise Christa Fuchs, Romana Fuchs Mayrhofer, Marco Fuchs, Kurt Melching, Dr. Lutz Bertling, Klaus Hofmann, Prof. Heinz Stoewer, Ingo Kramer and Robert Wethmar. The following companies are related parties:

- OHB Grundstücksgesellschaft, Achterstraße GmbH & Co. KG, Bremen
- OHB Grundstücksgesellschaft, Kitzbühler Straße GmbH & Co. KG, Bremen
- OHB Grundstücksgesellschaft, Universitätsallee GmbH & Co. KG, Bremen
- OHB Grundstücksgesellschaft, Karl-Ferdinand-Braun-Straße GmbH & Co. KG, Bremen
- VOLPAIA Beteiligungs-GmbH, Bremen
- Apollo Capital Partners GmbH, Munich

- Immobiliare Gallarate S.r.l., Milan
- KT Grundstücksverwaltungs GmbH & Co. KG, Munich
- Schloß Annaberg GmbH, Latsch, Italy
- Aerotech Peissenberg GmbH & Co. KG, Peissenberg
- ORBCOMM Inc., Rochelle Park, NJ, United States
- SV Werder Bremen GmbH & Co. KGaA., Bremen
- ZARM Technik AG, Bremen
- Jacobs University Bremen gGmbH, Bremen

Business transactions with related parties are conducted on arm's length terms. In the year under review, sales and other income of EUR 18 thousand (previous year: EUR 117 thousand) arose from transactions with related parties, while expenditure on goods and services purchased (previous year also rentals) came to around EUR 7.419 million (previous year: EUR 7.470 million) at subsidiaries. As of the reporting date, there were receivables of EUR 0 thousand (previous year: EUR 25 thousand) against related parties.

Real estate leases are in force with other related companies, for which right-of-use assets with respect to land and buildings and lease liabilities of a matching amount have been recognized as a result of the initial application of IFRS 16. Lease liabilities were valued at EUR 32.725 million as of December 31, 2019.

Under a contract with the law firm Taylor Wessing, of which Robert Wethmar is a partner, fees of a total of EUR 0.288 million were paid in consideration of advisory services provided for the benefit of Group companies. Liabilities outstanding as of December 31, 2019 are valued at EUR 11 thousand (previous year: EUR 0 thousand).

There were pension obligations towards related parties of EUR 0.183 million (previous year: EUR 0.199 million) as of the reporting date. No contributions were made to the plan. Benefits for surviving dependants of EUR 22 thousand were paid.

Sales of EUR 2.828 million (previous year: EUR 2.702 million) were generated with associates in the year under review. The resultant receivables outstanding as of the reporting date stood at EUR 3.505 million (previous year: EUR 1.232 million). Prepayments of EUR 21.513 million were made for construction contracts.

There are non-current loans to associates with a carrying amount of EUR 28.707 million (previous year: EUR 28.758 million) subject to a subordination agreement with banks. The loans are subject to a fixed interest rate of 3–5% and are automatically renewed unless terminated before the

expiry date. Interest of EUR 0.810 million (previous year: EUR 0.908 million) was collected and EUR 0.3 million deferred. All loans expire within one year. As the Group does not expect any short-term repayment, the total amount has been classified as non-current. The outstanding loan amount is payable in a single amount upon termination. No collateral has been provided for the loans.

### **DECLARATION OF CONFORMITY WITH THE CORPORATE GOVERNANCE CODE PURSUANT TO SECTION 161 OF THE GERMAN STOCK CORPORATION ACT**

The Management Board and the Supervisory Board have published the declaration required pursuant to Section 161 of the German Stock Corporation Act confirming that save for a few small exceptions (see Corporate Governance on page 34) the Group already conforms to the German Corporate Governance Code and will continue to do so in the future. The declaration of conformity is available on the Internet at:

<https://www.ohb.de/en/investor-relations/corporate-governance/declaration-of-conformity/>

### **ALLOCATION OF EARNINGS**

OHB SE exercises the function of an active holding company. Its main assets comprise investments which were carried at a value of EUR 60.507 million on the reporting date. OHB SE's equity stood at EUR 64.032 million on December 31, 2019. The company's single-entity financial statements carry cash and cash equivalents of EUR 0.498 million. Income of EUR 28.647 million under profit transfer agreements particularly made a contribution to net profit of EUR 20.511 million for 2019. The single-entity financial statements prepared by OHB SE pursuant to German GAAP (HGB) for the year ending December 31, 2019 carry an unappropriated surplus of EUR 24,403,256.38. The Management Board will be asking the shareholders to pass a resolution providing for the allocation of the company's unappropriated surplus of EUR 24.403 million for 2019 as specified in the table entitled "Allocation of unappropriated surplus". The figures stated for the total dividend and the amount to be carried forward are based on the number of dividend-entitled shares as of the date of the Management Board's allocation proposal. Pursuant to Section 71b of the German Stock Corporation Act, the company's treasury stock (67,996 shares) as of the reporting date is not dividend-entitled. If the number of shares held as treasury stock on the date on which the shareholders pass a resolution adopting the proposal for the allocation of the company's unappropriated surplus is greater or smaller than on the balance sheet date, the amount payable to the shareholders will be increased or, as the case may be, decreased by the amount attributable to the difference in the number of shares. The amount to be carried forward will be adjusted accordingly. However, there will be no change in the

distributable dividend per dividend-entitled share. If necessary, the shareholders will be presented with a correspondingly modified proposal for the allocation of the company's unappropriated surplus. The dividend distributed for 2018 came to EUR 0.43 per dividend-entitled share (17,400,100 shares), resulting in a total payout of EUR 7,482,043.00. In addition, an amount of EUR 3,892,535.92 was carried forward. The unappropriated surplus came to EUR 11,374,578.92 in 2018.

### **Allocation of unappropriated surplus**

in EUR	2019
Unappropriated surplus	24,403,256.38
Distribution of a dividend of EUR 0.43 for each dividend entitled share (17,400,100 shares)	7,482,043.00
Amount to be carried forward	16,921,213.38

### **REMUNERATION**

The remuneration paid to the Members of the Management Board comprises fixed and variable components. Share-based compensation components or compensation components with a long-term incentive have been granted to Dr. Lutz Bertling. In the event of the death of a Management Board Member, his surviving dependents are entitled to receive continued payment of that Member's fixed remuneration for a further period of six months. The principles of the compensation system as well as the individualized compensation paid to the Management Board are described in detail in the remuneration report, which forms part of the management report (page 62). The total compensation including share-based payments paid to the Members of the Management Board for 2019 came to EUR 2.922 million (previous year: EUR 4.598 million). This includes variable remuneration of EUR 1.660 million (previous year: EUR 1.553 million), fixed remuneration components of EUR 1.262 million (previous year: EUR 1.482 million) including benefits such as advances towards health and pension insurance and the use of a company car and, in the previous year, share-based payments with a long-term incentive of EUR 1.563 million.

Christa Fuchs received surviving-dependents benefits of EUR 22 thousand from OHB System AG for the Management Board Member Prof. Manfred Fuchs, who had passed away in 2014.

The total compensation paid to Members of the Supervisory Board for 2019 came to EUR 89 thousand (previous year: EUR 88 thousand). Of this, the chairman of the Supervisory Board received EUR 29 thousand (previous year: EUR 30 thousand) and the other Members of the Supervisory Board a total of EUR 60 thousand (previous year: EUR 58 thousand). Variable compensation components were dispensed with. Under a contract with the law firm Taylor Wessing, of which

Robert Wethmar is a partner; fees of a total of EUR 0.288 million were paid in consideration of advisory services provided for the benefit of Group companies.

**Share-based payments**

In 2018, 12,500 OHB SE shares were granted to a Member of the Management Board for the years 2018 to 2021 as of April 1 of each year as part of his compensation. These shares were not tied to a specific price. If the Management Board Member concerned resigns before the respective due date, he forfeits the right to receive the shares. The shares have a minimum holding period of two years after allocation. In the year under review, no shares were withdrawn from treasury stock. EUR 0.315 million (previous year: EUR 0.219 million) was recognized with staff costs in the year under review for the shares to be transferred in subsequent years.

**AUDITOR FEES AND SERVICES**

In the period under review, the OHB Group recorded the following fees paid to PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Bremen, the auditors of its financial statements:

- Audit of the consolidated and annual financial statements: EUR 0.261 million (previous year: EUR 0.236 million)
- Other services: EUR 75 thousand (previous year: EUR 88 thousand)
- Tax consulting services: EUR 0 thousand (previous year: EUR 12 thousand)

**EVENTS AFTER THE BALANCE SHEET DATE**

None.

The consolidated financial statements were approved by the Management Board for publication following the Supervisory Board's meeting of March 17, 2020.

The Management Board

Bremen, March 17, 2020



Marco Fuchs



Klaus Hofmann



Kurt Melching



Dr. Lutz Bertling

## RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles for financial reporting, the financial statements and the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the company, and the combined management report includes a fair review of the development and performance of the business and the position of the company as well as of the Group, together with a description of the principal opportunities and risks associated with the expected development of the company and the Group.

Bremen, March 17, 2020

The Management Board

## INDEPENDENT AUDITOR'S REPORT

to OHB SE, Bremen

### **REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND THE GROUP MANAGEMENT REPORT**

#### **AUDIT OPINIONS**

We have audited the consolidated financial statements of OHB SE, Bremen, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2019, 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 January 1 to December 31, 2019, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of OHB SE which is combined with the management report of the company for the financial year from January 1 to December 31, 2019. 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 accordance with the German legal requirements.

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 December 31, 2019, and of its financial performance for the financial year from January 1 to December 31, 2019,
- 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") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of 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 January 1 to December 31, 2019. 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 of sales from construction contracts
- [2] Recoverability of goodwill and internally generated intangible assets with a definite useful life
- [3] Effect of the first-time application of IFRS 16 on the accounting of leasing agreements

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 of sales from construction contracts
- [1] The revenues reported in OHB SE's consolidated financial statements as of December 31, 2019 are attributable in an amount of EUR 891.8 million to construction contracts for satellites and other development contracts, which are recognised over time in accordance with IFRS 15.

They are measured according to the percentage of completion on the reporting date. For this purpose, the percentage of completion is estimated by comparing the production costs that have arisen as of the reporting date with the total budgeted production costs. The underlying cost estimates and allocation of the costs incurred in orders to the revenues reported in the consolidated financial statements are based on discretionary judgments and assumptions made by the executive directors of the parent company.

Against this backdrop and in view of the underlying scope for discretionary judgments and estimates by the executive directors and the complexity involved in accounting for construction and development contracts this matter was of particular importance in our audit.

- [2] In our audit, we assessed the processes and checks implemented by the Group for recording revenues from construction contracts for satellites and other development contracts in the light of the percentage of completion, taking due account of the fact that the complexity and the scope for discretionary judgments and assessments result in a heightened risk of accounting misstatements. We have also reviewed customer contracts, tracked the identification of independent service obligations, and assessed whether those services should be recognized over time or at a point in time.

Moreover, we examined the methods for calculating budgeted and actual costs. We also traced the consistency and continuity of the methods applied to calculate the costs incurred.

As well as this, we issued appropriate instructions to the auditors of subsidiaries of the Group to ensure sufficient, appropriate and consistent auditing activities in order to reasonably address the inherent risk in the audit of these matters.

We were duly satisfied that the executive directors' discretionary judgments and estimates underlying the recognition and measurement of revenues on the basis of the percentage of completion were documented adequately and justified in order to ensure proper recognition of sales revenues in accordance with IFRS 15.

[3] The Company's disclosures pertaining to the revenues from construction contracts for satellites and other development contracts can be found in Note 1 "Sales" of the consolidated financial statements.

[2] Recoverability of goodwill and internally generated intangible assets with a definite useful life.

[1] In the consolidated financial statements of the company a total amount of EUR 118.9 million (12.8% of consolidated total assets or 59.2% of equity) in goodwill and internally generated assets is reported under the balance sheet line item "Goodwill" and "Other intangible assets".

Goodwill is tested for impairment by the company on an annual basis or if there are indications that goodwill may be impaired, and internally generated intangible assets with a definite useful life if there are indications that they may be impaired in order to determine a potential impairment loss.

The impairment test is performed on the level of those groups of cash-generating units, represented by the subsidiaries, to which the respective goodwill or the internally generated intangible assets is allocated.

As part of the impairment test, the carrying amount of the respective cash-generating units including goodwill or the internally generated intangible assets is compared against the corresponding recoverable amount.

In general, the recoverable amount is calculated on the basis of the value in use.

The basis for this calculation is usually the present value of future cash flows of the respective group of cash-generating units.

The present values are calculated using discounted cash flow models. Thereby, the approved medium-term planning of the Group serves as a starting point which is extrapolated on the basis of assumption about longterm growth rates. In doing so, expectations of future market development and assumptions regarding the development of macroeconomic factors are considered. The discount rate used is the weighted average costs of capital for the respective group of cash-generating units. Impairments were not necessary in 2019.

The result of this measurement depends to a large extent on management's assessment of future cash inflows of the respective group of cash-generating units, the discount rate and growth rate applied as well as further management assumptions. Therefore it is subject to considerable uncertainty. Against this background and due to the complexity of the measurement,

this matter was of particular importance during our audit.

[2] In the course of our audit, we, among other things, assessed the method used for performing the impairment test. After comparing the future cash inflows used in the calculation with the approved medium-term planning of the Group, we evaluated the appropriateness of the calculation especially through reconciliation with general and industry-specific market expectations. Supplementary adjustments to the medium-term planning for the purpose of the impairment test were assessed and discussed by us with the responsible employees of the company. Furthermore, we also evaluated that the costs for Group functions were considered properly. With the knowledge that even relatively small changes in the discount rate applied can have material effects on the corporate value calculated in this way, we also focused our testing on the parameters used to determine the discount rate applied, and evaluated the measurement model. In order to take into account the forecast uncertainties, we assessed the sensitivity analyses performed by the company.

Taking into consideration the information available, we found that the respective carrying amount of the cash-generating units including goodwill was sufficiently covered by discounted future cash flows.

We consider the measurement parameters and assumptions used by management to be in line with our expectations and to lie also within a range that we consider reasonable.

[3] The Company's disclosures pertaining to the impairment test as well as goodwill and internally generated intangible assets are contained in Note 12 "Goodwill and other intangible assets" of the consolidated financial statements.

[3] Effects of the first-time application of IFRS 16 on the accounting of leasing agreements

[1] The consolidated financial statements of the company show rights of use of € 54.9 million and leasing liabilities of EUR 55.3 million as of the balance sheet date. The leasing liabilities thus represent 6.0% of the balance sheet total. During the business year, the first-time application of the new accounting standard on leases (IFRS 16) had a significant impact on the opening balance sheet values and their updating during the business year. The conversion to IFRS 16 was carried out according to the modified retrospective approach. The comparative figures for the previous year's periods have not been adjusted. Due to the large number of leases, the Company has established Group-wide processes and controls for the complete and correct

recording of leases. In addition, the first-time application required special measures for the recording and presentation of leases. The new accounting standard IFRS 16 requires estimates and discretionary decisions by the legal representatives for certain areas, the appropriateness of which had to be assessed in the course of our audit. Against this background, and due to the complexity of the new requirements of IFRS 16, the accounting treatment of leases was of particular importance within the scope of our audit.

[2] As part of our audit, we assessed, with the support of our internal specialists, the effects of the first-time application of IFRS 16. Together, we reviewed the implementation work and assessed the design of the processes set up to depict transactions in accordance with IFRS 16 and the measures taken to implement the new requirements. In doing so, we inspected leasing agreements on a sample basis, tracked the identification of performance obligations and assessed whether these were recorded completely and accurately in the newly implemented central system for mapping leases. In particular, we assessed the estimates regarding the exercise of options with an impact on the term of the lease on the basis of surveys of company employees and by inspecting suitable evidence.

We were able to satisfy ourselves that the measures taken to apply IFRS 16 are appropriate. Furthermore, we were able to verify that the estimates and assumptions made by the legal representatives are sufficiently documented and justified to ensure that the leases are accounted for appropriately when IFRS 16 is applied for the first time.

[3] The Company's disclosures on accounting for leases and the effects of the first-time application of IFRS 16 are contained in the sections "Changes in Accounting Policies", "Right-of-use assets under leases", "Lease Liabilities" and "(13) Right-of-use assets under leases" of the notes to the consolidated financial statements.

#### **OTHER INFORMATION**

The legal representatives are responsible for other information. Other information includes the corporate governance statement in accordance with § 289f HGB and § 315d HGB, which we obtained prior to the date of this audit opinion.

The Other Information also includes the other parts of the Annual Report obtained by us prior to the date of this audit opinion – without further cross-references to external information – with the exception of the audited consolidated financial statements, the audited Group management report and our audit opinion.

The separate non-financial Group report pursuant to § 315b Abs. 3 HGB is expected to be made available to us after the date of the 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,
- 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 IFRS 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 Combined 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 IFRS 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 May 24, 2019. We were engaged by the supervisory board on November 18, 2019. We have been the group auditor of the OHB SE, Bremen, without interruption since the financial year 2016.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the Supervisory Board 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 Dr. Thomas Ull.

Bremen, March 17, 2019

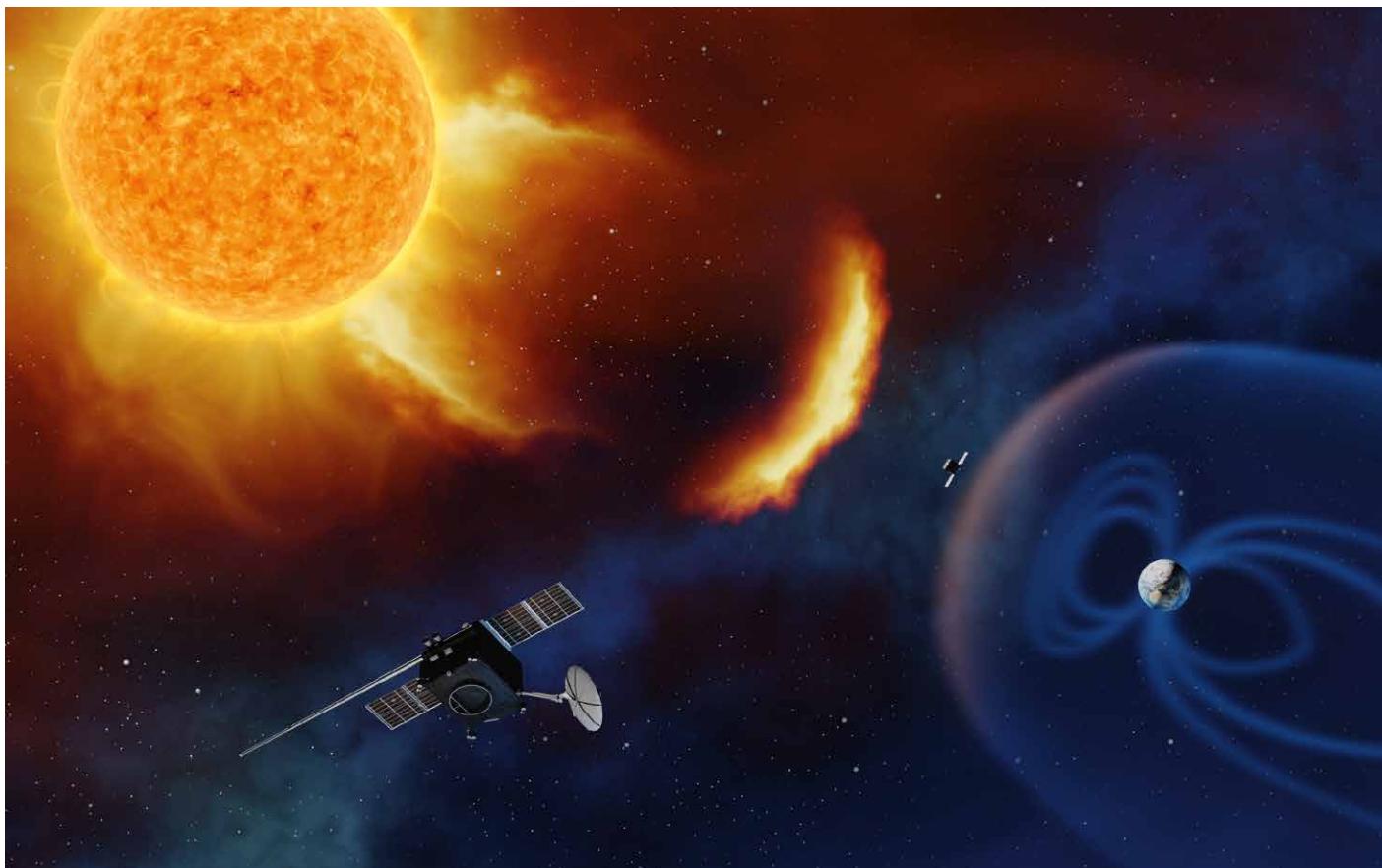
PricewaterhouseCoopers GmbH  
Wirtschaftsprüfungsgesellschaft

Dr. Thomas Ull  
Wirtschaftsprüfer  
(German Public Auditor)

ppa. Holger Schreiber  
Wirtschaftsprüfer  
(German Public Auditor)

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# GLOSSARY

**AMC**

Amortised costs

**ARIANE**

Series of European launch vehicles for space launch use, developed on behalf of the European Space Agency (ESA). Ariane 5 is currently used, Ariane 6 will be the follow-up from 2020 on

**ARTES**

Advanced Research in Telecommunications Systems; Technology program initiated by ESA to support research and development in the area of telecommunication

**ARTES-7**

Long-term ESA plan for developing a European communications satellite network using the latest laser communications

**ASTEROID IMPACT DEFLECTION ASSESSMENT (AIDA):**

International mission to investigate whether the orbit of an asteroid can be changed by the impact of a space probe

**BAAINBW**

Federal Office of Bundeswehr (German Federal Armed Forces) Equipment, Information Technology and In-Service Support (formerly BWB German Federal Office of Defense Technology and Procurement)

**CLP**

Chilean peso

**COVENANT**

Undertaking that a borrower makes to the lending bank

**DAX**

German bluechip share index, tracking the performance of the 30 largest shares listed on the Frankfurt stock exchange

**DIDYMOS**

Near-Earth double asteroid selected as a target object for the ESA-NASA mission AIDA

**DIDYMOON**

Informal name for the asteroid Didymos B, which is a smaller asteroid orbiting the much larger asteroid Didymos A. DidyMoon is the target of a planned mission for asteroid defense

**EBIT**

Earnings before interest and taxes

**EBITDA**

Earnings before interest, taxes, depreciation and amortization

**EBT**

Earnings before taxes

**EC**

European Commission

**EPS**

Earnings per share

**ESA**

European Space Agency

**EUMETSAT**

European organisation for the use of meteorological satellites based in Darmstadt, Germany, which operates the Meteosat and MetOp weather satellites. It is an intergovernmental organisation with currently 30 European Member States

**EXOPLANETS**

Planets are objects that are subject to the gravitational pull of a star and thus orbit it. Exoplanets or extrasolar planets are located outside our solar system and are thus not subject to the sun's gravitational pull

**FLAC**

Financial liabilities measured at amortised cost

**FLYEYE**

High-precision telescope that will detect objects (such as asteroids or comets) that come dangerously close to Earth. The telescope imitates the complex structure of a fly's eye

**FOC\***

The Full Operational Capability phase of the Galileo programme is managed and fully funded by the European Union. The Commission and ESA have signed a delegation agreement by which ESA acts as design and procurement agent on behalf of the Commission. The views expressed here can in no way be taken to reflect the official opinion of the European Union and/or ESA. "Galileo" is a trademark subject to OHIM application number 002742237 by EU and ESA

**FVOCI**

Fair value through Other Comprehensive Income

**FVPL**

Fair value through profit or loss

**GEO**

Geostationary orbit; circular orbit 35,786 kilometres (22,236 miles) above the Earth's equator and following the direction of the Earth's rotation

**HGB**

German Commercial Code

**IAS**

International Accounting Standards

**IFRS**

International Financial Reporting Standards

**ISS**

International Space Station; it is a cooperation project of different space nations and serves the exploration of the earth and the space, in addition, the international understanding. The ISS has been permanently inhabited since 2 November 2000

**LARANGE POINT**

Place where a gravitational equilibrium state occurs between two celestial bodies, so that a space probe appears to "stay" at this point. Therefore an object can stay here without having to hold its position by its own propulsion

**MINOR PLANET CENTER (MPC)**

Official organisation for the collection, evaluation and publication of data on asteroids

**NASA**

National Aeronautics and Space Administration; US space agency

**PAYOUT**

The payout is the mass transported on the satellite that is necessary to achieve the actual mission objective

**PERCENTAGE-OF-COMPLETION METHOD**

Accounting method under which revenues are allocated to a specific reporting period on the basis of the progress made on the completion of the contract in question

**R+D**

Research and development

**ROI**

Return on Investment; the profit from an activity for a particular period compared with the amount invested in it

**SEK**

Swedish krona

**SENTINEL**

Name of the satellites of the Copernicus programme of ESA and the European Commission

**SOYUZ**

Series of spacecraft (used for medium heavy payloads) designed for the Soviet space programme, since 2011 the rocket has also been launched from the Europe's Spaceport in Kourou

**TECDAX**

German stock index, that tracks the performance of the 30 largest German companies from the technology sector in terms of order book turnover and market capitalization

**TELEMATICS**

A system linking telecommunications and IT

**USD**

US-Dollar

**VEGA**

European four-stage launch vehicle for small satellites, developed on behalf of the European Space Agency ESA since 1998; it successfully completed its maiden flight in 2012. It is the smallest European launcher and will launch 1.5 tonnes into circular polar orbit

# IMPRINT

## OHB SE

Manfred-Fuchs-Platz 2–4  
28359 Bremen  
Germany

Phone: +49 (0)421 2020-8  
FAX: +49 (0)421 2020-700  
Email: info@ohb.de

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## CONTACT INFORMATION

OHB SE  
Manfred-Fuchs-Platz 2–4  
28359 Bremen  
Germany

Phone: +49(0)421 2020-7200  
FAX: +49(0)421 2020-613  
Email: ir@ohb.de

**Marco Fuchs,**  
Chief Executive Officer

**Martina Lilienthal,**  
Investor Relations

**Images and graphiks:** titel – Free Swing: Olivia Bauso, unsplash; Space Safety & Security: ESA | U2 – Bike trip: iStock | U3/U4 – World map time zones: shutterstock | p.2/3 – Space Safety & Security: ESA | p.5 – Five People Pier: jacoblund, iStock; Flyeye telescope: ESA/A. Baker | p.6 – Little hikers: Imgorthand, iStock; APEX CubeSat: Tomi Kärkkäinen/Reaktor Space Lab | p.8 – Team Hera: Stefan Gerding, „Studio-S“-Seekamp | p.9 – Coffee together: william87, iStock; Team Hera 2: Stefan Gerding, „Studio-S“-Seekamp | p.10 – Fittock: Stefan Gerding, „Studio-S“-Seekamp | p.13 – Interview Fittock: Stefan Gerding, „Studio-S“-Seekamp | p.14 – Couple Icecream: AscentXmedia, iStock; Lagrange mission: ESA/A. Baker, CC BY-SA 3.0 IGO | p.17 – Senior couple: Geber86, iStock; Satellite break up: ESA/ID&Sense/ONiriXEL, CC BY-SA 3.0 IGO | p.18 – Contract signing: OHB SE; Real spacecraft on the Moon: SpaceIL; Galileo satellite in orbit: ESA-P. Carril; Galileo quartet placed atop Ariane 5: ESA CNES Arianespace CSGP, Baudon | p.19 – Vega start: ESA; Artistic impression of PRISMA: ASI Agenzia Speziale Italiana; Encapsulation PRISMA: OHB SE; ExoMars Trace Gas Orbiter: ESA | ATG medialab; Artist impression of Mars: dottedhippo, iStock | p.20 – MTG satellite platform: OHB SE; MTG antenna on satellite: ESA, G. Porter; MTG recurring models: OHB SE; Inter Tank Structure of Ariane 6: MT Aerospace AG | p.21 – Flyeye Observatory: ESA/A. Baker, CC BY-SA 3.0 IGO; Hera in Orbit: ESA; Flyeye-Teleskop: OHB Italia; Neue Räumlichkeiten: OHB SE | p.22 – Moon Landing: NASA; Liftoff Ariane 5: ESA/CNES/Arianespace, Optique Vidéo du CSG; EDRS-C: OHB SE | p.23 – SARah Contract expansion: OHB; OHB Reception: OHB | p.24 – Roofing ceremony: OHB; Contract signing: OHB; Magellan-Teleskop: ESA | p.25 – Ministerial Council: ESA; Hera: ESA; Space Tech Expo und IAC: ESA | p.27 – Management Board: Bettina Conradi | p.30 – Supervisory Board: Bettina Conradi | p.40 – Capital Market Day: OHB | p.43 – Space Debris: ESA | p.65 – Hera: ESA | p.118 – Lagrange: ESA



**WANT TO HAVE  
BEEN WITH US**  
when we saved  
the world  
through foresight?

**OHB SE**

Manfred-Fuchs-Platz 2-4  
28359 Bremen, Germany  
Phone: +49 (0)421 2020-7200  
FAX: +49 (0)421 2020-613  
[ir@ohb.de](mailto:ir@ohb.de)  
[www.ohb.de](http://www.ohb.de)