



# Annual Report 2018/19

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**CHR HANSEN**

*Improving food & health*

# ANNUAL REPORT 2018/19

# CONTENTS

## 2018/19 IN BRIEF

Strategy & Product Highlights	4
Financial Highlights	5
Key figures	6
Letter to our Shareholders	7

## STRATEGY AND AMBITIONS

Business model	10
Nature's no. 1	13
Lighthouses	14
Long-term ambitions 2021/22	15
Outlook for 2019/20	16

## BUSINESS PERFORMANCE

Financial review	18
Regions	20
Food Cultures & Enzymes	21
Health & Nutrition	22
Natural Colors	23

## RISK MANAGEMENT

Risk management	25
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## GOVERNANCE

Corporate governance	29
Board of Directors and Executive Board	33
Shareholder information	40
Management's statement on the Annual Report	43
Independent auditor's report	44

## FINANCIAL STATEMENTS

Financial statements – Group	49
Financial statements – Parent	107



## COMMERCIALIZING INNOVATION

Research and development have always been a cornerstone of our business.

We own the broadest and best range of cultures and having access to around 40,000 microbial strains allows for extensive screening and selection of the best available combinations of strains. We have the know-how to transform these strains into safe and high-quality products and bring effective solutions to the market.

Our legacy and success enable us to expand innovations into new areas. Our eagerness to pioneer science means that we will keep developing microbial solutions for coming generations – for a future defined by natural ingredients.

# 2018/19 IN BRIEF

## STRATEGY & PRODUCT HIGHLIGHTS

### MAJOR EVENTS IN 2018/19

#### MOST SUSTAINABLE COMPANY IN THE WORLD



82% of Group revenue contribute to the UN's Global Goals. That is one of the reasons why Chr. Hansen was ranked the #1 Most Sustainable Company in the world by Corporate Knights.



#### LIVE BIOTHERAPEUTICS JOINT VENTURE WITH LONZA



Lonza and Chr. Hansen entered into a joint venture to serve the emerging market of live biotherapeutics. Bacthera AG operates as a contract manufacturer from its headquarters in Switzerland.



#### CHY-MAX® SUPREME RAISES THE BAR FOR COAGULANTS



Chr. Hansen's CHY-MAX® Supreme coagulant is a game changer for modern cheese makers as it allows them to increase yield by up to 1%.



#### SWEETY® Y-1 CULTURE WINS INDUSTRY AWARD



The world's first culture that allows dairies to create naturally sweeter products whilst reducing added sugar won the World Dairy Innovation Award for Best Dairy Ingredient.



#### A RECORD YEAR FOR PLANT HEALTH



Two years after market launch in Latin America, Quartzo® and Presence® had a very strong year in Latin America in sugarcane and first sales in other crops have been generated.



#### ADDITION TO COLORING FOODS RANGE



HANSEN SWEET POTATO™ is the result of a 10-year breeding program and offers a vibrant red alternative to carmine and synthetic colors.



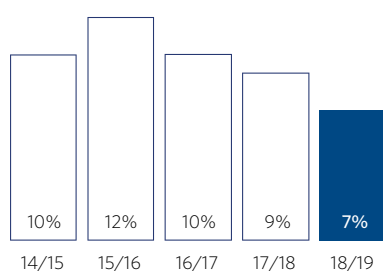


# 2018/19 IN BRIEF

## FINANCIAL HIGHLIGHTS

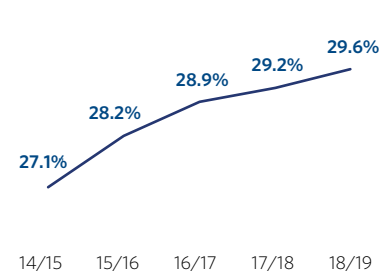
### SOLID ORGANIC GROWTH AND SOLID MARGIN EXPANSION; STRONG FREE CASH FLOW GROWTH EX. SPECIAL ITEMS

Group organic growth in %



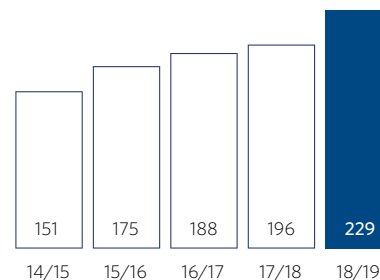
Guidance FY 18/19: 7-8%

Group EBIT margin b.s.i. in %



Guidance FY 18/19: Around 29.5%

Free cash flow b.a.s.i. in EUR m

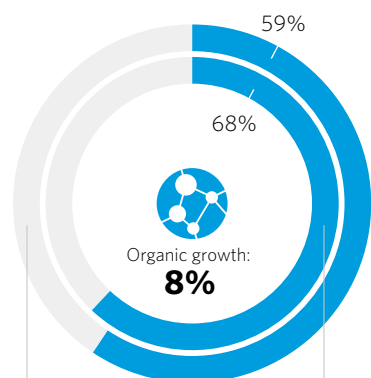


Guidance FY 18/19: Above 17/18 level

b.(a.)s.i. stands for before (acquisitions and) special items

### MICROBIAL PLATFORM WITH HIGH SINGLE-DIGIT ORGANIC GROWTH; NATURAL COLORS IMPACTED BY RAW MATERIAL PRICES

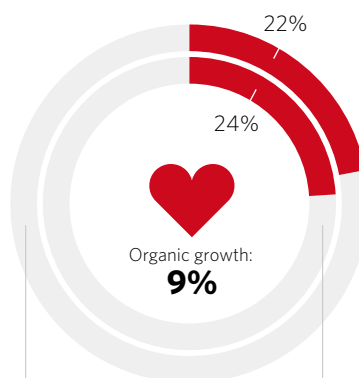
Food Cultures & Enzymes



Net revenue  
**682** EURm  
(5% EUR growth)

EBIT b.s.i.  
**234** EURm  
(34.3% margin)

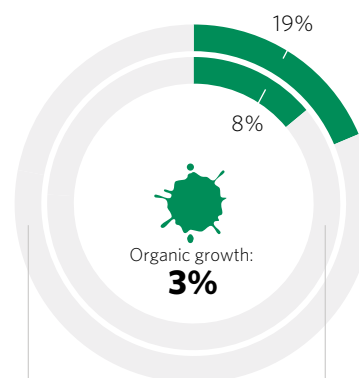
Health & Nutrition



Net revenue  
**255** EURm  
(10% EUR growth)

EBIT b.s.i.  
**80** EURm  
(31.5% margin)

Natural Colors



Net revenue  
**224** EURm  
(2% EUR growth)

EBIT b.s.i.  
**29** EURm  
(12.7% margin)

Outer circle is share of revenue. Inner circle is share of EBIT b.s.i.

### REGIONAL PERFORMANCE IMPACTED BY CHALLENGING TRADING CONDITIONS IN EMERGING MARKETS



North America  
**7%** organic growth  
27% of Group revenue



Latin America  
**21%** organic growth  
12% of Group revenue



EMEA  
**4%** organic growth  
44% of Group revenue



APAC  
**4%** organic growth  
17% of Group revenue

# 2018/19 IN BRIEF

## KEY FIGURES

EUR million

	2018/19	2017/18	2016/17	2015/16	2014/15
<b>Income statement</b>					
Revenue	1,161.1	1,097.4	1,062.5	948.9	858.6
Gross profit	650.0	600.6	578.1	505.4	446.4
EBITDA before special items	407.8	384.0	368.1	324.0	286.4
EBIT before special items	343.2	320.2	307.1	267.8	232.5
EBIT	340.9	320.2	305.7	255.6	232.5
Net financial items	(16.1)	(24.1)	(14.8)	(16.2)	(12.8)
Profit for the year	250.2	228.2	224.0	183.8	162.5
Average number of employees (FTEs)	3,420	3,151	2,940	2,708	2,573
<b>Financial position at August 31</b>					
Total assets	2,057.8	1,861.1	1,802.1	1,715.3	1,444.6
Invested capital	1,745.4	1,631.5	1,581.1	1,445.0	1,247.0
Net working capital	220.6	189.1	174.8	147.4	138.1
Equity	797.2	771.6	768.5	730.3	600.8
Net interest-bearing debt	734.4	658.7	628.4	547.9	487.6
<b>Cash flow and investments</b>					
Cash flow from operating activities	298.6	302.4	283.7	244.8	221.5
Cash flow used for investing activities	(81.6)	(107.0)	(176.5)	(244.4)	(70.4)
Free cash flow	217.0	195.4	107.2	0.4	151.1
Free cash flow before acquisitions and special items	229.1	195.9	187.8	175.2	151.1
Acquisition and sale of property, plant and equipment, net	(48.5)	(87.9)	(88.4)	(56.6)	(55.0)
<b>Earnings per share</b>					
EPS, diluted	1.90	1.73	1.68	1.40	1.23
<b>Key ratios</b>					
Organic growth, %	7	9	10	12	10
Gross margin, %	56.0	54.7	54.4	53.3	52.0
EBITDA margin before special items, %	35.1	35.0	34.6	34.1	33.4
EBIT margin before special items, %	29.6	29.2	28.9	28.2	27.1
EBIT margin, %	29.4	29.2	28.8	26.9	27.1
ROIC excl. goodwill, %	37.3	38.0	40.1	39.7	37.6
ROIC, %	20.3	19.9	20.3	19.9	18.9
NWC, %	19.0	17.2	16.5	15.5	16.1
R&D, %	7.3	7.3	7.0	7.1	6.4
Capital expenditure, %	12.0	9.8	10.0	8.2	8.2
Cash conversion, %	59.0	64.8	62.8	73.2	72.5
Net debt to EBITDA before special items	1.8x	1.7x	1.7x	1.7x	1.7x



# LETTER TO OUR SHAREHOLDERS

## DEAR SHAREHOLDER,

Our financial year 2018/19 was overall a good year for Chr. Hansen, but not a year without challenges from a volatile macroeconomic environment. Organic sales growth was 7%, which was below what we had expected at the beginning of the year and we experienced slower sales momentum in the second half of the financial year. EBIT margin before special items was 29.6%, which was in-line with our expectations. Finally, free cash flow before acquisitions and special items increased by 17% to EUR 229 million. We continued to invest in research and development to maintain a steady flow of new products and concepts that generate value for our customers, for consumers and for our shareholders.

## SOLID PERFORMANCE IN THE BUSINESS

In Food Cultures & Enzymes we achieved solid organic growth of 8%, with double-digit growth in several key product segments, driven equally by product innovation, upgrades and upselling and underlying volume growth. Bioprotection performed well, even though some markets were more challenging, especially in the final quarter of the year.

In Health & Nutrition, the 9% organic growth was slightly lower than we had expected at the beginning of the year. Human Health and Animal Health delivered solid and good growth, respectively, with some business segments that grew very well, but also some that contracted.

Plant Health had a very strong year in Latin America, with very strong sales from the bionematicides, Quartzo® and Presence®. The value proposition of a natural product reducing the damage from nematodes is powerful, and the products fit extremely well in a market with increasing regulation against chemical pesticides.

Natural Colors grew 3% organically, driven by new product launches with natural colors solutions in North America, whereas Latin America and Asia-Pacific both declined due to lower pigment prices. New products were launched in the FRUITMAX® range to support the continued conversion from synthetic colors to natural colors.

## GOOD PROGRESS WITH THE LIGHTHOUSES

Chr. Hansen has three lighthouses – that is, business areas that we believe can deliver at least EUR 100 million in additional sales. Bioprotection is the first lighthouse, and we continued to increase the market penetration in 2018/19, although at a slower pace than expected. We are also working on the next generation of technology in this field to unlock even more opportunities. The second lighthouse is Plant

Health, which had a very strong year in Latin America. Next year, we will begin to sell to the North American market, in addition to growing further in Latin America. The third lighthouse is the Human Microbiome, which is all about developing pharmaceutical products based on good bacteria. In April 2019, we announced a joint venture, now named Bacthera AG with Lonza that we aim to position as a strong partner to the pharmaceutical industry and a pioneer in the emerging market for live biotherapeutic products. The Human Microbiome will thus not contribute to revenues, but as 'Income from associated companies', expectedly with a positive contribution from 2022/23.

## NEW IMPORTANT PRODUCTS LAUNCHED

Innovation is core to Chr. Hansen, and this year we launched several new important innovations in Food Cultures & Enzymes. SWEETY®, a new acidifying culture enabling dairies to reduce the amount of added sugar by up to 20% while maintaining the same perceived sweetness is very relevant to consumers who are trying to cut back on sugar. CHY-MAX® Supreme is a new coagulation enzyme for cheese production that can increase the yield by up to 1%, which is very significant for dairies. In Natural Colors, we launched HANSEN SWEET POTATO™ which offers a vibrant red alternative to carmine and synthetic colors. We feel confident that all products will be important in driving continued growth from innovation together with other future product launches.

## SUSTAINABILITY AWARD

In January 2019, Chr. Hansen was awarded first place as the World's Most Sustainable Company by Corporate Knights. We are incredibly proud and humbled by the recognition, which was awarded to us, among other things, due to our efforts to measure our impact on the UN Global Goals. In 2018/19, 82% of our business supported 3 of the 17 UN sustainable development goals. The efforts we have put into this enables us to bring a very powerful message to customers, employees and consumers alike; our products help to promote a more sustainable world

You can read more about our progress on sustainability in our Sustainability Report 2018/19, which is available at [www.chr-hansen.com/en/sustainability-report-1819](http://www.chr-hansen.com/en/sustainability-report-1819).

## CAPITAL STRUCTURE AND DIVIDEND

Our capital allocation principles remain unchanged and continue to prioritize investment in organic revenue growth and bolt-on acquisitions to support our existing business. The Company's ability to generate free cash flow remains strong, and excess cash will be distributed to shareholders. In July

2019, the Board of Directors decided to pay an extraordinary dividend of EUR 0.84 (DKK 6.24) per share, totaling EUR 110 million. To support an optimal capital structure, the Board of Directors proposes, subject to the approval of the Annual General Meeting, paying an ordinary dividend of EUR 0.95 (DKK 7.07) per share - or EUR 125 million - for the financial year 2018/19.

### **NATURE'S NO. 1 STRATEGY REVIEW**

Every two years, Chr. Hansen performs a thorough strategy review conducted between the executive leadership and the Board of Directors. After receiving final approval by the Board of Directors, the results are presented at a Capital Markets Day. During the first half of 2019/20, this process will take place again. The strategic direction of Chr. Hansen should not be expected to change materially. We will remain committed to leveraging the full potential of the microbial platform and look for new opportunities to expand our business into adjacent areas to the ones we are successfully competing in today. We will also evolve the mindset of customer centricity to ensure that our customers experience a Chr. Hansen which is even more innovative and value adding.

### **FOCUS IN 2019/20 ON IMPROVING EXECUTION**

In the coming year, until the strategy review is completed, the leadership team will be focused on improving the execution of Nature's no. 1 Sustainably strategy. The more challenging macroeconomic environment requires leveraging the full capabilities of Chr. Hansen to raise the bar in terms of growth performance.

In Food Cultures & Enzymes, we will focus on driving conversion further, while also continuing to drive penetration of bioprotective solutions in several food applications. We will also maintain the focus on broadening the product solutions to our customers and on winning business across segments. The offering of digital services to our dairy customers will also continue after the good interest and pilot results in 2018/19.

In Health & Nutrition, our focus will be on launching new products in Human Health, and on continuing to strengthen our route-to-market in Animal Health. In Plant Health, we will focus on expanding the use of Quartzo® and Presence® in Latin America through our partner, FMC, while also preparing to roll out the products commercially in the US.

In Natural Colors, the focus will be on maintaining the growth momentum in coloring foods, continuing to work on conversion projects in North America and managing the profitability of the larger conventional natural color business.

Our results in 2018/19 would not have been possible without the commitment, engagement and passion of our colleagues all over the world. We would like to thank all of them for their dedicated efforts in the past year, and we look forward to accelerating our execution of Nature's no. 1 Sustainably strategy with them.

Dominique Reiniche  
Chair of the Board

Mauricio Graber  
President & CEO





# ANNUAL REPORT 2018/19

## STRATEGY AND AMBITIONS



### YOUR HEALTH - OUR SCIENCE

At Chr. Hansen we are very proud of the science behind our probiotic strains and the dedicated scientists who study and show exactly how our probiotics work.

As part of our Nature's no. 1 strategy, we work to unleash the potential of probiotics as a safe and effective solution into new health areas by focusing on careful strain selection, high quality clinical trial design and professional execution. The joint venture with Lonza announced in April 2019 is a good example of how the established medical world is looking to good bacteria as a way to launch ground-breaking innovation in the medical field. And a blue stamp of the inherent health effects of probiotics.

# STRATEGY AND AMBITIONS

## BUSINESS MODEL

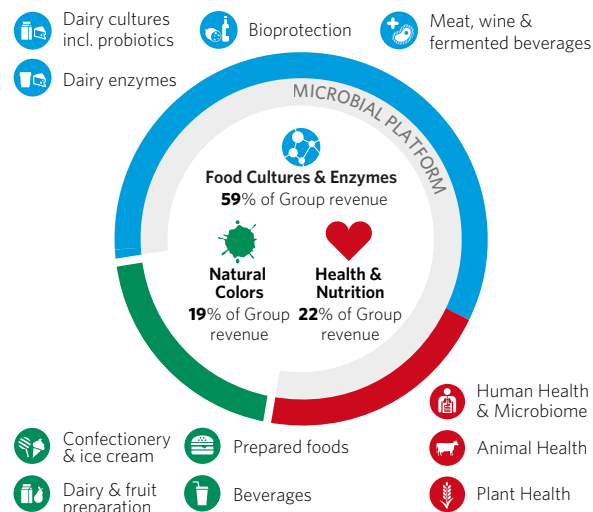
### AT A GLANCE

Chr. Hansen is a global bioscience company headquartered in Hørsholm, Denmark, developing natural ingredient solutions for the food, nutritional, pharmaceutical and agricultural industries. The Company was founded in 1874 by the Danish pharmacist Christian D. A. Hansen who had invented an industrial process to extract rennet for cheese making and who a few years later introduced annatto as a food coloring. With EUR 1,161 million revenue and 3,420 employees, Chr. Hansen is a global leading manufacturer of food cultures and enzymes, probiotics and natural colors.

Organizationally, the Company is split into three segments:

- Food Cultures & Enzymes, 59% of Group revenue
- Health & Nutrition, 22% of Group revenue
- Natural Colors, 19% of Group revenue.

### BUSINESS OVERVIEW



Whilst Food Cultures & Enzymes and Health & Nutrition share a common research and production platform, which is also referred to as the Microbial Platform, Natural Colors has been managed separately since 2014 with an independent sales and R&D organization and separate production sites.

### OUR BUSINESS MODEL

As a specialty ingredients supplier, Chr. Hansen serves different niche markets with attractive growth prospects and high entry barriers. The Company's business model is centered around strong innovation capabilities, a scalable production set-up and longstanding customer relationships all of which places Chr. Hansen in a very strong competitive position.

### Attractive growth opportunities

Chr. Hansen is uniquely positioned when it comes to leveraging the microbial technology platform to address some of society's most pressing challenges such as enabling more sustainable agricultural practices with fewer pesticides and antibiotics, reducing food waste and supporting global health through well-documented probiotics.

### GLOBAL TRENDS PROVIDE GROWTH OPPORTUNITIES



Sources: Mintel (2018), World Research Institute (2018), Singh et al. (2015), AMR (2016), management estimate

Whilst our ingredients usually only make up a small part of a product's cost base, they are strategically important and in the case of our starter culture and coagulant business they are indispensable. Our product solutions help customers:

- Define and differentiate their products (flavor, texture)
- Increase productivity and yield
- Extend shelf life and increase food safety
- Substitute artificial ingredients for clean-labelling
- Promote health and well-being.

### SUSTAINABILITY GOALS ALIGNED WITH UN GLOBAL GOALS



In the financial year 2018/19, 82% of the Group's revenue contribute to three of the United Nation's Sustainable Development Goals which is one of the reasons why Chr.



# STRATEGY AND AMBITIONS

Hansen was named World's Most Sustainable Company by Corporate Knights in 2019.

## **Addressable market**

Chr. Hansen operates in several niche markets with different competitive dynamics and attractive growth opportunities. In Food Cultures & Enzymes market concentration is high, whilst in Health & Nutrition and Natural Colors competition is more diverse.

Whilst growth in the food cultures & enzymes market is mostly driven by increasing consumption of dairy and other fermented products, Health & Nutrition market growth comes from increasing penetration levels as public perception and understanding of probiotics increases and science delivers further proof points on the effectiveness of 'good bacteria'. The main growth driver in the natural colors market is the conversion from synthetic to natural colors triggered by end consumers demanding more clean label and healthy solutions.

## **Loyal, diversified customer base across industries**

Chr. Hansen has a broad customer base with the top 25 customers representing around 30% of Group revenue.

Food Cultures & Enzymes serves a highly fragmented customer base ranging from local, family-owned specialty producers to large, multinational groups. The majority of its 3,000 customers are dairies but by moving into adjacent areas, Chr. Hansen is expanding the customer base to include other food and beverage markets.

As dairy cultures represent a critical ingredient, customer loyalty in the core dairy business is very high. This is not only due to long-standing relationships but also thanks to Chr. Hansen's unrivalled, highly specialized technical support which operates from several application centers worldwide as well as its comprehensive product range.

Chr. Hansen's food cultures & enzymes are sold directly under one global commercial model except when serving smaller customers where the Company works with distributors. To further enhance its service offering, Food Cultures & Enzymes has started, on a small scale, to experiment with digital services.

Health & Nutrition is selling probiotic solutions for dietary supplements and infant formula (Human Health), feed ingredients (Animal Health) and crop protection (Plant

Health). Probiotics are defined as 'live microorganisms that confer health benefits on the host' (FAO/WHO, 2001).

For Human Health customers, Chr. Hansen is the go-to-player as the Company has a very strong probiotic strain portfolio, offering the world's two most scientifically documented probiotic strains for human health. Chr. Hansen largely sells directly to large customers in the nutrition and health industry.

In Animal Health, Chr. Hansen sells probiotics for animals and has one of the industry's most comprehensive product portfolios for cattle, swine and poultry as well as silage inoculants. The North American market is the most important market for Chr. Hansen. The animal probiotics are sold to various players along the farming value chain including, pre-mixers, feed mills, large integrators and small farmers. Outside of North America, Chr. Hansen works predominantly with distributors and is working on strengthening the route-to-market.

In Plant Health, Chr. Hansen sells bionematicides through its partner FMC. Products are primarily sold to sugarcane and soybean farmers in Latin America, and the Company is expected to expand into other crops, such as corn, and also enter the US market in 2019/20.

In Natural Colors, Chr. Hansen sells natural colors and coloring foods for various applications including confectionary, ice cream, dairy, fruit preparation, prepared food, beverages, food service and, since 2018/19, also for pet food. Natural colors are sold both directly and through distributors.

## **Microbial powerhouse with strong innovation muscle**

Chr. Hansen draws on more than 145 years of experience in working with microbes and possesses deep knowledge across the entire value chain from the discovery of new strains to scale-up and industrial production. The Company's collection of bacteria contains around 40,000 strains and is continuously being expanded to develop new microbial solutions for different end market applications. Furthermore, Chr. Hansen leverages new technologies as well as a network of more than 120 external partners to bring innovations to market faster.

R&D activities are closely aligned with Nature's no. 1 and resource allocation and pipeline progress are tightly managed and monitored by a Portfolio Board that was established in 2018.

# STRATEGY AND AMBITIONS

As innovation becomes a more important growth driver, relevance of intellectual property is also increasing, and Chr. Hansen has a proactive IP strategy in place to protect new products including their functionalities in specific application areas as well as production and formulation technologies.

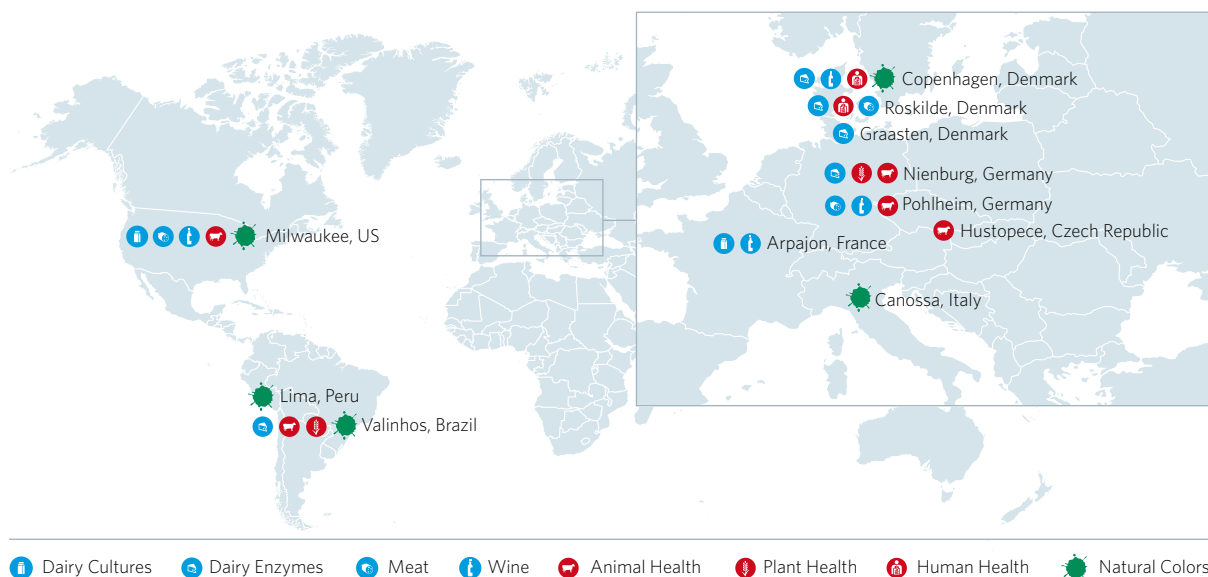
## Cost leadership due to scalable production

For the microbial business Chr. Hansen runs a consolidated production set-up which allows the Company to drive scalability benefits. Main production facilities are located in Denmark, Germany, France and the US where Chr. Hansen produces different bacteria strains by fermentation that are subsequently blended into cultures. An increasing degree of automation also helps to drive profitability. Raw material

inputs are mostly commodities such as skim milk powder, vitamins and sugars and as such play a secondary role. Waste streams from culture production are used as fertilizers or for biogas where possible.

Natural Colors production centers on the extraction of pigments and formulation and takes place at facilities in Denmark, Italy, Brazil, Peru and USA.

## OUR PRODUCTION FOOTPRINT



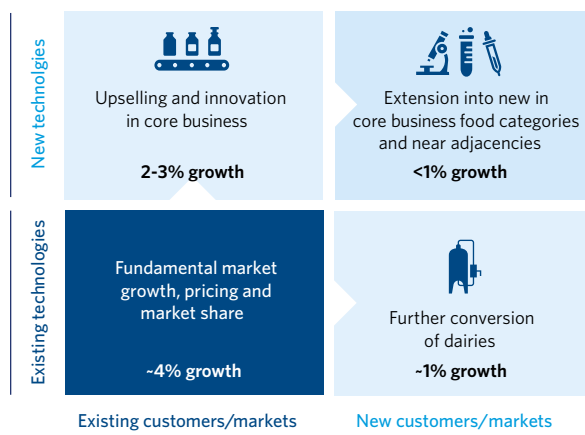
# STRATEGY AND AMBITIONS

## NATURE'S NO. 1

Launched in 2013, Chr. Hansen's Nature's no. 1 strategy aims to capture the full potential of its core business while at the same time pursuing broader opportunities within microbial solutions by leveraging the Company's strong technology platform. Maintaining market and technology leadership in established markets whilst developing adjacent areas remain clear priorities. Each business unit has separate focus areas that contribute to the Company's overall ambitions.

Chr. Hansen's management regularly assesses the relevance and scope of its Nature's no. 1 strategy and the results of the biannual review process will be presented at the upcoming Capital Markets Day in April 2020.

### FOOD CULTURES & ENZYMES GROWTH MODEL



### Leverage the full potential of Food Cultures & Enzymes

In Food Cultures & Enzymes, Chr. Hansen continues to prioritize the core dairy business whilst developing new adjacencies to outgrow the market and protect/expand its leading position. Overall, the segment is expected to reach the long-term financial ambition of 7-8% organic growth through the four growth drivers: fundamental market growth, pricing and market share gains; upselling and innovation; conversion; and adjacencies.

In the dairy business, Chr. Hansen focuses on bringing new product solutions and concepts for better functionality (e.g. low sugar, lactose-free or clean-label) and yield through upselling. The bioprotection lighthouse is an important strategic driver when it comes to innovation. Another priority remains the conversion of dairies from in-house bulk starter production to one of Chr. Hansen's solutions, the DVS® products.

Adjacent areas including bioprotection outside dairy, fermented beverage solutions for low/no alcohol beer and fermented plant bases ('dairy alternatives') are becoming increasingly important. Here, the organization focuses on building application knowledge, executing on the innovation pipeline and developing relationships with new customer groups.

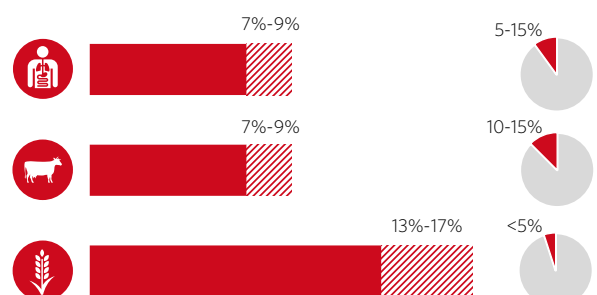
Finally, utilizing the expanded production capacity at the Copenhagen site which was completed in 2017/18 will drive scalability, and digitalizing core processes in production and R&D will increase efficiency.

### Developing the microbial platform in Health & Nutrition

In Health & Nutrition, Chr. Hansen has large growth opportunities to expand and grow the businesses through driving penetration of probiotics and reinforcing the position in growth markets globally.

### HEALTH & NUTRITION MARKET GROWTH AND PENETRATION LEVELS

Market growth  
(CAGR 17/18-21/22)



Source: Euromonitor and management estimates (Capital Markets Day 2018)

For Human Health, the focus is on bringing new innovations to market, increasing penetration with key customers, expanding the position in emerging markets and raising awareness of the importance of scientific documentation of probiotic strains through collaborations with industry associations and key opinion leaders as well as a new brand positioning.

In Animal Health, the primary focus remains to further strengthen the route-to-market outside of North America



# STRATEGY AND AMBITIONS

## LIGHTHOUSES

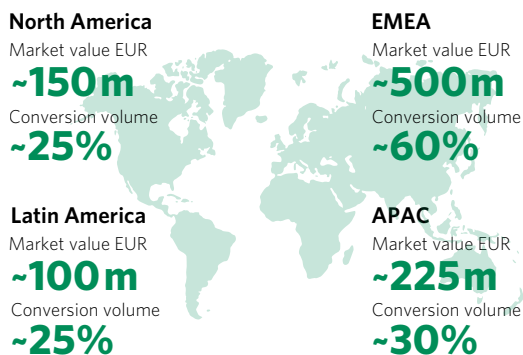
whilst advancing the development of the next generation of animal probiotics.

In Plant Health, the Company seeks to further increase the penetration of its bionematicides Quartzo® and Presence® in sugarcane in Latin America whilst also driving adoption in other crops such as soybeans, cotton and coffee. The next strategic milestone for Plant Health is the US market entry in 2019/20 together with its partner FMC.

### Creating further value In Natural Colors

Increased regulation and growing consumer awareness are fueling demand for natural colors to replace synthetics. Whilst conversion is progressing at varying paces across regions, the growth prospects remain attractive. Chr. Hansen will focus on balancing the goal of outgrowing the underlying natural colors market and increasing the profitability of the business.

### NATURAL COLORS MARKET VALUE & CONVERSION LEVELS



Source: Euromonitor and management estimates (Capital Markets Day 2018)

### LIGHTHOUSES

As part of the Nature's no. 1 strategy, Chr. Hansen has defined three lighthouses which are new growth areas of strategic importance that have a revenue potential of at least EUR 100 million per year.

#### Bioprotection

Bioprotection makes use of natural microbial food cultures to inhibit growth of unwanted contaminants, thereby preventing food spoilage and enhancing food safety. Depending on the market, bioprotection allows customers to replace chemical preservatives for cleaner labels, improve food safety against contamination, or extend shelf life and reduce food waste in the supply chain. Bioprotective cultures can be applied not only to dairy and fermented meat products but also to other, traditionally non-fermented foods that are exposed to a high risk of Listeria, opening up a completely new market and customer group for Chr. Hansen.

Today, bioprotection represents 7% of Food Cultures & Enzymes revenue. To reach the lighthouse target of EUR 200 million by 2025, the business unit focuses on increasing adoption amongst the existing customer base with special attention towards emerging markets. Continued efforts in R&D will allow further generations of bioprotection to come to market. Outside dairy, the strategic priorities encompass gaining application knowledge, building new customer relationships and engaging with regulators to get clarity on labelling requirements for this new technology.

#### Plant Health

Drawing on the Company's microbial backbone, Plant Health develops microbial solutions with the goal of reducing the usage of chemical pesticides in crop farming. Together with its partner FMC, Chr. Hansen aims to expand the geographical reach beyond the Latin American market whilst increasing adoption levels in sugarcane and other crops. At the same time, Chr. Hansen invests in strengthening the R&D efforts and expanding the strain library to drive new innovations whilst exploring further partnerships. Plant Health has a 2025 target of EUR 100 million and today constitutes around 5% of Health & Nutrition revenue.

#### Human Microbiome

The Human Microbiome is a rapidly developing research field which aims to understand how the human microbiota influences health and the role microbes could play in treating diseases in the future. Chr. Hansen defined a lighthouse in 2013 to explore how to leverage the microbial know-how in this emerging field and develop relevant competencies.

In April 2019, an important strategic milestone was reached with the announcement of the 50/50 joint venture with Lonza. Together the two parties will invest EUR 90 million over the course of three years to establish a contract manufacturing organization to produce bacteria-based pharmaceuticals, so called live biotherapeutic products (LBP), for pharma and biotech firms that have discovered new strains with therapeutic potential.

Bacthera AG operates from its headquarters in Switzerland and expects to generate first revenue in 2020/21. Unlike the other two lighthouses, Bacthera AG will not affect Chr. Hansen's Group guidance metrics as it will not be fully consolidated. Whilst the Human Microbiome lighthouse does not yet have a revenue target, the market is expected to reach a size of EUR 150-200 million by 2025 and of more than EUR 1 billion by 2035, and the joint venture expects to capture a meaningful share of both.

# STRATEGY AND AMBITIONS

## LONG-TERM AMBITIONS

### FINANCIAL AMBITIONS THROUGH 2021/22

#### Organic revenue growth

The ambition is to deliver organic revenue growth rate of 8-10% per year, supported by all business areas, with average organic growth of 7-8% in Food Cultures & Enzymes.

#### EBIT margin before special items

The ambition is to deliver an EBIT margin before special items of above 30%.

This ambition will be driven by a continued focus on maintaining cost discipline and on productivity and efficiency gains across the organization, to some extent offset by investments in innovation, emerging markets and in exploring new growth opportunities.

#### Free cash flow

The ambition is for free cash flow before acquisitions, divestments and special items to increase at a compound annual growth rate of around 10% over the period, compared to the base year 2016/17 (EUR 188 million).

The ambitions for the EBIT margin and free cash flow are sensitive to currency exchange rate fluctuations.

### SUSTAINABILITY AMBITIONS

#### Commercial targets

Chr. Hansen's sustainability strategy focuses on how the Company's natural products can help address global trends and challenges. The strategy focuses on three areas where Chr. Hansen has the largest impact:

#### Better farming

Help feed the growing population by promoting sustainable agriculture using Chr. Hansen's biological Plant Health solutions and silage inoculants. By 2024/25, the ambition is to expand the reach of Chr. Hansen's natural Plant Health solutions to an accumulated 25 million hectares of farmland.

#### Less waste

Help customers reduce food waste through Chr. Hansen's bioprotection solutions and enzyme technology. By 2021/22, the ambition is to reduce global yogurt waste by 2%, equivalent to 1,200,000 tons accumulated.

#### Good health

Improve global health through probiotics and healthier and safer food ingredients. For 2021/22, the ambition is to have launched six new products with a documented health effect.

#### Operational targets

As part of the strategy review and to reduce the environmental footprint of its own operations, Chr. Hansen revised its 2021/22 operational targets for health and safety, energy, water, CO<sub>2</sub> and waste recycling. Compared to the base year 2013/14, Chr. Hansen is aiming for:

- 20% energy and water efficiency improvement
- 25% CO<sub>2</sub> efficiency improvement
- 40% waste recycling compared to 20% in 2013/14

A full report on sustainability and progress on commercial and operational targets during 2018/19 can be found at [www.chr-hansen.com/en/sustainability-report-1819](http://www.chr-hansen.com/en/sustainability-report-1819).

# STRATEGY AND AMBITIONS

## OUTLOOK FOR 2019/20

### ORGANIC REVENUE GROWTH

For 2019/20, organic revenue growth is expected to be 4-8%, with a neutral impact from EUR pricing. The group guidance for the full year is below the long-term ambition of 8-10%, primarily due to an expected weak Q1 and a negative development in natural color raw material prices.

In Q1, the organic growth for the group is expected to be flat to low-single digit due to the challenges from the macroeconomic volatility in emerging markets that have impacted the business in the second half of 2018/19, order timing in Health & Nutrition, and an expected normalization of inventory levels in the distribution chain for Food Cultures & Enzymes as a result of the lower end-market demand.

For the remainder of the year Food Cultures & Enzymes and Health & Nutrition in combination are expected to grow 7-10%, in-line with the group long-term ambition of 8-10% organic growth given the absence of a positive EUR pricing impact. There are several points that underpin this growth expectation: the actions that have been taken to improve execution in several areas, the positive view of the commercial pipeline in Food Cultures & Enzymes, new product launches in Human Health, a continued improvement in Animal Health and strong growth expected in Plant Health. Natural Colors is expected to grow organically at low to mid-single digit in the same period, driven primarily by continued growth in FRUITMAX® but partly offset by lower raw material prices leading to lower sales prices.

### EBIT MARGIN BEFORE SPECIAL ITEMS (B.S.I.)

The EBIT margin b.s.i. is expected to be around 29.5%. Increased utilization of production capacity in Food Cultures & Enzymes will have a positive impact on the margin, which is expected to be offset by investments into the lighthouse projects and other strategic priorities.

### FREE CASH FLOW

Free cash flow before acquisitions and special items is expected to be around EUR 190 million. Cash flow used for operational investment activities is expected to be higher than the EUR 139 million realized in 2018/19 (excluding the proceeds from the sale-and-lease-back), primarily related to investment phasing from 2018/19 to 2019/20.

### ASSUMPTIONS

The outlook is based on constant currencies and stable raw material prices and assumes no acquisitions. The outlook is also based on the current political and economic environment. Any deterioration in the political and economic climate might impact the outlook negatively. This includes, but is not limited to, the economic climate in several emerging markets, such as China, Turkey, Brazil and Argentina; the risk of a global economic recession; the overall situation in the Middle East, including any potential sanctions; a deepening of the US-China trade tension; an escalation of the US-EU tariff situation; and a no-deal Brexit scenario.

### SENSITIVITY

Chr. Hansen is a global company serving more than 140 countries through subsidiaries in more than 30 countries.

The most significant currency exposure relates to USD, which accounts for around 30% of revenue, while exposure to other currencies is more modest. A 5% decrease in the EUR/USD exchange rate would impact revenue measured in EUR negatively by around EUR 15-20 million.

Organic revenue growth is sensitive to exchange rate fluctuations in currencies for which Chr. Hansen applies a EUR-based pricing model, and to changes in raw material prices for Natural Colors as some contracts are adjusted for movements in raw material prices.

The EBIT margin is also sensitive to exchange rate fluctuations and to changes in raw material prices for Natural Colors. Production in the US and sourcing in USD only partly offset the impact on revenue from changes in the EUR/USD exchange rate. Therefore, the relative EBIT exposure is higher than the revenue exposure. A 5% decrease in the EUR/USD exchange rate would impact EBIT negatively by roughly half of the revenue impact.

The sensitivity to currency also applies to free cash flow.

The use of currency hedging of balance sheet exposures and future cash flows is described in note 4.3 to the Consolidated Financial Statements 2018/19.



# BUSINESS PERFORMANCE



## THE POWER OF GOOD BACTERIA

Bacteria are by far the most successful life form on earth. They have been around longer than humans, and while they may be small, their numbers are gigantic. There are more bacteria than grains of sand – and every person carries around 1-2 kilos in and on their body. Chr. Hansen's technology platform revolves around the understanding, application and production of bacteria. This has never been more exciting as science is beginning to truly unfold and understand the impact bacteria have on people, as well as animals and plants, and it fuels our quest to contribute to a better world and preserve our planet through our natural, sustainable solutions.

# BUSINESS PERFORMANCE

## FINANCIAL REVIEW

### REVENUE

Organic growth was 7%, and adjusting for a negative currency impact of 1%, corresponded to a revenue increase of 6% to EUR 1,161 million. The organic growth was negatively impacted by a volatile macroeconomic environment, particularly in emerging markets.

Organic growth was primarily driven by volume/mix effects, with around 2% from pricing. The impact from acquisitions was immaterial. The price increases were mainly achieved by using EUR-based pricing in certain countries to protect EBIT from depreciating currencies.

### REVENUE

	2018/19
Organic growth (vol/mix)	5%
Organic growth (price)	2%
Acquisition	0%
<b>Organic growth</b>	<b>7%</b>
Currencies	(1)%
<b>EUR growth</b>	<b>6%</b>

### GROSS PROFIT

Gross profit was EUR 650 million, up 8% on 2017/18. The gross margin increased by 1.3%-points to 56.0%, driven by improvements in all three business areas. In Food Cultures & Enzymes, scalability benefits drove the margin improvement, in Health & Nutrition product mix was stronger, and in Natural Colors, lower raw material prices combined with operating efficiencies drove the margin increase. Acquisitions had an immaterial impact.

### OPERATING EXPENSES (% OF REVENUE)

Operating expenses totaled EUR 309 million (26.6%), compared to EUR 280 million (25.6%) in 2017/18.

Research & Development (R&D) expenses, including amortization and depreciation, amounted to EUR 79 million (6.8%), compared to EUR 73 million (6.7%) in 2017/18.

The net impact from capitalization less amortization and impairment of development costs was EUR 6 million (0.5%), compared to EUR 7 million (0.6%) in 2017/18.

Total R&D expenditures incurred increased by 6% to EUR 86 million (7.4%), from EUR 80 million (7.3%) in 2017/18.

The increase was driven by Nature's no. 1 initiatives, including bioprotection and Plant Health.

Sales & marketing expenses amounted to EUR 159 million (13.7%), compared to EUR 139 million (12.7%) in 2017/18. The increase was mainly driven by strategic initiatives to support Nature's no. 1, such as bioprotection, route-to-market in Animal Health, Plant Health, and digitalization.

Administrative expenses amounted to EUR 71 million (6.1%), compared to EUR 70 million (6.4%) in 2017/18.

Net other operating income/expenses was an income of EUR 2 million, compared to EUR 3 million in 2017/18.

### OPERATING PROFIT (EBIT) BEFORE SPECIAL ITEMS

EBIT before special items amounted to EUR 343 million, compared to EUR 320 million in 2017/18, an increase of 7%. The increase was mainly due to the higher gross profit.

The EBIT margin before special items was 29.6%, up from 29.2% in 2017/18, driven by underlying small improvements in Health & Nutrition and Natural Colors, while the EBIT margin in Food Cultures & Enzymes was similar to last year.

In Food Cultures & Enzymes, EBIT amounted to EUR 234 million, compared to EUR 222 million in 2017/18. The EBIT margin was 34.3%, on par with 2017/18. The scalability benefits achieved in production (around 1%-point on gross margin), most notably from increased capacity utilization at the Copenhagen plant, were offset by investments in strategic initiatives, e.g. bioprotection and digitization.

In Health & Nutrition, EBIT amounted to EUR 80 million, compared to EUR 72 million in 2017/18. The EBIT margin was 31.5%, up 0.5%-point on 2017/18. The increase was driven by a positive product mix and a minor positive impact from currencies, partly offset by investments in strategic initiatives, e.g. route-to-market in Animal Health, the Human Microbiome and Plant Health.

In Natural Colors, EBIT amounted to EUR 29 million, compared to EUR 26 million in 2017/18. The EBIT margin was 12.7%, up 0.7%-point on 2017/18. The increase was driven by lower raw material costs combined with operating efficiencies, partly offset by organizational changes and currencies.

### SPECIAL ITEMS

Special items were an expense of EUR 2 million compared to nil in 2017/18 driven by costs related to the acquisition and integration of Hundsichler GmbH as well as the joint venture established with Lonza.

# BUSINESS PERFORMANCE

## OPERATING PROFIT (EBIT)

EBIT amounted to EUR 341 million, compared to EUR 320 million in 2017/18, an increase of 6%. The EBIT margin was 29.4%, compared to 29.2% in 2017/18.

## NET FINANCIALS AND TAX

Net financial expenses amounted to EUR 16 million, compared to EUR 24 million in 2017/18. The net interest expenses were EUR 12 million, up from EUR 11 million in 2017/18.

The net impact from exchange rate adjustments was negative at EUR 2 million, compared to a negative EUR 12 million in 2017/18. The improvement was mainly due to a focused effort to reduce intercompany balances in emerging market currencies in order to manage the currency risk.

Income taxes amounted to EUR 75 million, equivalent to an effective tax rate of 23.0%, compared to EUR 68 million and 22.9%, respectively, in 2017/18.

## PROFIT FOR THE YEAR

Profit for the year increased by 10% to EUR 250 million, up from EUR 228 million in 2017/18.

## ASSETS

At August 31, 2019, total assets amounted to EUR 2,058 million, compared to EUR 1,861 million a year earlier. The increase was mainly due to investments in the microbial production platform and the sale-and-lease-back of the Company's main site in Hørsholm.

Total non-current assets amounted to EUR 1,584 million, compared to EUR 1,450 million at August 31, 2018. Intangible assets increased by EUR 17 million, while property, plant and equipment increased by EUR 116 million.

Total current assets amounted to EUR 474 million, compared to EUR 411 million at August 31, 2018. Inventories increased by EUR 13 million, or 9%, and receivables were up by EUR 31 million, or 16%. Cash increased by EUR 18 million to EUR 87 million.

## NET WORKING CAPITAL

Net working capital was EUR 221 million, or 19.0% of revenue, compared to EUR 189 million, or 17.2%, in 2017/18, which was driven by higher trade receivables due to challenging market conditions in the Middle East and slightly higher inventories.

## EQUITY

Total equity amounted to EUR 797 million at August 31, 2019, compared to EUR 772 million a year earlier. An ordinary dividend for the financial year 2017/18 totaling EUR 114 million was paid in December 2018, and an extraordinary dividend for the financial year 2018/19 totaling EUR 110 million was paid in July 2019.

## NET DEBT

Net interest-bearing debt amounted to EUR 734 million, or 1.8x EBITDA, compared to EUR 659 million, or 1.7x EBITDA, at August 31, 2018.

## RETURN ON INVESTED CAPITAL (ROIC)

The return on invested capital excluding goodwill was 37.3%, compared to 38.0% in 2017/18. The decrease was driven by investments in the microbial platform. Invested capital excluding goodwill increased to EUR 972 million, compared to EUR 870 million at August 31, 2018. The increase was mainly due to investments in the microbial platform.

The return on invested capital including goodwill was 20.3%, compared to 19.9% in 2017/18. Invested capital including goodwill increased to EUR 1,745 million, compared to EUR 1,632 million at August 31, 2018.

## CASH FLOW

Cash flow from operating activities was EUR 299 million, compared to EUR 302 million in 2017/18. The decrease was driven by the higher taxes paid. The increase in taxes paid was due to the absence of acquisition-related tax benefits recognized in 2017/18.

Cash flow used for operational investing activities was EUR 72 million, or 6.2% of revenue, compared to EUR 107 million, or 9.8% of revenue, in 2017/18. This includes the net proceeds of EUR 68 million from the sale-and-lease-back of the Company's main site in Hørsholm. Excluding this inflow, the cash flow used for operational investing activities was EUR 139 million, or 12.0% of revenue. The increase relative to last year was primarily driven by investments to expand the capacity for packaging freeze-dried products at the Copenhagen facility.

Free cash flow before acquisitions, and special items was EUR 229 million, compared to EUR 196 million in 2017/18. This includes the net proceeds of EUR 68 million from the sale-and-lease-back of the Company's main site in Hørsholm. Excluding this inflow, free cash flow before acquisitions, and special items was EUR 161 million.



# BUSINESS PERFORMANCE

## REGIONS

With customers in more than 140 countries and offices in more than 30 countries around the world, Chr. Hansen has organized its sales operations in four regions:

- EMEA (Europe, Middle East and Africa)
- North America
- APAC (Asia-Pacific)
- LATAM (Latin America)

### **EMEA (Europe, the Middle East and Africa)**

The EMEA region accounted for 44% of revenue, compared to 45% in 2017/18. Organic growth was 4%, and adjusting for a negative currency impact of 1%, corresponded to a revenue increase of 3%. Organic growth was driven by solid growth in Food Cultures & Enzymes and good growth in Health & Nutrition, while Natural Colors grew slightly.

### **NORTH AMERICA**

The North American region accounted for 27% of revenue, compared to 26% in 2017/18. Organic growth was 7%, and adjusting for a positive currency impact of 5%, corresponded to a revenue increase of 12%. Organic growth was driven by very strong growth in Natural Colors, driven by large conversions to coloring foods and solid growth in Food Cultures & Enzymes. Health & Nutrition delivered good growth, as Human Health delivered solid growth while Animal Health declined slightly as the cattle segment has had a challenging although gradually improving year.

### **APAC (Asia-Pacific)**

The APAC region accounted for 17% of revenue, compared to 17% in 2017/18. Organic growth was 4%, corresponding to a revenue increase of 4%. Organic growth was driven by very strong growth in Health & Nutrition, while Food Cultures & Enzymes only grew slightly due to slowing demand in China, and Natural Colors declined.

### **LATAM (Latin America)**

The LATAM region accounted for 12% of revenue, compared to 12% in 2017/18. Organic growth was 21%, and adjusting for a negative currency impact of 17%, corresponded to a revenue increase of 4%. Organic growth was driven by very strong growth in Food Cultures & Enzymes and Health & Nutrition, while Natural Colors declined due to a challenging economic climate impacting demand for natural colors.

# BUSINESS PERFORMANCE

## FOOD CULTURES & ENZYMES

EUR million	2018/19	2017/18
Revenue	682.3	647.2
Organic growth	8%	12%
EBIT	234.3	222.2
EBIT margin	34.3%	34.3%
ROIC excluding goodwill	44.2%	45.6%

### FUNDAMENTAL GROWTH

According to the Company's own estimates and based on volume, the global market for fermented milk grew by around 2% in 2018/19, driven by Asia-Pacific, the Middle East and Africa, while certain key markets in the EU showed little or no growth, and the US declined slightly. The market for cheese is estimated to have grown slightly above 2%, driven by high production in the US.

### CONVERSION

Based on industrialized production volume, Chr. Hansen estimates that around 80% of the fermented milk market and slightly more than 50% of the cheese market had converted from bulk starter to Chr. Hansen's industrialized DVS® cultures or similar technologies by the end of 2018/19. Chr. Hansen expects growth from continued conversion in the future, especially within in cheese.

### INNOVATION

A significant part of the growth contribution in Food Cultures & Enzymes comes from innovation. Two new key products SWEETY® and CHY-MAX® Supreme were launched in 2018/19, and progress was made in adjacent areas like plant-based dairy alternatives, fermented beverages and bioprotection for segments outside dairy.

### REVENUE

Organic growth was 8%, and adjusting for a negative currency impact of 3%, corresponded to a revenue increase of 5% to EUR 682 million. The impact from acquisitions was less than 1%. The contribution from volume was 4%, while the contribution from pricing was around 4%, mostly driven by the EUR-price list.

Organic growth was positively impacted by strong growth in enzymes and meat, solid growth from cheese and fermented milk, whereas probiotics declined driven by Asia-Pacific.

Bioprotective cultures delivered organic growth of approximately 10%, driven by the existing segments within fermented milk and meat. Bioprotection accounted for around 7% of the Food Cultures & Enzymes business in 2018/19.

### EBIT

EBIT amounted to EUR 234 million, compared to EUR 222 million in 2017/18. The EBIT margin was 34.3%, on par with 2017/18. The scalability benefits achieved in production (around 1%-point on gross margin), most notably from increased capacity utilization at the Copenhagen plant, were offset by investments in strategic initiatives, e.g. bioprotection and digitalization.

### ROIC EXCLUDING GOODWILL

The return on invested capital excluding goodwill was 44.2%, compared to 45.6% in 2017/18. Invested capital excluding goodwill increased by EUR 54 million, or 11%, to EUR 558 million. The increase was mainly due to investments in production capacity.

	Strategic Focus Areas	Progress 2018/19	Focus 2019/20
<b>Drive penetration of new innovation</b>	<ul style="list-style-type: none"> <li>- Continue to prioritize core dairy business</li> <li>- Develop adjuncts and adjacencies</li> <li>- Drive bioprotection lighthouse to EUR 200m by 2025</li> </ul>	<ul style="list-style-type: none"> <li>- SWEETY® and CHY-MAX® Supreme launched</li> <li>- BioProtection 2<sup>nd</sup> generation delivered strong growth</li> </ul>	<ul style="list-style-type: none"> <li>- Progress next-generation products in R&amp;D</li> <li>- Drive new launches and develop adjacent areas</li> </ul>
<b>Reinforce position in growth markets</b>	<ul style="list-style-type: none"> <li>- Further strengthen global market presence</li> <li>- Application support in core adjacencies</li> </ul>	<ul style="list-style-type: none"> <li>- Good wins in plant-based alternatives</li> <li>- Expanded sales and application support for adjacencies</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthen emerging market focus, incl. on SME's in China</li> <li>- Invest further in capabilities for adjacencies</li> </ul>
<b>Generate fuel for growth</b>	<ul style="list-style-type: none"> <li>- Drive scalability in supply chain</li> <li>- Digitalize core processes</li> </ul>	<ul style="list-style-type: none"> <li>- Sizable scalability benefits achieved in production</li> <li>- Pilot tests with digital business models</li> </ul>	<ul style="list-style-type: none"> <li>- Leverage new expansion</li> <li>- Build on digital services</li> </ul>

# BUSINESS PERFORMANCE

## HEALTH & NUTRITION

EUR million	2018/19	2017/18
Revenue	255.1	230.9
Organic growth	9%	8%
EBIT	80.4	71.6
EBIT margin	31.5%	31.0%
ROIC excluding goodwill	29.5%	29.0%

### HUMAN HEALTH

Market conditions for human probiotic dietary supplements were stable in 2018/19, with relatively low growth in the mature markets and strong growth in the emerging markets. The key North American market began to show signs of improvement after a period of instability. The market for infant formula developed well, particularly driven by a tailwind from a regulatory change in China in early 2018.

### ANIMAL HEALTH

In 2018/19, the markets for animal probiotics and silage were impacted by African swine fever (ASF), flooding in the US, US-China trade disputes and relatively low milk prices. The swine prices in the EU were supported by ASF, creating good conditions for probiotics. The US poultry market continued to be driven by an increasing demand for antibiotic free meat, and global demand is increasing, which created relatively good conditions for probiotics. Probiotics for cattle were more challenged due to low milk prices and lower demand for silage inoculants.

### PLANT HEALTH

In 2018/19, Chr. Hansen and FMC Corporation had a very strong year in Latin America, where both sugarcane and soybean growers used the bionematicides Quartzo™ and Presence™ on a large scale.

### HUMAN MICROBIOME

In 2018/19, Chr. Hansen announced a joint venture with Lonza to pioneer the area of live biotherapeutics (LBP).

### REVENUE

Organic growth was 9%, and adjusting for a positive currency impact of 1%, corresponded to a revenue increase of 10% to EUR 255 million, driven by volume/mix. Human Health delivered solid growth, Animal Health delivered good growth, while Plant Health realized very strong growth.

Organic growth in Human Health was driven by very strong growth in infant formula, while dietary supplements was flat. Animal Health delivered good growth, reflecting very strong growth in Poultry & Swine, while Cattle declined, mainly due to weak dairy farm economics in the first half of the year and timing of orders and lower demand for silage inoculants in North America and relatively low milk prices. Plant Health delivered very strong growth in Latin America, with sales to both sugarcane and soybean growers.

### EBIT

EBIT amounted to EUR 80 million, compared to EUR 72 million in 2017/18. The EBIT margin was 31.5%, up 0.5%-point on 2017/18. The increase was driven by a positive product mix and a minor positive impact from currencies, partly offset by investments in strategic initiatives, e.g. route-to-market in Animal Health, the Human Microbiome and Plant Health.

### ROIC EXCLUDING GOODWILL

The return on invested capital excluding goodwill was 29.5%, compared to 29.0% in 2017/18. Invested capital excluding goodwill increased by EUR 34 million, or 13%, to EUR 290 million, driven by investments in production capacity and Nature's no.1 initiatives.

	Strategic Focus Areas	Progress 2018/19	Focus 2019/20
<b>Drive penetration of new innovation</b>	<ul style="list-style-type: none"> <li>- Drive new products for Human Health (incl. Microbiome) and Animal Health</li> <li>- Invest in Plant Health platform to unlock EUR 100m potential by 2025</li> </ul>	<ul style="list-style-type: none"> <li>- Excellent progress in Plant Health in Latin America</li> <li>- Bacthera AG JV with Lonza established</li> </ul>	<ul style="list-style-type: none"> <li>- Launch new products in Human Health</li> <li>- Expand Plant Health business to new countries and crops</li> </ul>
<b>Reinforce position in growth markets</b>	<ul style="list-style-type: none"> <li>- Human Health: Expansion into emerging markets and growth segments</li> <li>- Strengthen route-to-market in Ag businesses</li> </ul>	<ul style="list-style-type: none"> <li>- Strong organic growth in infant formula</li> <li>- Good progress in Animal Health on route-to-market expansion</li> </ul>	<ul style="list-style-type: none"> <li>- Drive sales excellence in Animal Health across regions</li> <li>- Build on strong position in infant formula</li> </ul>
<b>Generate fuel for growth</b>	<ul style="list-style-type: none"> <li>- Reinvest in future growth</li> </ul>	<ul style="list-style-type: none"> <li>- New application lab for Plant Health in Copenhagen</li> </ul>	<ul style="list-style-type: none"> <li>- Further investments in Bacthera and Plant Health</li> </ul>



# BUSINESS PERFORMANCE

## NATURAL COLORS

EUR million	2018/19	2017/18
Revenue	223.7	219.3
Organic growth	3%	5%
EBIT	28.5	26.4
EBIT margin	12.7%	12.0%
ROIC excluding goodwill	24.2%	24.6%

### PRODUCT RANGE

Chr. Hansen works continuously to improve its products, especially within the FRUITMAX® range of coloring foods. Coloring foods, processed from edible, natural sources such as fruit and vegetables, give food manufacturers the opportunity to color food with food, for example juices or concentrates.

### CONVERSION

Increased consumer demand for natural and clean-label products, combined with stricter regulation of the use of synthetic solutions in food & beverages, especially in the EU, has led to conversion from synthetic colors to natural solutions. In 2018/19, the conversion to natural colors continued in North America, while the European market is seeing demand for more advanced natural color solution, like the FRUITMAX® range.

### SOURCING

Chr. Hansen sources a wide range of natural raw materials through a global sourcing network. During the year, Chr. Hansen continued its efforts to improve standards and farm yields at raw material suppliers as well as expanding the number of strategic suppliers for key pigments. Particularly, avoiding suppliers based in sensitive forested regions is a key priority.

Purchase prices for certain raw materials can be very volatile due to the relatively small size of the markets. Annatto and carmine prices declined in 2018/19, which had a negative impact for the selling prices of natural colors.

### OPERATIONAL OPTIMIZATION INITIATIVES

As part of the Nature's no. 1 strategy, Chr. Hansen focused on profitable growth in Natural Colors. Initiatives to optimize pricing, production yields, the product portfolio and transportation costs have contributed positively to the improvement in the EBIT margin from 2014/15 to 2018/19. Over the last four years, this project has contributed significantly to the improvement in the EBIT margin in Natural Colors from 8.3% to 12.7%.

### REVENUE

Organic growth was 3%, and adjusting for a negative currency impact of 1%, corresponded to a revenue increase of 2% to EUR 224 million. Organic volume growth was primarily driven by strong growth in the FRUITMAX® product range in North America, partly offset by price and volume declines for carmine and annatto.

### EBIT

EBIT amounted to EUR 29 million, compared to EUR 26 million in 2017/18. The EBIT margin was 12.7%, up 0.7%-point on 2017/18. The increase was driven by lower raw material costs combined with operating efficiencies, partly offset by organizational changes and currencies

### ROIC

The return on invested capital excluding goodwill was 24.2%, compared to 24.6% in 2017/18. The invested capital increased by EUR 14 million, or 13%, to EUR 125 million, driven by investments in production capacity.

	Strategic Focus Areas	Progress 2018/19	Focus 2019/20
<b>Drive penetration of new innovation</b>	- Expand FRUITMAX® range of coloring foods	- Continued to strengthen the FRUITMAX® range of products with HANSEN SWEET POTATO™	- Portfolio expansion within coloring foods and clean label products
<b>Reinforce position in growth markets</b>	- Support US conversion and secure APAC growth	- Successful conversion projects with large-volume products in the US	- Continue to pursue conversion opportunities - Expand presence in food service segment
<b>Generate fuel for growth</b>	- Continue drive to restore profitability	- Strengthened operational processes to enable scalability of the business	- Continuation of efficiency programs and expansion in Peru

## PIONEERING SCIENCE TO FIGHT FOOD WASTE

Using nature's own good bacteria to ferment food is a traditional way of preserving food and keeping it fresh for longer.

To help the dairy sector maintain the freshness of fermented milk products, such as yogurt, for longer periods of time our scientists have looked to nature for solutions that meet consumer demands for fresh, natural products, free from artificial preservatives.

Our cultures are selected based on to their ability to delay spoilage from contaminants such as yeast and mold in perishable foods, in a natural way.

# RISK MANAGEMENT

## RISK MANAGEMENT

Enterprise Risk Management (ERM) is an integral part of doing business at Chr. Hansen. The objective of ERM is to support the achievement of our Nature's no. 1 Sustainably strategy, while managing risks appropriately.

Executing Nature's no. 1 Sustainably strategy requires a shared understanding of the key risks and the overall level of risk exposure throughout the organization.

The risk management process supports a healthy balance between risk and return in the Chr. Hansen business model. Therefore, for Chr. Hansen, ERM is not about risk aversion but about ensuring risk awareness and that adequate control and mitigations are in place.

### OUR THREE-TIER RISK SYSTEM ENSURES TRANSPARENCY

<b>D</b> Very high		<b>Tier 1</b>		
<b>C</b> High		<b>Tier 2</b>		
<b>B</b> Medium		<b>Tier 3</b>		
<b>A</b> Low				
	Remote	Possible	Likely	Almost certain

Each enterprise risk is assessed in terms of six impact drivers: Safety, Compliance, Financial, Business Interruption, Environment, and Brand & Reputation. The risk is assessed in respect of the likelihood of the impact materializing.

The Company operates a three-tier risk system ensuring clarity and transparency in which risks are reported to the Executive Board and the Board of Directors, allowing them to ensure that the right risk mitigation strategy is adopted. Tier 1 risks, the most significant risks, are reported to the Board of Directors. Tier 2 risks are managed by the Executive Board, while Tier 3 risks are managed locally by the respective leadership teams.

To support the risk review processes, risk workshops are held with each production plant and respective business units. This exercise has led to the further development of the Company's business continuity set-up which is a core mitigation component.

To achieve clear risk ownership and an embedded risk culture within the Company, Risk Champs have been appointed for each business unit. The purpose of Risk Champs is to facilitate risk management discussions locally and support the risk

review processes, enabling decentralized risk structure and management where appropriate.

The Executive Board and the Board of Directors maintain a strong focus on ERM to ensure that risk management is an integral part of the decision-making process.

The Audit Committee reviews the effectiveness of the Company's risk management throughout the year.

The key risks may be divided into four categories:

- Production, products and IP rights
- Customers, partners and markets
- Employees
- Structural risks (legal, finance and IT)

The following list of risk that could ultimately affect the Company is not exhaustive.

### PRODUCTION, PRODUCTS AND IP RIGHTS

Chr. Hansen has a global production footprint. Its largest production facility is located in Copenhagen. Given that almost half of the Company's products pass through this facility, a disruption will have a significant business interruption and financial impact. Two significant risks are fire and flooding. With the progressive changes to the climate, torrential rain is becoming increasingly frequent in Denmark. A project involving modelling and the use of physical reviews of the infrastructure is currently ongoing to help the Company better understand the risk of flooding.

To understand all potential risks at the Company's sites, risk engineering visits are regularly conducted at all sites, with a particular focus on fire risks. Based on the outcome, appropriate risk mitigation plans are executed in order to reduce the impact and likelihood of such risks.

The Company's robust business continuity management setup is an important component of these mitigation actions. Business Impact Analyses have been conducted at all production sites to ensure that local management teams are aware of the most critical risks and take responsibility for the mitigations. The Company's "One plant many locations" philosophy provides some flexibility and standardization, allowing a switchover in production operations and reducing the potential business interruption and delivery performance somewhat.

# RISK MANAGEMENT

As most Chr. Hansen products are sold to the food & beverage, nutrition, animal feed and agricultural industries, products causing an unintended health effect to end-consumers is a significant risk.

To ensure the highest level of product safety, Chr. Hansen maintains an extensive quality assurance and food safety program covering the entire value chain, from sourcing raw materials to delivery of the finished products to customers. Food safety is a top priority throughout the supply chain. The risk assessment performed as part of the food safety program includes an evaluation of the use of our products in customer end products. Chr. Hansen's food safety program is certified to internationally recognized food safety standards. All production sites are FSSC 22000 certified, and central product development functions are certified to ISO 22000.

Chr. Hansen's products have been perfected throughout our 145-year history. Hence, protecting the accumulated knowledge is a high priority for the Company, as the need to protect intellectual property (IP) is increasing. Copyright piracy, brand abuse, trademark violation, patent infringement and trade secret theft possess a significant risk to the Company, given the ever-increasing aggressiveness towards IP theft. Legal challenges to the validity of trademarks, claims and patents is also managed under the remit of IP risk mitigation. The Company has a proactive patent strategy and protects new knowledge created to support and protect its business. Chr. Hansen has more than 2000 patents granted or pending.

With the recent capacity expansion at the Copenhagen facility, and the expansions taking place outside Denmark, the impact of a capacity breakdown has been reduced significantly. However, considering the increasingly hostile external environment regarding the stealing or exploitation of IP rights, these risks have increased slightly.

## CUSTOMERS, PARTNERS AND MARKETS

The Company's global footprint makes it exposed to various geopolitical shifts and trends in markets and customer portfolio risks.

As for any global organization, the Company is exposed to rising geopolitical and geo-economic tensions. To understand current geopolitical risks, the Company reaches out to various organizations to obtain information on current and predicted threats. This input is used to create working groups internally ensuring the Company of a dedicated focus to understanding and reducing the exposure of such risks. Brexit, trade

sanctions, the Middle East economic environment and US-China tensions are examples of such working groups.

Chr. Hansen continues to hold very strong and leading positions across markets and regions. To deliver excellence, Chr. Hansen has established long-term and strategic relationship with many customers. If the Company fails to deliver on e.g. innovation or quality, the potential downside of losing strategic customers increases. Chr. Hansen monitors its customer dependency and satisfaction across business areas to understand potential vulnerabilities and to initiate mitigation activities.

In certain areas, the Company relies on partners to handle key matters for which the Company does not possess the required key competencies. All partners are diligently evaluated to ensure, that they meet Chr. Hansen's standards. Appropriate business continuity arrangements exist to overcome disruption.

Chr. Hansen is highly dependent on delivering relevant and value-creating solutions to customers and end consumers. Established players and newcomers with intentions of taking market share is a risk present in all organizations. Competition is increasing in the probiotics market. Therefore, the Company is focused on being the preferred partner. Chr. Hansen has some of the most extensively documented probiotic strains on the market and works continuously to improve the documentation of health claims related to those probiotic strains and to respond to changing documentation requirements from authorities.

In general, the risk related to competitors, customers and consumers is considered to be unchanged. There has been a slight increase in geopolitical threats.

## EMPLOYEES

The employees are the Company's most significant asset. Hence, employee retention and hazards to employee health and safety represent significant risks.

Chr. Hansen has a unique company culture, which has evolved over several decades. Considering the Company's strong growth in recent years, onboarding new employees into the organization and its culture requires new efforts and focus. A project launched in 2018/19 to review the Chr. Hansen culture has led to the roll-out of the Chr. Hansen culture model. The model is not about formulating a new culture but more about building on the values and cultural elements already inherent in the organization and ensuring that the culture model is



# RISK MANAGEMENT

In the effort to improve the onboarding of new employees, the Company has launched “Come Fly with Me”, a global onboarding program with tools and measures to ensure the successful onboarding of new employees and of staff moving to new positions internally.

Attracting and retaining the best employees and new talent remains crucial if Chr. Hansen is to continue to excel. To control this risk, Chr. Hansen applies several tools to retain key personnel, including appropriate incentive systems, training & development and succession planning. A program focusing specifically on core scientists has been implemented.

As the employees represent the Company’s most significant asset, it is essential to ensure their health, safety and wellbeing. The Company has implemented several initiatives to underline the importance of a safe working environment. Monitoring and following-up on safety incidents take place at both departmental and Executive Board level.

The health and safety initiatives have resulted in a significant reduction in number of Lost Time Injuries (LTI) in Chr. Hansen in 2018/19. Observing that the initiatives have the intended effect, the risk of safety incidents is reduced. The risk of insufficient safety onboarding of new employees is slightly reduced, due to the corporate culture articulation project. The risk of attracting successful candidates remain unchanged. In general, Chr. Hansen is considered to be an attractive company to work for.

## STRUCTURAL RISKS (LEGAL, FINANCE AND IT)

Legal, Finance and IT are all essential components of the Company’s structural backbone. Risks threatening to jeopardize the structural backbone must be controlled and mitigated effectively, as they may have a significant impact and can hinder the successful execution of the Natures no. 1 Sustainably strategy.

Having a global presence, the organization is exposed to various cultures and traditions. To ensure the Company’s commitment to integrity, trust and respect and for it to be fully compliant with all applicable laws and regulations, all employees globally have completed a training course designed to increase awareness and knowledge of applicable laws and Chr. Hansen policies. Chr. Hansen has a zero-tolerance approach to non-compliance.

From time to time, Chr. Hansen is party to legal disputes arising in the ordinary course of its business. The Legal department is focused on analyzing potential risks in a timely

manner and mitigating them in an appropriate way using both internal and, if needed, external capabilities. Despite the focus from Chr. Hansen on these matters, the outcome of legal disputes cannot be predicted with certainty.

As a global company, Chr. Hansen is exposed to financial and tax risks, such as currency risk, liquidity risk, interest rate risk, credit risk and funding risks. As a global business, the Company operates in multiple jurisdictions with different tax rules and regulations. It is the Company’s intention always to meet the tax requirements in each of the countries where its businesses operate. Despite having a strong awareness of tax in the organization, tax and transfer pricing disputes do arise, as cross-border transactions increasingly receive attention from local authorities.

Chr. Hansen has policies and procedures in place that address each type of financial risk and the Company is working consistently to manage and mitigate all financial risks.

Having a strong and protected technology platform is important to Chr. Hansen. It is important to protect the Company’s critical and sensitive data, assets and reputation against the increasing global threat of cyber-attacks and theft. Such attacks are becoming increasingly sophisticated. Combined with the Company’s digitalization strategy, this makes Cyber security a strategic focus area for Chr. Hansen.

The financial risks remain unchanged. However, risks related to cyber-attacks and theft are increasing.



## **REDUCING THE USE OF ANTIBIOTICS WITH NATURE'S OWN RESOURCES**

While antibiotics have been a critical health tool since the discovery of penicillin in the 1920's, antibiotic-resistance is increasingly a threat to human health.

We are at the forefront of innovation when it comes to probiotics for the livestock industry. Probiotics for animals is an effective, yet sustainable, natural way to reduce drug-resistance and the use of antibiotics for growth promotion. Our Animal Health division develops and produces animal feed additives that improve performance of production animals while providing healthy economic returns to producers.

# GOVERNANCE

## CORPORATE GOVERNANCE

### FRAMEWORK AND RECOMMENDATIONS

The Board of Directors of Chr. Hansen Holding A/S remains committed to good governance practices and to following the Danish Recommendations on Corporate Governance<sup>1</sup>. Further, the Board of Directors regularly reviews Chr. Hansen's corporate governance framework and policies in relation to the activities of Chr. Hansen.

Section 107b of the Danish Financial Statements Act requires Chr. Hansen Holding A/S to prepare a statement on corporate governance for the 2018/19 financial year. This statement is available at [www.chr-hansen.com/en/investors/governance/corporate-governance](http://www.chr-hansen.com/en/investors/governance/corporate-governance) and forms part of the Management's Review, but is not covered by the independent auditor's report. The statement provides an overview of our overall governance structure and our position on each of the Danish Recommendations on Corporate Governance. The Company currently complies with **all** the recommendations.

In addition, Chr. Hansen is committed to be accountable to all relevant stakeholders. The Company has developed a number of policies and positions that are aligned with international conventions, treaties and standards. For example, Chr. Hansen continues to support the ten principles of the United Nations Global Compact in the areas of human rights, labor, the environment and anticorruption. For more information, go to <https://www.chr-hansen.com/en/sustainability/targets-and-governance/our-contribution-to-the-un-global-goals>

### SHAREHOLDERS

The shareholders have ultimate authority over the Company and can exercise their rights by passing resolutions at general meetings, which is the supreme governing body of Chr. Hansen. At annual general meetings, shareholders approve the annual reports, any amendments to the Articles of Association, elect board members and the independent auditor. Resolutions can generally be passed by a simple majority. However, resolutions to amend the Articles of Association require two-thirds of the votes cast and capital represented, unless the Danish Companies Act imposes other adoption requirements.

The 2018 Annual General Meeting was held on November 29, 2018 and the minutes of the meeting are available at [www.chr-hansen.com](http://www.chr-hansen.com). Rules and deadlines applicable to the

Annual General Meeting are stipulated in the Company's Articles of Association available at [www.chr-hansen.com](http://www.chr-hansen.com).

### MANAGEMENT

Chr. Hansen has a two-tier management structure consisting of the Board of Directors and the Executive Board. The two bodies are separate and have no overlapping members. The Executive Board oversees the day-to-day management, while the Board of Directors supervises the work of the Executive Board and is responsible for the overall management and strategic direction.

### BOARD OF DIRECTORS

The Board of Directors has eleven members, seven of whom are elected by the shareholders and four by the employees in Denmark. All shareholder-elected members of the Board of Directors serve for terms of one year and may stand for re-election at each year's annual general meeting. Currently, all seven board members elected by the shareholders are independent as defined by the Danish Recommendations on Corporate Governance.

In June 2017, the employees in Denmark elected four board members, two men and two women, for a statutory four-year term. The current employee representatives joined the Board of Directors after the annual general meeting held in November 2017. Employee-elected board members are not considered independent as defined in the Danish Recommendations on Corporate Governance.

After serving eight years on the Board of Directors, Ole Andersen did not seek re-election at the Annual General Meeting held in November 2018, and Dominique Reiniche was elected new Chair of the Board. Dominique Reiniche has served on the Board of Directors since 2013 including as Vice Chair since 2015. The Board subsequently appointed Jesper Brandgaard as new Vice Chair of the Board of Directors. Niels Peder Nielsen was elected as a new board member.

The Board of Directors held eight board meetings in 2018/19. All board members attended all meetings, except Niels Peder Nielsen, Luis Cantarell, Per Poulsen and Kim Ib Sørensen, who were excused from one board meeting each during the term of their board membership in 2018/19.

More information on each of the board members is available on pp 33-39 and at [www.chr-hansen.com](http://www.chr-hansen.com).

<sup>1</sup> The Danish Recommendations on Corporate Governance of November 23, 2017 as adopted by Nasdaq Copenhagen in its Rules for Issuers of Shares with effect from January 3, 2018.



# GOVERNANCE

The Chair of the Board of Directors is responsible for conducting an annual review of the Board's performance. The review includes all members of the Board, the Executive Board and the other members of the Corporate Leadership Team. The review addresses the efficiency of the Board, the board composition and dynamics, the processes supporting its work, the value contributions of individual members, the Chair's performance and the collaboration with and performance of the Executive Board. Further, the process evaluates topics such as agendas and discussions, strategy development and implementation, risk awareness, monitoring and reporting, succession, and potential overboarding. In addition, each member of the Board of Directors is provided with feedback from all other board members, members of the Executive Board and the Corporate Leadership Team on their individual performance.

In 2018/19, the review was, as in previous years, facilitated by an external consultant and conducted by the individual board members and members of the Executive Board and Corporate Leadership Team anonymously completing a comprehensive specially-designed online questionnaire, and the responses were then summarized in a report. In addition, the Audit Committee, the Nomination Committee, the Remuneration Committee and the Scientific Committee all conducted informal self-evaluations.

Presented to the Board of Directors in September 2019, the results of the evaluations revealed an overall impression of an excellent performing board and a good collaboration between the Board and the Executive Board. Almost all the areas for improvement identified in the 2017/18 evaluation had been addressed. The 2018/19 evaluation resulted in a focus on reviewing and developing the strategy on an ongoing basis, securing the competitiveness of the remuneration of the Corporate Leadership Team, reviewing the competences desired for future board members and to strengthen the succession planning processes for the Board of Directors. The Chair of the Board held individual meetings with the other board members to review their performance.

## BOARD COMMITTEES

### Audit Committee

The Audit Committee assists the Board of Directors in meeting its responsibilities in the financial reporting process, the system of internal controls, the audit process and the Company's process for monitoring compliance with laws, regulations, internal policies and positions, including considering the independence of the independent auditor and reviewing the annual and quarterly financial reports.

The Audit Committee is appointed by the Board and consists of:

- Mark Wilson (chair; financial expert)
- Jesper Brandgaard (financial expert)
- Dominique Reiniche
- Kristian Villumsen

All members are independent as defined by the Danish Recommendations on Corporate Governance and have relevant experience within the industries in which the Company operates. In 2018/2019, the Audit Committee held four meetings and all members attended all meetings held during the term of their committee membership in 2018/19.

For information on the key matters handled by the Audit Committee in 2018/19 please refer to [www.chr-hansen.com](http://www.chr-hansen.com).

### NOMINATION COMMITTEE

The Nomination Committee assists the Board of Directors in meeting its responsibilities with respect to the nomination and appointment of members of the Board of Directors and the Executive Board, ensuring that the Board of Directors and the Executive Board are at all times of the appropriate size and composed of individuals with the necessary professional qualifications and experience, and to conduct regular evaluations of the performance of the Board of Directors and the Executive Board.

The Nomination Committee is appointed by the Board and consists of:

- Dominique Reiniche (chair)
- Jesper Brandgaard
- Kristian Villumsen

All members are independent as defined by the Danish Recommendations on Corporate Governance. In 2018/2019, the committee held three meetings and all members attended all meetings held during the term of their committee membership in 2018/19.

For information on the key matters handled by the Nomination Committee in 2018/19, please refer to [www.chr-hansen.com](http://www.chr-hansen.com).

### REMUNERATION COMMITTEE

The Remuneration Committee assists the Board of Directors in meeting its responsibilities in regard to establishing, implementing and executing its remuneration policy for the members of the Board of Directors, its committees and the Executive Board. Furthermore, the Remuneration Committee



# GOVERNANCE

assists the Board of Directors in preparing a general remuneration policy for the Company.

The Remuneration Committee is appointed by the Board and consists of:

- Dominique Reiniche (chair)
- Heidi Kleinbach-Sauter
- Mark Wilson

All members are independent as defined by the Danish Recommendations on Corporate Governance. In 2018/2019, the committee held four meetings and all members attended all meetings held during the term of their committee membership in 2018/19.

For information on the key matters handled by the Remuneration Committee in 2018/19 please refer to [www.chr-hansen.com](http://www.chr-hansen.com).

## SCIENTIFIC COMMITTEE

The Scientific Committee assists the Board of Directors in meeting its responsibilities with respect to the Company's R&D activities and to ensure that the Board of Directors has an informed, independent view of the focus and direction of the R&D function's work and capabilities.

The Scientific Committee is appointed by the Board and consists of:

- Luis Cantarell (chair)
- Niels Peder Nielsen
- Heidi Kleinbach-Sauter

All members are independent as defined by the Danish Recommendations on Corporate Governance. In 2018/2019, the committee held five meetings and all members attended all meetings held during the term of their committee membership in 2018/19.

For information on the key matters handled by the Scientific Committee in 2018/19 please refer to [www.chr-hansen.com](http://www.chr-hansen.com).

## EXECUTIVE BOARD

The Executive Board is responsible for the day-to-day management and compliance with the guidelines and recommendations issued by the Board of Directors. The Executive Board is to present, submit and recommend proposals for the Company's overall strategy and objectives to the Board of Directors.

As per August 31, 2019, the Executive Board had three members and was chaired by the Chief Executive Officer ("CEO"). The Executive Board forms part of the Corporate Leadership Team, which currently has six additional members and meets at least once a month apart from in the month of July. The Board of Directors appoints members of the Executive Board, reviews their performance and determines their remuneration based on a recommendation from the Remuneration Committee.

In May 2019, the Executive Vice President for Food Cultures & Enzymes, Christoffer Lorenzen, resigned and stepped down from the Executive Board and was replaced by Executive Vice President Jacob Vishof Paulsen, who is part of the Corporate Leadership Team.

More information on the members of the Executive Board and Corporate Leadership Team is available at pp 33-39 and on [www.chr-hansen.com](http://www.chr-hansen.com).

## DIVERSITY

As a company driven by science and innovation, our future relies on our ability to generate ideas, create solutions, and approach problems in new ways. A workforce comprised of employees with diverse backgrounds, experiences, and points of view is fundamental to achieving our vision of improving food and health worldwide.

We strive to develop a diverse workforce and an engaged, innovative and open-minded culture, where each employee's unique differences are not only acknowledged and welcomed, but where they add value and make us a stronger institution. Whether it is an employee's experience, socio-economic background, education, age, nationality, or gender, we strive to welcome and encourage these differences and have put in place measures to ensure we succeed.

While we are proud of the diversity of our workforce today, we acknowledge that we still have more work to do, primarily regarding improved gender diversity, but also diversity of experience, skills and thought. To help raise the bar on diversity, Chr. Hansen is working on a range of parameters to address these challenges, unconscious bias training is one of the initiatives.

The positive trend towards more non-Danes in Directors and higher positions seen in 2017/18, saw a set-back in 2018/19 with a decrease from 46% to 43%. The number of women employed at Chr. Hansen went up to 43% (1%-point increase over past 12 months). Still women in management positions

# GOVERNANCE

remained at 39%, where 2018/2019 saw a 3%-points increase in number of women in Directors and higher positions. The number of diverse corporate management teams<sup>2</sup> increased from 78% to 83%.

The gender distribution in the Chr. Hansen Holding A/S Board of Directors remained stable with two out of seven members elected by the shareholders being women. Similar to last year, the Board of Directors achieved equal gender representation under Danish law<sup>3</sup>. The Board of Directors maintains the target of having at least three women elected by the shareholders by 2022, as well as a strong diversity of skills, experience and nationalities.

For a full report on corporate social responsibility and diversity as required by sections 99a and 99b of the Danish Financial Statements Act, please refer to Chr. Hansen's Communication on Progress to the UN Global Compact, available at <https://www.chr-hansen.com/en/sustainability-report-1819>.

## REMUNERATION

The remuneration of the Board of Directors and Executive Board at Chr. Hansen must contribute to the creation of value to the Company and support the Company's short- and long-term objectives. The design of the remuneration structure also seeks to align the interests of the Executive Board with those of the shareholders and, finally, to ensure that the Company is able to attract and retain highly qualified members for both the Executive Board and the Board of Directors.

For more information on remuneration, please refer to Chr. Hansen's Remuneration Policy as approved by the Annual General Meeting on November 28, 2017 and Overall Guidelines for Incentive-Based Remuneration as approved by the Annual General Meeting on November 26, 2015. The Remuneration Policy and guidelines are available at [www.chr-hansen.com/en/investors/governance/remuneration](http://www.chr-hansen.com/en/investors/governance/remuneration).

For specific information on the remuneration of the Board of Directors and the Executive Board in 2018/19, please refer to the Remuneration Report 2018/19 available at [www.chr-hansen.com/en/investors/governance/remuneration](http://www.chr-hansen.com/en/investors/governance/remuneration) and in notes 2.3 and 5.1 to the Consolidated Financial Statements.

<sup>2</sup> Diverse teams are corporate management teams reporting to vice president level and above that include at least one woman and one non-local. The percentage of diverse teams is calculated at the end of the financial year

<sup>3</sup> The Danish Business Authority's "Guidelines on target figures, policies and reporting on the gender composition of management".

## BUSINESS ETHICS, WHISTLEBLOWER HOTLINE AND GDPR

Chr. Hansen is committed to conducting business with the highest level of integrity to ensure fair, safe and ethical business practices. This year, Chr. Hansen rolled out a new advanced Anti-corruption and Antitrust e-learning program. This marked an important step towards ensuring compliance across the organization. In 2018/19, 100% of the invited employees completed the training. Chr. Hansen encourages employees and external stakeholders, such as suppliers and customers, to raise any concerns they may have regarding business integrity. In 2018/19, eight cases were reported, six of which were raised through the whistleblower hotline. All cases were investigated of which five cases were closed as unjustified. One case was partly justified, and one was justified, and appropriate actions were taken in both cases. One case is still under investigation. Chr. Hansen will continue to communicate on the whistleblower system to ensure that all employees and relevant stakeholders are aware of and familiar with it.

Compliance with the EU General Data Protection Regulation (GDPR) remained a strong priority in 2018/19. The European compliance project has been completed and the focus is now on ensuring the same high level of privacy compliance in other regions. The focus in 2019/20 will be on the US region and on the preparation of binding corporate rules. Chr. Hansen will continue to prioritize protection of personal data as an integral part of implementing new processes and systems.

For information about diversity in other Denmark-based Chr. Hansen companies, please refer to the Chr. Hansen Communication on Progress Report available at <https://www.chr-hansen.com/en/sustainability/reporting-and-rankings/reporting-and-disclosure>.

# GOVERNANCE

## BOARD OF DIRECTORS



**DOMINIQUE REINICHE**  
CHAIR

Professional board member.

- Born July 1955. French national. Independent.
- Member of the Board since November 2013; Vice Chair in the period 2015-2018 and elected as Chair in 2018; term expires 2019.
- Chair of the Nomination and Remuneration Committees. Member of the Audit Committee.

### BOARD POSITIONS AND OTHER OFFICES

Chair: Eurostar EIL, UK, chair of the nomination & remuneration committee.

Member: PayPal Luxembourg, LX, chair of the remuneration committee and member of the audit committee. Mondi plc, UK, chair of the sustainability committee and member of the nomination and remuneration committees. Severn Trent plc, UK, member of the sustainability and nomination committees.

### BOARD COMPETENCIES

Professional experience from positions in the food, beverage and hygiene/beauty care industries at, among others, Procter & Gamble and Jacobs-Suchard (now Mondelēz International). 22 years in senior leadership positions at French and European levels within Coca-Cola Enterprises and The Coca-Cola Company.



**JESPER BRANDGAARD**  
VICE CHAIR

Professional board member.

- Born October 1963. Danish national. Independent.
- Member of the Board since November 2017; re-elected and appointed Vice Chair in 2018; term expires 2019.
- Member of the Audit and Nomination Committees.

### BOARD POSITIONS AND OTHER OFFICES

Vice chair: William Demant Invest A/S, DK, member of the nomination & remuneration committee.

Member: William Demant Fonden and the Advisory Board of the private equity company, VækstPartner Kapital ApS, both DK. President of the Novo Nordisk Hæmophilia Foundation Council, CH.

### BOARD COMPETENCIES

Experience from group management in a multinational pharmaceutical company, including responsibility for strategy development and implementation, legal affairs and patents, information technology and investor relations. Board and executive experience with financial reporting and capital markets.

# GOVERNANCE

## BOARD OF DIRECTORS



**LUIS CANTARELL**  
MEMBER

Professional board member.

- Born August 1952. Spanish and Swiss national. Independent.
- Member of the Board since November 2016; re-elected 2018; term expires 2019.
- Chair of the Scientific Committee.

### BOARD POSITIONS AND OTHER OFFICES

Chair: Froneri Ltd., UK.

Member: Kintai Therapeutics, Inc., US, Grupo URIACH SL, Werfen SA and Foundation Fero, all E.

### BOARD COMPETENCIES

Professional global experience within the food and beverage industry, as well as the consumer health industry. Extensive board experience and over 10 years of executive leadership experience with the Nestlé Group.



**LISBETH GRUBOV**  
EMPLOYEE REPRESENTATIVE

Process Specialist, Global Engineering, Chr. Hansen A/S.

- Born June 1955. Danish national. Not independent.
- Member of the Board since November 2017; term expires 2021.



**CHARLOTTE HEMMINGSEN**  
EMPLOYEE REPRESENTATIVE

Senior Specialist, CMC Documentation, QA, Chr. Hansen A/S.

- Born September 1964. Danish national. Not independent.
- Member of the Board since November 2017; term expires 2021.



# GOVERNANCE

## BOARD OF DIRECTORS



**HEIDI KLEINBACH-SAUTER**  
MEMBER

Professional board member.

- Born June 1956. German and US national. Independent.
- Member of the Board since November 2017; re-elected in 2018; term expires 2019.
- Member of the Remuneration and Scientific Committees.

**BOARD POSITIONS AND OTHER OFFICES**  
Member: Royal Unibrew A/S, DK.

### BOARD COMPETENCIES

More than 25 years of innovation and R&D experience across a broad range of categories within the CPG (consumer packaged goods) food and beverage industry in Europe, the US, Latin America, Asia and Australia. Founding Chair of several councils, including from listed companies. Experience as a member of the Advisory Committee of Northern Seed Montana LCC, US.



**NIELS PEDER NIELSEN**  
MEMBER

Deputy-CEO of Novo Nordisk Fonden, DK.

- Born November 1965. Danish national. Independent.
- Member of the Board since November 2018; term expires 2019.
- Member of the Scientific Committee.

**BOARD POSITIONS AND OTHER OFFICES**  
Member: BioInnovation Institute and Danish Venture Capital Association, both DK.

### BOARD COMPETENCIES

International experience in managing and developing large international companies from his position as partner with Bain & Company and McKinsey & Co., both global management consultant firms operating in various industries, including healthcare and biological solutions. Mr. Nielsen also has experience in digital strategy and business development.



**PER POULSEN**  
EMPLOYEE REPRESENTATIVE

Senior Technology Specialist, Chr. Hansen A/S.

- Born April 1966. Danish national. Not independent.
- Member of the Board since November 2013; re-elected 2017; term expires 2021.

# GOVERNANCE

## BOARD OF DIRECTORS



**KIM IB SØRENSEN**  
EMPLOYEE REPRESENTATIVE

Senior Principal Scientist with responsibilities within bacterial strain development and acquisition, Chr. Hansen A/S.

- Born July 1963. Danish national. Not independent.
- Member of the Board since November 2017; term expires 2021.



**KRISTIAN VILLUMSEN**  
MEMBER

CEO of Coloplast A/S, DK.

- Born November 1970. Danish national. Independent.
- Member of the Board since November 2014; re-elected 2018; term expires 2019.
- Member of the Audit and Nomination Committees.

### BOARD COMPETENCIES

Extensive knowledge of the medico and life science industry as well as solid international and managerial experience in both European and emerging markets.



**MARK WILSON**  
MEMBER

Professional board member.

- Born July 1952. British national. Independent.
- Member of the Board since October 2010; re-elected 2018; term expires 2019.
- Chair of the Audit Committee and member of the Remuneration Committee.

### BOARD COMPETENCIES

International CEO/MD with over 40 years in fast moving consumer goods companies and service/B2B industries in Asian, South American, UK, Irish and international markets. Financial and accounting experience.

# GOVERNANCE

## EXECUTIVE BOARD



### **MAURICIO GRABER**

PRESIDENT & CHIEF EXECUTIVE OFFICER

- Born March 1963. Mexican national.
- Joined Chr. Hansen and the Executive Board in June 2018.

#### BOARD POSITIONS AND OTHER OFFICES

Member: BacThera AG, CH.

#### EDUCATION

Master of Business Administration from Kellogg Graduate School of Management, Northwestern University, US. Bachelor of Science in Electronic Engineering, Universidad Autonoma Metropoli, MX.



### **SØREN WESTH LØNNING**

EXECUTIVE VICE PRESIDENT & CHIEF FINANCIAL OFFICER

- Born June 1977. Danish national.
- Joined Chr. Hansen in October 2007 and the Executive Board in August 2015.

#### BOARD POSITIONS AND OTHER OFFICES

CEO and sole shareholder of MNGT4 SWL ApS, DK.  
Member: BacThera AG, CH.

#### EDUCATION

M.Sc. in Finance and Accounting (Cand. Merc. FIR) from Copenhagen Business School, DK.



### **THOMAS SCHÄFER**

EXECUTIVE VICE PRESIDENT & CHIEF SCIENTIFIC OFFICER

- Born January 1963. German national.
- Joined Chr. Hansen and the Executive Board in November 2017.

#### BOARD POSITION AND OTHER OFFICES

Member: BioInnovation Institute and the Advisory Board for DTU Bioengineering, both DK, BacThera AG, CH.

#### EDUCATION

PhD in Microbiology from Freie Universität Berlin, D.

# GOVERNANCE

## CORPORATE LEADERSHIP TEAM

In addition to the Executive Board, the Company has established a Corporate Leadership Team that assists in the day-to-day management of the Company. In addition to the three members of the Executive Board, the Corporate Leadership Team comprises a further six members.



### **CHRISTIAN BARKER**

EXECUTIVE VICE PRESIDENT, HEALTH & NUTRITION

- Born May 1970. Danish and US national.
- Joined Chr. Hansen in May 2012 and the Corporate Leadership Team in August 2013.

### BOARD POSITIONS AND OTHER OFFICES

Member: BacThera AG, CH.

### EDUCATION

M.Sc. in Economics and Business Administration, Copenhagen Business School, DK.



### **KLAUS BJERRUM**

EXECUTIVE VICE PRESIDENT, NATURAL COLORS

- Born June 1968. Danish national.
- Joined Chr. Hansen and the Corporate Leadership Team in August 2018.

### EDUCATION

Food Science and Technology from Copenhagen University, graduate in International Business Administration from Copenhagen Business School and Master Brewer (Carlsberg) Scandinavian School of Brewing, all DK. Kellogg School of Management in Business Marketing Strategy US..



# GOVERNANCE

## CORPORATE LEADERSHIP TEAM



### **WINNIE BÜGEL**

CORPORATE VICE PRESIDENT, COMPLIANCE,  
CORPORATE COMMUNICATIONS & SUSTAINABILITY

- Born September 1965. Danish national.
- Joined Chr. Hansen in February 2000 and the Corporate Leadership Team in January 2006.

### EDUCATION

M.A. Law from the University of Copenhagen – B.Com,  
International Trade, Copenhagen Business School, DK.



### **ALICE LARSEN**

CORPORATE VICE PRESIDENT, HUMAN RESOURCES

- Born January 1968. Danish national.
- Joined Chr. Hansen and the Corporate Leadership Team in June 2016.

### EDUCATION

Master of Science – Copenhagen Business School, DK.



### **JACOB VISHOF PAULSEN**

EXECUTIVE VICE PRESIDENT, FOOD CULTURES & ENZYMES

- Born August 1976. Danish national.
- Joined Chr. Hansen in 2006 and the Corporate Leadership Team in August 2013.

### EDUCATION

MSc. In Applied Economics and Finance from Copenhagen  
Business School, DK.



### **TORSTEN STEENHOLT**

EXECUTIVE VICE PRESIDENT, GLOBAL OPERATIONS

- Born April 1969. Danish national.
- Joined Chr. Hansen in October 2012 and the Corporate Leadership Team in March 2017.

### BOARD POSITIONS AND OTHER OFFICES

Member: CO-RO A/S, DK, and Altia Plc, FIN.

### EDUCATION

MSc in Pharmacy from the Royal Danish School of Pharmacy  
(now Copenhagen University);DK, MSc in Chemical Research  
from University College London, UK, and Diploma Master Brew-  
er from the Scandinavian School of Brewing, DK.

# GOVERNANCE

## SHAREHOLDER INFORMATION

Chr. Hansen Holding A/S is listed on Nasdaq Copenhagen and aims to provide long-term returns to shareholders through share price increases and dividend payouts.

The sole activity of Chr. Hansen Holding A/S is the general management and central administration of shareholdings in companies in the Chr. Hansen Group.

### TOTAL SHAREHOLDER RETURN 2018/19

The Chr. Hansen share closed the financial year on August 30, 2019 at DKK 570. This represents a decrease of DKK 82 per share or -13% compared to the previous year's closing price.

During the year, an ordinary dividend of EUR 0.87 (DKK 6.47) per share, or a total of EUR 114 million, was paid for the 2017/18 financial year. In June 2019, the Board of Directors decided to pay an extraordinary dividend of EUR 0.84 (DKK 6.24) per share, totaling EUR 110 million. The total shareholder return in 2018/19 was equal to -11%.

Chr. Hansen is included in a number of share indexes, including the Nasdaq OMX C25 index, and benchmarks itself against a predefined group of companies. The Nasdaq OMX C25 index returned -3%, while the predefined peer group returned 9% including dividends.

### CAPITAL STRUCTURE

The Board of Directors regularly assesses whether the capital structure of Chr. Hansen is in the shareholders' best interests. The Board of Directors is committed to maintaining financial leverage consistent with a solid investment-grade credit profile, while returning excess cash to shareholders.

The Company's policy for ordinary dividends is a payout ratio of 40-60% of net profit. In addition, the Annual General

Meeting has authorized the Board of Directors to distribute extraordinary dividends.

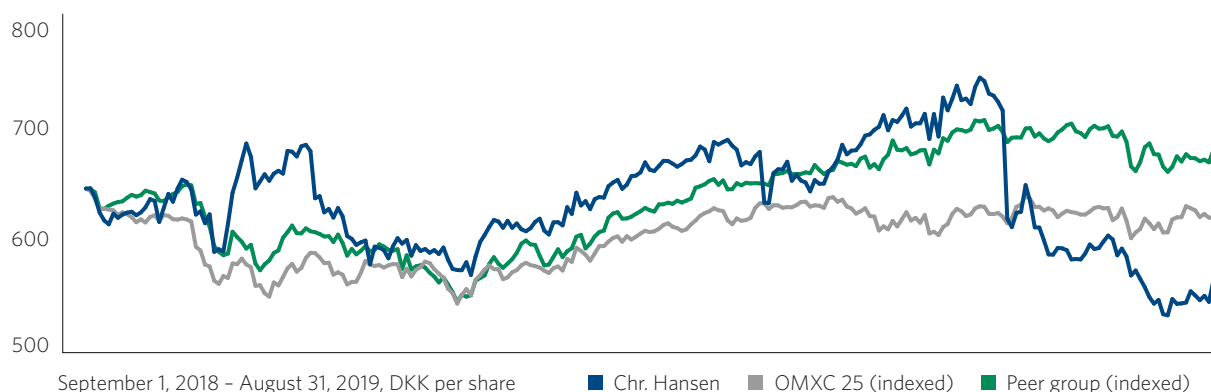
The dividends proposed depend on the Board's assessment of factors such as business development, growth strategy and financing needs, and there can be no assurance that an ordinary or extraordinary dividend will be proposed or declared in any given year.

The Board of Directors proposes that the Annual General Meeting approves an ordinary dividend for 2018/19 of EUR 0.95 (DKK 7.07) per share, or a total of EUR 125 million. The proposed ordinary dividend is equivalent to 50% of the profit for the year. The Board of Directors believes that the proposed dividend best serves the interests of the shareholders. The capital and share structure will be assessed regularly to determine whether it remains in the shareholders' best interests.

### AUTHORIZATION OF THE BOARD OF DIRECTORS

Until and including November 28, 2022, the Board of Directors has been authorized by the Annual General Meeting to:

- Increase the share capital in one or more stages, with pre-emptive rights for existing shareholders, by up to a total nominal value of DKK 131,852,496. The capital increase shall be effected by payment in cash.
- Increase the share capital in one or more stages, without pre-emptive rights for existing shareholders, by up to a total nominal value of DKK 131,852,496, provided that the increase takes place at market price. The capital increase may be effected by payment in cash or by contribution of assets other than cash. The authorizations to increase the share capital are subject to a joint cap of nominally DKK 131,852,496.



# GOVERNANCE

- To acquire up to 13,185,249 treasury shares, provided that the Company's holding of treasury shares at no time exceeds 10% of the Company's share capital. The consideration payable for the shares may not deviate by more than 10% from the share price listed on Nasdaq Copenhagen at the time of acquisition.

## SHAREHOLDERS

At the end of August 2019, Chr. Hansen had around 28,000 institutional and private shareholders, four of which each held 5% or more of the shares:

- Novo Holdings A/S (Denmark)
- Capital Group Companies Inc. (US)
- APG Asset Management N.V. (Netherlands)
- WCM Investment Management (US)

An analysis of the shareholder structure carried out in June 2019 showed that the United States and United Kingdom represent the largest regional group of institutional investors at 42% of share capital followed by the Netherlands and France. Around 4% of shares were held by retail investors.

To meet certain obligations to deliver shares for management incentive programs Chr. Hansen held less than 1% in treasury stock.

## AMERICAN DEPOSITARY RECEIPT PROGRAM

Chr. Hansen has a sponsored Level 1 American Depositary Receipt (ADR) program with J.P. Morgan Chase Bank N.A. acting as depositary bank. An ADR is a USD-denominated negotiable certificate that represents ownership of shares in a non-US company, facilitating the purchase, holding and sale of non-US securities by US investors. At the end of August 2019, 2.8% of the share capital was held through the ADR program.

## ANALYST COVERAGE

The Company is currently covered by 17 analysts, including major international investment banks. A list of analysts covering Chr. Hansen can be found at [www.chr-hansen.com/investors/share-info/analysts](http://www.chr-hansen.com/investors/share-info/analysts).

## INVESTOR RELATIONS ACTIVITIES

Chr. Hansen seeks to ensure that relevant, accurate and timely information is made available to the capital markets to serve as a basis for regular trading and fair pricing of the Company's shares. In providing this information, Chr. Hansen aims to ensure that it is perceived as a visible, accessible, reliable and professional company by the investor community, and that it is regarded as one of the best among its peers in this area. This is

to be achieved while complying with the rules and legislation for companies listed on Nasdaq Copenhagen and Chr. Hansen's communication policy.

In 2018/19, Chr. Hansen maintained a close dialogue with investors and analysts and participated in a number of conferences hosted by various brokers.

## INVESTOR RELATIONS WEBSITE

The Company's investor relations site contains both historical and current information about the Company, including company announcements, investor presentations, teleconferences including transcripts, a financial calendar and annual reports. See [www.chr-hansen.com/investors](http://www.chr-hansen.com/investors).

## ANNUAL GENERAL MEETING

The Annual General Meeting will be held on Wednesday, November 27, 2019 in Chr. Hansen's headquarters at Bøge Allé 10-12, 2970 Hørsholm, Denmark.

## SHARE DATA

Share capital	DKK 1,318,524,960
Number of shares	131,852,496 of DKK 10
Outstanding shares	131,686,267 of DKK 10
Classes of shares	1
Voting and ownership restrictions	None
Stock exchange	Nasdaq Copenhagen A/S
ISIN code	DK0060227585
Ticker symbol	CHR
Share price at year-end	DKK 570
Proposed dividend per share	DKK 7.07

OTC ADR Level 1 program (J.P. Morgan Chase Bank N.A.)	
DR Symbol	CHYHY
CUSIP	12545M207
DR ISIN	US12545M2070
Ratio	DR:ORD 4:1

# GOVERNANCE

## FINANCIAL CALENDAR 2019/2020

November 27, 2019	Annual General Meeting 2019
January 15, 2020	Interim Report Q1 2019/20
April 16, 2020	Interim Report Q2 2019/20
July 2, 2020	Interim Report Q3 2019/20
October 8, 2020	Annual Report 2018/19
November 25, 2020	Annual General Meeting 2020

## MAIN COMPANY ANNOUNCEMENTS 2018/19

April 2, 2019	Chr. Hansen and Lonza establish a 50/50 joint venture to pioneer the emerging market for live biotherapeutic products
June 29, 2019	Major shareholder announcement from WCM Investment Management
August 29, 2019	Chr. Hansen and Lonza's newly branded joint venture, BacThera, receives anti-trust approvals to start contract manufacturing of live biotherapeutic products

## CONTACT

The Investor Relations department handles daily contact with analysts and investors.

Head of IR	IR Officer
Martin Riise	Annika Stern
Tel.: +45 5339 2250	Tel.: +45 2399 2382
dkmari@chr-hansen.com	dkaste@chr-hansen.com



# GOVERNANCE

## MANAGEMENT'S STATEMENT ON THE ANNUAL REPORT

The Executive Board and the Board of Directors have today considered and adopted the Annual Report of Chr. Hansen Holding A/S for the financial year September 1, 2018 – August 31, 2019.

The Annual Report has been prepared in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act.

In our opinion, the Consolidated Financial Statements and the Parent Company Financial Statements give a true and fair view of the financial position at August 31, 2019 of the Group and the Parent Company and of the results of the Group's and Parent Company's operations and cash flows for 2018/19.

In our opinion, Management's Review includes a true and fair account of the development in the operations and financial circumstances of the Group and the Parent Company, of the results for the year, and of the financial position of the Group and the Parent Company, as well as a description of the most significant risks and elements of uncertainty facing the Group and the Parent Company.

We recommend that the Annual Report be adopted at the Annual General Meeting.

**Hørsholm, October 10, 2019**

### Executive Board

Mauricio Graber  
President and CEO

Søren Westh Lonning  
CFO

Thomas Schäfer  
CSO

### Board of Directors

Dominique Reiniche  
Chair

Jesper Brandgaard  
Vice Chair

Luis Cantarell

Lisbeth Grubov

Charlotte Hemmingsen

Heidi Kleinbach-Sauter

Niels Peder Nielsen

Per Poulsen

Kim Ib Sørensen

Kristian Villumsen

Mark Wilson

# GOVERNANCE

# **INDEPENDENT AUDITOR'S REPORT**

TO THE SHAREHOLDERS OF CHR. HANSEN HOLDING A/S

## **OUR OPINION**

In our opinion, the Consolidated Financial Statements and the Parent Company Financial Statements give a true and fair view of the Group's and the Parent Company's financial position at 31 August 2019 and of the results of the Group's and the Parent Company's operations and cash flows for the financial year 1 September 2018 to 31 August 2019 in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act.

Our opinion is consistent with our Auditor's Long-form Report to the Audit Committee and the Board of Directors.

## **WHAT WE HAVE AUDITED**

The Consolidated Financial Statements and Parent Company Financial Statements of Chr. Hansen Holding A/S for the financial year 1 September 2018 to 31 August 2019 comprise income statement and statement of comprehensive income, balance sheet, statement of changes in equity, cash flow statement and notes, including summary of significant accounting policies for the Group as well as for the Parent Company. Collectively referred to as the "Financial Statements".

## **BASIS FOR OPINION**

We conducted our audit in accordance with International Standards on Auditing (ISAs) and the additional requirements applicable in Denmark. Our responsibilities under those standards and requirements are further described in the *Auditor's responsibilities for the audit of the Financial Statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## **INDEPENDENCE**

We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and the additional requirements applicable in Denmark. We have also fulfilled our other ethical responsibilities in accordance with the IESBA Code.

To the best of our knowledge and belief, prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No 537/2014 were not provided.

## **APPOINTMENT**

We were first appointed auditors of Chr. Hansen Holding A/S for the first time after the initial public offering on 30 November 2010. We have been reappointed annually by shareholder resolution for a total period of uninterrupted engagement of 9 years including the financial year for the period 1 September 2018 to 31 August 2019.

## **KEY AUDIT MATTERS**

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the Financial Statements for the period 1 September 2018 to 31 August 2019. These matters were addressed in the context of our audit of the Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

# GOVERNANCE

## KEY AUDIT MATTER

## HOW OUR AUDIT ADDRESSED THE KEY AUDIT MATTER

### Valuation of goodwill

The Group has goodwill arising from acquisitions.

The value of goodwill is supported by Management's assessment of the future value based on strategic plans, and value-in-use calculations which are based on future cash flow.

We focused on this area because the valuation assessment of Goodwill is dependent on complex and subjective judgements by Management as well as estimation over the future outcome, which is uncertain by nature.

Refer to note 3.1 in the Consolidated Financial Statements.

We assessed the Group's impairment methodology including the identification of CGUs.

We challenged Management's estimates and key assumptions used in the valuation of Goodwill, comprising revenue development, profit margins, proposed capital expenditure and growth expectations, etc.

Furthermore, we evaluated Management's sensitivity analysis and challenged key assumptions within the valuation calculations.

### Capitalisation and valuation of development projects

The Group capitalizes development costs in accordance with IFRS, which prescribe capitalization when certain criteria are met. Recognition and measurement of development projects are subject to judgement and estimates based on Management's assumptions of the future, which is uncertain by nature.

Completed development projects are reviewed at the time of completion and on an annual basis to determine whether there is any indication of impairment. If so, an impairment test is carried out for the individual development projects. For development projects in progress, however, an annual impairment test is always performed.

The impairment test is based on strategic plans, and either value-in-use calculation based on future cash flow forecasts or fair value less costs of disposal (i.e. "recoverable amount")

We focused on this area because the valuation assessment of development projects is dependent on complex and subjective judgements by Management.

Refer to note 3.2 in the Consolidated Financial Statements.

We considered whether all criteria are met as basis for the capitalisation of development projects in progress. We evaluated procedures and tested relevant internal controls to ensure correct accounting for development projects and performed substantive audit procedures to verify capitalised amounts.

We evaluated and challenged Management's assessment of indication of impairment of completed development projects. Our work was based on our understanding of the commercial prospects of the completed development projects.

For development projects in progress we evaluated the impairment test performed by Management.

We selected a sample of projects not yet launched at the balance sheet date and challenged whether a future intent to develop the project remains and whether they will generate probable future economic benefit exceeding the expected carrying value.

We challenged the appropriateness of the key assumptions applied and the probability of key future events occurring. Our work was based on our understanding of the commercial prospects of the developments projects in progress.

We considered the appropriateness of the related disclosure provided in the Consolidated Financial Statements.

# GOVERNANCE

## **STATEMENT ON MANAGEMENT'S REVIEW**

Management is responsible for Management's Review, pages 4-42.

Our opinion on the Financial Statements does not cover Management's Review, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Financial Statements, our responsibility is to read Management's Review and, in doing so, consider whether Management's Review is materially inconsistent with the Financial Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

Moreover, we considered whether Management's Review includes the disclosures required by the Danish Financial Statements Act.

Based on the work we have performed, in our view, Management's Review is in accordance with the Consolidated Financial Statements and the Parent Company Financial Statements and has been prepared in accordance with the requirements of the Danish Financial Statements Act. We did not identify any material misstatement in Management's Review.

## **MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS**

Management is responsible for the preparation of consolidated financial statements and parent company financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act, and for such internal control as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the Financial Statements, Management is responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless Management either intends to liquidate the Group or the Parent Company or to cease operations, or has no realistic alternative but to do so.

## **AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS**

Our objectives are to obtain reasonable assurance about whether the Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and the additional requirements applicable in Denmark will always detect a material misstatement when it exists. 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 Financial Statements.

As part of an audit in accordance with ISAs and the additional requirements applicable in Denmark, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Financial Statements, 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 opinion. 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 in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Parent Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.
- Conclude on the appropriateness of Management's 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



# GOVERNANCE

- Conclude on the appropriateness of Management's 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 and the Parent Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Financial Statements or, if such disclosures are inadequate, to modify our opinion. 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 or the Parent Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Financial Statements, including the disclosures, and whether the Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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 relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, 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 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 or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Hellerup, 10 October 2019  
PricewaterhouseCoopers  
Statsautoriseret Revisionspartnerselskab  
CVR No 33 77 12 31

Kim Fücksel  
State Authorized Public Accountant  
mne9291

Allan Knudsen  
State Authorized Public Accountant  
mne29465

## **CLEAN LABEL AND A CLEAR CONSCIENCE**

At Chr. Hansen we help producers worldwide convert from synthetic colors to natural solutions in sync with consumer demand.

But it all starts with having the right raw materials. Our sourcing experts come from, live, and work in the main harvest areas. We're in the fields partnering with growers to improve yield and growing methods and are part of the communities we operate in. This means we're there to support ethical and safety practices and decent living standards.

We also have a breeding team that collaborates with the international plant-science community keeping us aware of the latest research. This ensures our ability to bring valuable innovations to market – most recently the Hansen sweet potato; a whole new variety of vegetable to create a plant-based, brilliant red as a natural alternative to carmine as well as synthetic colors.

# FINANCIAL STATEMENTS – GROUP

# CONTENTS

## **INCOME STATEMENT**

## **STATEMENT OF COMPREHENSIVE INCOME**

## **BALANCE SHEET**

## **STATEMENT OF CHANGES IN EQUITY**

## **CASH FLOW STATEMENT**

## **BASIS OF PREPARATION**

- 1.1 General accounting policies
- 1.2 Summary of key accounting estimates

## **RESULTS FOR THE YEAR**

- 2.1 Segment information
- 2.2 Depreciation, amortization and impairment losses
- 2.3 Staff expenses
- 2.4 Fees to auditors
- 2.5 Special items
- 2.6 Financial income
- 2.7 Financial expenses
- 2.8 Income taxes and deferred tax
- 2.9 Earnings per share

## **OPERATING ASSETS AND LIABILITIES**

- 3.1 Goodwill
- 3.2 Other intangible assets
- 3.3 Property, plant and equipment
- 3.4 Inventories
- 3.5 Trade receivables
- 3.6 Employee benefit obligations
- 3.7 Provisions
- 3.8 Commitments and contingent liabilities

## **CAPITAL STRUCTURE AND FINANCING**

- 4.1 Share capital
- 4.2 Financial assets and liabilities
- 4.3 Derivative financial instruments

## **OTHER DISCLOSURES**

- 5.1 Share-based payment
- 5.2 Non-cash adjustments
- 5.3 Acquisition of entities
- 5.4 Related parties
- 5.5 Events after the balance sheet date
- 5.6 List of Group companies at August 31, 2019

# FINANCIAL STATEMENTS – GROUP

## INCOME STATEMENT

### SEPTEMBER 1 – AUGUST 31

EUR million	Note	2018/19	2017/18
Revenue	2.1	1,161.1	1,097.4
Cost of sales	2.2 - 2.3	(511.1)	(496.8)
<b>Gross profit</b>		<b>650.0</b>	<b>600.6</b>
Research and development expenses	2.2 - 2.3	(79.4)	(73.4)
Sales and marketing expenses	2.2 - 2.3	(158.5)	(139.3)
Administrative expenses	2.2 - 2.3 - 2.4	(71.1)	(70.4)
Other operating income		4.9	3.5
Other operating expenses		(2.7)	(0.8)
<b>Operating profit before special items</b>		<b>343.2</b>	<b>320.2</b>
Special items	2.5	(2.3)	-
<b>Operating profit (EBIT)</b>		<b>340.9</b>	<b>320.2</b>
Financial income	2.6	36.5	37.4
Financial expenses	2.7	(52.6)	(61.5)
<b>Profit before tax</b>		<b>324.8</b>	<b>296.1</b>
Income taxes	2.8	(74.6)	(67.9)
<b>Profit for the year</b>		<b>250.2</b>	<b>228.2</b>
Earnings per share (EUR)	2.9	1.90	1.73
Earnings per share, diluted (EUR)	2.9	1.90	1.73



# FINANCIAL STATEMENTS – GROUP

## STATEMENT OF COMPREHENSIVE INCOME

### SEPTEMBER 1 – AUGUST 31

EUR million

Note	2018/19	2017/18
<b>Profit for the year</b>	<b>250.2</b>	<b>228.2</b>
<b>Items that will not be reclassified subsequently to the income statement:</b>		
Remeasurements of defined benefit plans	(0.5)	0.1
<b>Items that will be reclassified subsequently to the income statement when specific conditions are met:</b>		
Currency translation of foreign Group companies	5.7	(13.3)
Deferred gains/(losses) on cash flow hedges arising during the year	(6.9)	0.4
Gains/(losses) on cash flow hedges expiring during the year	-	1.1
Tax related to cash flow hedges	1.4	(0.3)
<b>Other comprehensive income for the year</b>	<b>(0.3)</b>	<b>(12.0)</b>
<b>Total comprehensive income for the year</b>	<b>249.9</b>	<b>216.2</b>

# FINANCIAL STATEMENTS – GROUP

## BALANCE SHEET

### AT AUGUST 31

EUR million

	Note	2019	2018
<b>ASSETS</b>			
<b>Non-current assets</b>			
<b>Intangible assets</b>			
Goodwill	3.1	772.9	761.7
Other intangible assets	3.2	172.3	173.8
Intangible assets in progress	3.2	53.2	45.4
<b>Total intangible assets</b>		<b>998.4</b>	<b>980.9</b>
<b>Property, plant and equipment</b>			
Land and buildings	3.3	207.1	145.3
Plant and machinery	3.3	200.7	188.1
Other fixtures and equipment	3.3	31.6	25.0
Property, plant and equipment in progress	3.3	138.4	103.1
<b>Total property, plant and equipment</b>		<b>577.8</b>	<b>461.5</b>
<b>Other non-current assets</b>			
Deferred tax	2.8	7.6	7.4
<b>Total other non-current assets</b>		<b>7.6</b>	<b>7.4</b>
<b>Total non-current assets</b>		<b>1,583.8</b>	<b>1,449.8</b>
<b>Current assets</b>			
<b>Inventories</b>			
Raw materials and consumables		30.0	25.9
Work in progress		59.8	53.4
Finished goods and goods for resale		70.2	67.6
<b>Total inventories</b>	3.4	<b>160.0</b>	<b>146.9</b>
<b>Receivables</b>			
Trade receivables	3.5	192.7	160.8
Tax receivables		3.8	3.0
Other receivables		19.1	21.4
Prepayments		11.0	10.1
<b>Total receivables</b>		<b>226.6</b>	<b>195.3</b>
<b>Cash and cash equivalents</b>		<b>87.4</b>	<b>69.1</b>
<b>Total current assets</b>		<b>474.0</b>	<b>411.3</b>
<b>Total assets</b>		<b>2,057.8</b>	<b>1,861.1</b>

# FINANCIAL STATEMENTS – GROUP

## **BALANCE SHEET**

### AT AUGUST 31

EUR million

#### **EQUITY AND LIABILITIES**

##### **Equity**

Share capital	4.1	176.8	176.8
Reserves		620.4	594.8
<b>Total equity</b>		<b>797.2</b>	<b>771.6</b>

##### **Liabilities**

##### **Non-current liabilities**

Employee benefit obligations	3.6	7.8	7.1
Deferred tax	2.8	91.2	81.6
Provisions	3.7	3.7	3.6
Borrowings	4.2	668.9	632.4
Finance lease (due after 1 year)	4.2	54.6	-
Tax payables		15.6	21.3
Deferred gain		49.6	-
Other payables		8.3	-
<b>Total non-current liabilities</b>		<b>899.7</b>	<b>746.0</b>

##### **Current liabilities**

Provisions	3.7	0.1	0.1
Borrowings	4.2	96.2	95.4
Finance lease (due within 1 year)	4.2	2.1	-
Prepayments from customers		0.2	0.2
Trade payables		132.1	118.6
Tax payables		40.7	44.4
Deferred gain		1.8	-
Other payables		87.7	84.8
<b>Total current liabilities</b>		<b>360.9</b>	<b>343.5</b>

##### **Total liabilities**

**1,260.6**    **1,089.5**

##### **Total equity and liabilities**

**2,057.8**    **1,861.1**

Commitments and contingent liabilities	3.8
Derivative financial instruments	4.3
Related parties	5.4
Events after the balance sheet date	5.5
List of Group companies at August 31, 2019	5.6

# FINANCIAL STATEMENTS – GROUP

## STATEMENT OF CHANGES IN EQUITY

### SEPTEMBER 1 – AUGUST 31

EUR million

						2018/19
	Note	Share capital	Currency translation	Cash flow hedges	Retained earnings	Total
<b>Equity at September 1, 2018</b>		<b>176.8</b>	<b>(51.0)</b>	<b>(0.7)</b>	<b>646.5</b>	<b>771.6</b>
Total comprehensive income for the year, see statement of comprehensive income		-	5.7	(5.5)	249.7	249.9
<b>Transactions with owners:</b>						
Purchase of treasury shares		-	-	-	(5.4)	(5.4)
Exercised share options		-	-	-	-	-
Share-based payment	5.1	-	-	-	4.7	4.7
Tax related to share-based payment		-	-	-	0.7	0.7
Dividend		-	-	-	(224.3)	(224.3)
<b>Equity at August 31, 2019</b>		<b>176.8</b>	<b>(45.3)</b>	<b>(6.2)</b>	<b>671.9</b>	<b>797.2</b>

During the year, an ordinary dividend for the financial year 2017/18 of EUR 0.87 (DKK 6.47) per share, corresponding to EUR 114 million, and an extraordinary dividend of EUR 0.84 (DKK 6.24) per share, corresponding to EUR 110 million, were paid.

A dividend of EUR 0.95 (DKK 7.07), corresponding to EUR 125 million in total, is proposed for 2018/19.

EUR million

						2017/18
	Note	Share capital	Currency translation	Cash flow hedges	Retained earnings	Total
<b>Equity at September 1, 2017</b>		<b>177.3</b>	<b>(38.2)</b>	<b>(1.9)</b>	<b>631.3</b>	<b>768.5</b>
Total comprehensive income for the year, see statement of comprehensive income		(0.5)	(12.8)	1.2	228.3	216.2
<b>Transactions with owners:</b>						
Purchase of treasury shares		-	-	-	(4.7)	(4.7)
Exercised share options		-	-	-	1.1	1.1
Share-based payment	5.1	-	-	-	5.5	5.5
Tax related to share-based payment		-	-	-	1.9	1.9
Dividend		-	-	-	(216.9)	(216.9)
<b>Equity at August 31, 2018</b>		<b>176.8</b>	<b>(51.0)</b>	<b>(0.7)</b>	<b>646.5</b>	<b>771.6</b>

During the year, an ordinary dividend for the financial year 2015/16 of EUR 0.70 (DKK 5.23) per share, corresponding to EUR 92 million, and an extraordinary dividend of EUR 0.76 (DKK 5.64) per share, corresponding to EUR 100 million, were paid.



# FINANCIAL STATEMENTS – GROUP

## CASH FLOW STATEMENT

### SEPTEMBER 1 – AUGUST 31

EUR million

	Note	2018/19	2017/18
<b>Operating profit</b>		340.9	320.2
Non-cash adjustments	5.2	65.3	65.9
Change in working capital		(24.7)	(28.5)
Interest payments received		-	0.4
Interest payments made		(10.6)	(11.0)
Taxes paid		(72.3)	(44.6)
<b>Cash flow from operating activities</b>		<b>298.6</b>	<b>302.4</b>
Investments in intangible assets		(23.3)	(19.1)
Investments in property, plant and equipment		(116.3)	(88.8)
Sale and lease back proceeds		67.6	-
Sale of property, plant and equipment		0.2	0.9
<b>Cash flow used for operational investing activities</b>		<b>(71.8)</b>	<b>(107.0)</b>
<b>Free operating cash flow</b>		<b>226.8</b>	<b>195.4</b>
Acquisition of entities, net of cash acquired	5.3	(9.8)	-
<b>Cash flow used for investing activities</b>		<b>(81.6)</b>	<b>(107.0)</b>
<b>Free cash flow</b>		<b>217.0</b>	<b>195.4</b>
Borrowings		306.9	60.5
Repayment of long-term loans		(277.8)	(35.6)
Exercise of options		-	1.1
Purchase of treasury shares, net		(5.3)	(4.7)
Dividends paid		(224.3)	(216.9)
<b>Cash flow used for financing activities</b>		<b>(200.5)</b>	<b>(195.6)</b>
<b>Net cash flow for the year</b>		<b>16.5</b>	<b>(0.2)</b>
Cash and cash equivalents at September 1		69.1	73.0
Unrealized exchange gains/(losses) included in cash and cash equivalents		1.8	(3.7)
Net cash flow for the year		16.5	(0.2)
<b>Cash and cash equivalents at August 31</b>		<b>87.4</b>	<b>69.1</b>

## 1.1 GENERAL ACCOUNTING POLICIES

### ACCOUNTING POLICIES

#### BASIS OF PREPARATION

The Consolidated Financial Statements of the Chr. Hansen Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and as adopted by the European Union, and further requirements in the Danish Financial Statement Act.

#### GENERAL INFORMATION ON RECOGNITION AND MEASUREMENT

The Consolidated Financial Statements have been prepared under the historical cost method, except for the measurement of certain financial instruments at fair value.

The accounting policies set out below have been applied consistently in respect of the financial year 2018/19 and the comparative figures. The accounting policies are unchanged from 2017/18, except for the implementation of new and amended IFRS/IAS standards as stated below.

#### NEW AND AMENDED STANDARDS

Chr. Hansen has adopted all new or amended financial reporting standards (IFRSs) and interpretations (IFRICs) issued by the IASB and endorsed by the European Union effective for the accounting year 2018/19. Most relevant to the Group are the following:

- **IFRS 9 "Financial Instruments"**, introduces changes to the classification and measurement of financial assets and liabilities, impairment methodology and general hedge accounting.
- The implementation has not resulted in any material changes to classifications of financial assets or financial liabilities.
- The new requirements for hedge accounting do not have an impact as Chr. Hansen's current treasury policy meets the requirements set forth in IFRS 9.
- The expected loss model have been applied to trade receivables but do not significantly impact the allowance for bad debts and no retrospective adjustments to equity has been made.
- Chr. Hansen have implemented the standard exercising the option for relief from restating the comparative figures.

- **IFRS 15 "Revenue from Contracts with Customers"**, clarifies the principles for recognizing revenue from contracts with customers.
- Implementation of the standard has had no significant impact on how to recognize or measure revenue compared to the Group's existing accounting practice and no retrospective adjustments to equity has been made.
- Chr. Hansen have implemented the standard using the modified retrospective approach and exercised the option for relief from restating comparative figures.

The IASB has issued new or amended standards and interpretations that are effective for financial years beginning after September 1, 2019 and have consequently not been implemented in the financial statements for 2018/19. Most relevant to the Group are the following:

- **IFRS 16 "Leases"**, introduces a single lessee accounting model, where the lessee is required to recognize all leases as a lease liability and a lease asset in the balance sheet, unless the lease term is 12 months or less or the underlying asset has a low value. In the income statement, the lease cost is replaced by depreciation of the leased asset and an interest expense for the financial liability.
- The standard will be implemented on September 1, 2019 using the modified retrospective approach, where the right-of-use assets on transition are measured at an amount equal to the lease liability. Comparatives are not restated.
- As of September 1, 2019 Property, plant and equipment are expected to increase between EUR 30-35 million, Lease liabilities are expected to increase between EUR 30-35 million and the net impact on Profit before tax is expected to be around EUR -0.1 to -0.5 million.

## 1.1 GENERAL ACCOUNTING POLICIES (CONTINUED)

### PRESENTATION OF ACCOUNTING POLICIES

Where possible, the accounting policies for an accounting area are presented in the individual notes for that area. Accounting policies not directly related to an area covered by a note are presented below.

### DEFINING MATERIALITY

The Consolidated Financial Statements are a result of processing large numbers of transactions and aggregating those transactions into classes according to their nature or function. When aggregated, the transactions are presented in classes of similar items in the Consolidated Financial Statements. If a line item is not individually material, it is aggregated with other items of a similar nature in the Consolidated Financial Statements or in the notes. There are substantial disclosure requirements throughout IFRS. Management provides specific disclosures required by IFRS unless the information is considered immaterial to the economic decision-making of the users of these financial statements or not applicable.

### TRANSLATION OF FOREIGN CURRENCIES

#### Translation from functional currency to presentation currency

Items in the financial statements of each of the reporting companies of the Group are measured in the currency of the primary economic environment in which the company operates (the functional currency).

Assets, liabilities and equity items are translated from each reporting company's functional currency to EUR at the balance sheet date. The income statements are translated from the functional currency into the presentation currency based on the average exchange rate for the individual months. Differences arising on the translation of the equity at the beginning of the period and translation of the income statement from the average rates to the exchange rate at the balance sheet date are recognized in other comprehensive income and presented as a separate reserve in equity.

The functional currency of the Parent Company is the Danish krone (DKK). However, due to the Group's international relations, the Consolidated Financial Statements are presented in Euro (EUR).

### Translation of transactions and amounts

Transactions in foreign currencies are initially translated into the functional currency at the exchange rates at the transaction date.

Exchange adjustments arising due to differences between the transaction date rates and the rates at the payment date are recognized in financial income or financial expenses in the income statement. Receivables, payables and other monetary items in foreign currencies not settled at the balance sheet date are translated at the exchange rates at the balance sheet date. Exchange adjustments arising due to differences between the rates at the balance sheet date and the transaction date are recognized in financial income or financial expenses in the income statement.

### BASIS OF CONSOLIDATION

The Consolidated Financial Statements cover Chr. Hansen Holding A/S (the Parent Company) and entities over which the Parent Company has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Gains or losses on the disposal or winding up of Group companies are stated as the difference between the sales amount and the carrying amount of net assets including goodwill at the date of disposal or winding up, foreign exchange adjustments recognized directly in equity, plus costs to sell or winding-up expenses.

Gains or losses on disposal or winding up of subsidiaries are recognized in the income statement under special items, while gains or losses on disposal or winding up of associates are recognized under financial income and expenses.

### BUSINESS COMBINATIONS

Entities acquired or formed during the year are recognized in the Consolidated Financial Statements from the date of acquisition or formation. Entities that are disposed of or wound up are recognized in the consolidated income statement until the date of disposal or winding up. The comparative figures are not restated for entities acquired, disposed of or wound up.

## **1.1 GENERAL ACCOUNTING POLICIES (CONTINUED)**

### **REVENUE**

Chr. Hansen produces a wide range of cultures, enzymes and natural colors. Revenue includes sales of goods and related services and royalties and is recognized at an amount that reflects the consideration to which Chr. Hansen is expected to be entitled.

Revenue from straightforward sale of goods to customers is recognized when control of the goods is transferred to the customer, i.e. when goods are delivered to the end customer.

The performance obligations in the contracts are to deliver produced cultures, enzymes or natural colors to the customers, and each batch delivered is considered a separate performance obligation, as each batch is distinct.

Products are often sold with a discount, such an agreement can be set up in various ways, but mutual to all discount agreements is that revenue is recognized based on the price specified in the contract, net of the estimated discount. The discounts are estimated based on historical data as well as forecasts. The estimated discounts are reassessed at the end of each reporting period.

A relative small part of revenue originates from commission agreements where agents undertake sales to third parties in return for commission on realized sales. Revenue from such agreements is recognized when the goods are delivered, as the nature of the performance obligation is to provide the specified goods.

A trade receivable is recognized when the customer obtains control of the goods and an invoice is issued, as this is the point in time when the consideration is unconditional and only the passage

of time is required before the payment is due. Typical payment terms are around 45 days, however there may be country specific deviations from the typical payment terms.

The obligation to provide a refund for products that are not of the agreed quality or according to agreed specifications under the standard warranty terms is recognized as a provision.

### **COST OF SALES**

Cost of sales comprises the cost of products sold. Cost comprises the purchase price of raw materials, consumables and goods for resale, direct labour costs and a share of indirect production costs, including costs of operation and depreciation of production facilities as well as operation, administration and management of factories.

### **OTHER OPERATING INCOME AND EXPENSES**

Other operating income and expenses comprise income that is not related to the principal activities. This includes income from government grants, rental income, gains and losses on the disposal of intangible assets and property, plant and equipment, and other income of a secondary nature in relation to the main activities of the Group.

### **ALTERNATIVE PERFORMANCE MEASURES**

Chr. Hansen presents certain financial measures of the Group's financial performance, financial position and cash flows that are not defined according to IFRS.

These non-IFRS financial measures may not be defined and calculated by other companies using the same method and may not be comparable.

The financial measures should not be considered as a replacement for performance measures as defined under IFRS, but rather as supplementary information.



## 1.1 GENERAL ACCOUNTING POLICIES (CONTINUED)

### CALCULATION OF KEY FIGURES AND FINANCIAL RATIOS

<b>EBITDA before special items</b>	Operating profit adjusted for depreciation, amortization, impairment and special items
<b>EBIT before special items</b>	Operating profit adjusted for special items
<b>EBIT</b>	Operating profit
<b>Invested capital</b>	Intangible assets, property, plant and equipment adjusted for deferred gain on sale and lease back transaction, trade receivables and inventories less trade payables
<b>Net working capital</b>	Inventories and trade receivables less trade payables
<b>Net interest-bearing debt</b>	Borrowings from financial institutions less cash and cash equivalents
<b>Free cash flow before special items and acquisitions</b>	Free cash flow adjusted for cash effect of special items and acquisitions
<b>Earnings per share, diluted</b>	Profit for the year divided by the average number of shares excluding treasury shares fully diluted for share options and performance shares in the money, in accordance with IAS 33
<b>Organic growth</b>	Increase in revenue adjusted for sales reductions, acquisitions and divestments, and measured in local currencies
<b>ROIC excl. Goodwill</b>	Operating profit before special items as a percentage of average invested capital excl. goodwill
<b>Capital expenditure</b>	Investments for the year in intangible assets and property, plant and equipment divided by revenue
<b>Cash conversion</b>	EBITDA before special items less capital expenditures and changes in net working capital as a percentage of EBITDA before special items
<b>Other key ratios</b>	Other key ratios used are measured as a percentage of revenue

## 1.2 SUMMARY OF KEY ACCOUNTING ESTIMATES

### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

In preparing the Consolidated Financial Statements, Management makes various accounting estimates and assumptions that form the basis of the presentation, recognition and measurement of the Group's assets and liabilities. The most significant accounting estimates and judgments are presented below.

In applying the Group's accounting policies, Management makes judgments that may significantly influence the amounts recognized in the Consolidated Financial Statements. Determining the carrying amount of some assets and liabilities requires judgments, estimates and assumptions to be made concerning future events.

The judgments, estimates and assumptions made are based on historical experience and other factors that Management considers to be reliable, but which are inherently associated with uncertainty and unpredictability. These assumptions may prove incomplete or incorrect, and unexpected events or circumstances may arise. The most critical judgments, estimates and assumptions for the individual items are described below.

The Group is also subject to risks and uncertainties that may lead to actual results differing from these estimates, either positively or negatively.

Assumptions about the future and estimation uncertainty at the balance sheet date are described in the notes where there is a significant risk of changes that could result in material adjustments to the carrying amounts of assets or liabilities within the next financial year.

Management considers the key accounting estimates and assumptions used in the preparation of the Consolidated Financial Statements to relate to the following:

- Note 2.8 Income taxes and deferred tax
- Note 3.1 Goodwill
- Note 3.2 Other intangible assets
- Note 3.4 Inventories
- Note 3.5 Trade receivables

See the specific notes for further information on the key accounting estimates and assumptions applied.

## 2.1 SEGMENT INFORMATION

### ACCOUNTING POLICIES

Segment information is provided on the Group's three business units: Food Cultures & Enzymes, Health & Nutrition and Natural Colors. The information is based on the management structure and internal management reporting to the Corporate Leadership Team and the Executive Board, and constitutes our reportable segments.

The identification of the segments on which to report does not involve aggregation of operating segments. The recognition and measurement principles used in the segment information are identical to the ones used in the Consolidated Financial Statements.

The geographic distribution of revenue is based on customers' location.

When presenting segment information from the income statement and balance sheet, disclosed amounts are split according to internal management information. Some costs, assets and liabilities are not directly attributable to the three business units and have to be distributed according to allocation keys used in internal Management reporting. These allocation keys are reassessed at least annually, based on planned activity in the three business units, and are subject to Management's judgment.

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### Segment information

The reportable segments are based on the segmentation in the internal financial reporting received by the Corporate Leadership Team and the Executive Board. The reportable segments are business units offering customers different products and services.

Food Cultures & Enzymes produces and sells innovative cultures, enzymes and probiotic products that help determine the taste, flavor, texture, shelf life, nutritional value and health benefits of a variety of consumer products in the food industry, especially in the dairy industry.

Health & Nutrition produces and sells products for the dietary supplement, over-the-counter pharmaceutical, infant formula, animal feed and plant protection industries.

Natural Colors supplies natural color solutions to the food & beverage industry.

Segment performance is evaluated on the basis of EBIT before special items consistent with the Consolidated Financial Statements. Special items, financial income and expenses, and income taxes are managed at Group level and are not allocated to the business units.

## 2.1 SEGMENT INFORMATION (CONTINUED)

EUR million

				2018/19
	Food Cultures & Enzymes	Health & Nutrition	Natural Colors	Group
<b>INCOME STATEMENT</b>				
Revenue	682.3	255.1	223.7	1,161.1
EUR growth	5%	10%	2%	6%
Organic growth	8%	9%	3%	7%
Depreciation, amortization and impairment losses	(39.2)	(18.4)	(7.0)	(64.6)
EBIT before special items	234.3	80.4	28.5	343.2
EBIT margin before special items	34.3%	31.5%	12.7%	29.6%
Special items and net financial expenses				(18.4)
<b>Profit before tax</b>				<b>324.8</b>
<b>ASSETS</b>				
Goodwill	535.4	237.5	-	772.9
Other intangible assets	103.9	103.6	18.0	225.5
<b>Intangible assets</b>	<b>639.3</b>	<b>341.1</b>	<b>18.0</b>	<b>998.4</b>
Property, plant and equipment	372.3	142.4	63.1	577.8
<b>Total non-current assets excluding deferred tax</b>	<b>1,011.6</b>	<b>483.5</b>	<b>81.1</b>	<b>1,576.2</b>
Inventories	77.8	29.4	52.8	160.0
Trade receivables	103.9	50.4	38.4	192.7
Trade payables	(64.9)	(24.8)	(42.4)	(132.1)
<b>Net working capital</b>	<b>116.8</b>	<b>55.0</b>	<b>48.8</b>	<b>220.6</b>
Assets not allocated				128.9
<b>Group assets</b>				<b>2,057.8</b>
<b>Invested capital excluding goodwill</b>	<b>557.8</b>	<b>289.9</b>	<b>124.7</b>	<b>972.4</b>
<b>ROIC excluding goodwill</b>	<b>44.2%</b>	<b>29.5%</b>	<b>24.2%</b>	<b>37.3%</b>
Investment in non-current assets excluding deferred tax	127.8	49.5	27.0	204.3

## 2.1 SEGMENT INFORMATION (CONTINUED)

EUR million

				2017/18
	Food Cultures & Enzymes	Health & Nutrition	Natural Colors	Group
<b>INCOME STATEMENT</b>				
Revenue	647.2	230.9	219.3	1,097.4
EUR growth	5%	3%	0%	3%
Organic growth	12%	8%	5%	9%
Depreciation, amortization and impairment losses	(38.9)	(17.8)	(7.1)	(63.8)
EBIT before special items	222.2	71.6	26.4	320.2
EBIT margin before special items	34.3%	31.0%	12.0%	29.2%
Special items and net financial expenses				(24.1)
<b>Profit before tax</b>				<b>296.1</b>
<b>ASSETS</b>				
Goodwill	529.8	231.9	-	761.7
Other intangible assets	96.9	105.0	17.3	219.2
<b>Intangible assets</b>	<b>626.7</b>	<b>336.9</b>	<b>17.3</b>	<b>980.9</b>
Property, plant and equipment	304.4	111.3	45.8	461.5
<b>Total non-current assets excluding deferred tax</b>	<b>931.1</b>	<b>448.2</b>	<b>63.1</b>	<b>1,442.4</b>
Inventories	71.0	26.2	49.7	146.9
Trade receivables	89.8	35.5	35.5	160.8
Trade payables	(58.3)	(22.3)	(38.0)	(118.6)
<b>Net working capital</b>	<b>102.5</b>	<b>39.4</b>	<b>47.2</b>	<b>189.1</b>
Assets not allocated				111.0
<b>Group assets</b>				<b>1,861.1</b>
<b>Invested capital excluding goodwill</b>	<b>503.8</b>	<b>255.7</b>	<b>110.3</b>	<b>869.8</b>
<b>ROIC excluding goodwill</b>	<b>45.6%</b>	<b>29.0%</b>	<b>24.6%</b>	<b>38.0%</b>
Investment in non-current assets excluding deferred tax	68.6	27.6	11.7	107.9



## 2.1 SEGMENT INFORMATION (CONTINUED)

EUR million	2018/19				
	EMEA*	North America**	LATAM	APAC	Group
<b>GEOGRAPHIC ALLOCATION</b>					
Revenue	507.5	316.5	144.1	193.0	1,161.1
EUR growth	3%	12%	4%	4%	6%
Organic growth	4%	7%	21%	4%	7%
<b>Non-current assets excluding deferred tax***</b>	<b>1,340.3</b>	<b>190.8</b>	<b>32.2</b>	<b>12.9</b>	<b>1,576.2</b>

\* Includes Denmark, which accounts for 1% of total revenue, corresponding to EUR 10.4 million.

\*\* Includes the US, which accounts for 26% of total revenue, corresponding to EUR 297.2 million.

\*\*\* Non-current assets in Denmark amount to EUR 1.041.3 million.

EUR million	2017/18				
	EMEA*	North America**	LATAM	APAC	Group
Revenue	491.6	281.6	138.0	186.2	1,097.4
EUR growth	6%	(5)%	2%	12%	3%
Organic growth	8%	3%	19%	16%	9%
<b>Non-current assets excluding deferred tax***</b>	<b>1,239.3</b>	<b>160.9</b>	<b>29.2</b>	<b>13.0</b>	<b>1,442.4</b>

\* Includes Denmark, which accounts for 1% of total revenue, corresponding to EUR 11.0 million.

\*\* Includes the US, which accounts for 24% of total revenue, corresponding to EUR 263.4 million.

\*\*\* Non-current assets in Denmark amount to EUR 953.6 million.

## 2.2 DEPRECIATION, AMORTIZATION AND IMPAIRMENT LOSSES

### ACCOUNTING POLICIES

The accounting policies on depreciation, amortization and impairment losses are specified in notes 3.1, 3.2 and 3.3.

EUR million	2018/19	2017/18
<b>AMORTIZATION AND IMPAIRMENT LOSSES</b>		
<b>INTANGIBLE ASSETS</b>		
Cost of sales	(4.2)	(4.7)
Research and development expenses	(7.6)	(6.9)
Sales and marketing expenses	(13.8)	(13.8)
Administrative expenses	(1.5)	(1.8)
<b>Total</b>	<b>(27.1)</b>	<b>(27.2)</b>
<b>DEPRECIATION AND WRITE-DOWN</b>		
<b>PROPERTY, PLANT AND EQUIPMENT</b>		
Cost of sales	(28.4)	(28.1)
Research and development expenses	(4.7)	(4.1)
Sales and marketing expenses	(0.8)	(1.1)
Administrative expenses	(3.6)	(3.3)
<b>Total</b>	<b>(37.5)</b>	<b>(36.6)</b>
<b>Total depreciation, amortization and impairment losses</b>	<b>(64.6)</b>	<b>(63.8)</b>

## 2.3 STAFF EXPENSES

EUR million	2018/19	2017/18
Wages and salaries, etc.	(249.8)	(230.0)
Pension expenses - defined contribution plans	(20.6)	(18.3)
Pension expenses - defined benefit plans (note 3.6)	(0.6)	(0.4)
Social security, etc.	(23.0)	(21.1)
<b>Total</b>	<b>(294.0)</b>	<b>(269.8)</b>
<b>Average number of employees (FTE)</b>	<b>3,420</b>	<b>3,151</b>

## 2.3 STAFF EXPENSES (CONTINUED)

### Remuneration of the Board of Directors and Executive Board

Total fees to key management personnel, comprising the Board of Directors and Executive Board, amounted to EUR 6.0 million in 2018/19 and EUR 5.5 million in 2017/18.

Members of the Executive Board receive a fixed salary, pension and bonus based on corporate and individual KPIs. The size of the bonus is subject to certain financial and non-financial targets being met. If a member is dismissed, the ordinary salary is paid for an 18-month notice period. In the event of change of control, members of the Executive Board do not receive any additional compensation.

### Board of Directors

Total fees to the Board of Directors amounted to EUR 1.1 million in 2018/19 and EUR 1.1 million in 2017/18.

### Executive Board

					2018/19
EUR million	Salary	Bonus <sup>1</sup>	Pension	Share-based payment <sup>2</sup>	Total
Mauricio Graber <sup>3</sup>	(1.06)	(1.06)	(0.19)	(0.51)	(2.82)
Søren Westh Lønning	(0.46)	(0.14)	(0.09)	(0.23)	(0.92)
Thomas Schäfer <sup>4</sup>	(0.29)	(0.04)	(0.05)	(0.12)	(0.50)
Christoffer Lorenzen <sup>5</sup>	(0.35)	(0.16)	(0.07)	(0.04)	(0.62)
<b>Total</b>	<b>(2.16)</b>	<b>(1.40)</b>	<b>(0.40)</b>	<b>(0.90)</b>	<b>(4.86)</b>

					2017/18
	Salary	Bonus <sup>1</sup>	Pension	Share-based payment <sup>2</sup>	Total
Mauricio Graber <sup>3</sup>	(0.25)	(0.55)	(0.05)	(0.31)	(1.16)
Søren Westh Lønning	(0.37)	(0.15)	(0.07)	(0.22)	(0.81)
Christoffer Lorenzen <sup>5</sup>	(0.22)	(0.14)	(0.04)	(0.10)	(0.50)
Thomas Schäfer <sup>4</sup>	(0.24)	(0.08)	(0.04)	(0.05)	(0.41)
Cees de Jong <sup>6</sup>	(0.62)	(0.43)	(0.12)	(0.37)	(1.54)
<b>Total</b>	<b>(1.70)</b>	<b>(1.35)</b>	<b>(0.32)</b>	<b>(1.05)</b>	<b>(4.42)</b>

1) The amounts express the cash value of the bonus.

2) The amounts are based on the principles set out in note 5.1.

3) Member of the Executive Board since June 1, 2018.

4) Member of the Executive Board since November 1, 2017.

5) Member of the Executive Board until May 31, 2019.

6) Member of the Executive Board until May 31, 2018.

## 2.3 STAFF EXPENSES (CONTINUED)

EUR million

			2018/19	2017/18
<b>Fee to the members of the Board of Directors</b>				
	Joined	Resigned	Fee	Fee
Dominique Reiniche	November 2013		(0.22)	(0.16)
Jesper Brandgaard	November 2017		(0.13)	(0.06)
Luis Cantarell	November 2016		(0.09)	(0.09)
Lisbeth Grubov	November 2017		(0.06)	(0.04)
Charlotte Hemmingsen	November 2017		(0.05)	(0.04)
Heidi Kleinbach-Sauter	November 2017		(0.09)	(0.06)
Niels Peder Nielsen	November 2018		(0.06)	-
Per Poulsen	November 2013		(0.05)	(0.06)
Kim Ib Sørensen	November 2017		(0.06)	(0.04)
Kristian Villumsen	November 2014		(0.09)	(0.09)
Mark Wilson	October 2010		(0.13)	(0.13)
Svend Laulund	January 2006	November 2017	-	(0.01)
Tiina Mattila-Sandholm	November 2014	November 2017	-	(0.02)
Frédéric Stévenin	November 2006	November 2017	-	(0.02)
Ole Andersen	February 2010	November 2018	(0.06)	(0.24)
<b>Total</b>			<b>(1.09)</b>	<b>(1.06)</b>

## 2.3 STAFF EXPENSES (CONTINUED)

### Shares

Shares in Chr. Hansen Holding A/S held by members of the Board of Directors and the Executive Board:

Number of shares	Beginning of the year	Bought during the year	Sold during the year	End of the year
Dominique Reiniche	1,462	-	-	<b>1,462</b>
Jesper Brandgaard	1,952	1,670	-	<b>3,622</b>
Luis Cantarell	1,400	800	-	<b>2,200</b>
Lisbeth Grubov	100	-	-	<b>100</b>
Charlotte Hemmingsen	992	100	-	<b>1,092</b>
Heidi Kleinbach-Sauter	-	750	-	<b>750</b>
Niels Peder Nielsen	-	775	-	<b>775</b>
Per Poulsen	150	-	-	<b>150</b>
Kim Ib Sørensen	20	-	-	<b>20</b>
Kristian Villumsen	1,500	3,500	-	<b>5,000</b>
Mark Wilson	3,000	-	-	<b>3,000</b>
<b>Total</b>	<b>10,576</b>	<b>7,595</b>	<b>-</b>	<b>18,171</b>
Mauricio Graber	10,000	7,500	-	<b>17,500</b>
Søren Westh Lonning	3,501	4,646	(3,571)	<b>4,576</b>
Thomas Schäfer	2,262	-	-	<b>2,262</b>
<b>Total</b>	<b>15,763</b>	<b>12,146</b>	<b>(3,571)</b>	<b>24,338</b>

Each director elected by the General Meeting must, no later than 12 months after appointment to the Board of Directors, purchase shares in the Company corresponding to an amount of at least one year's base fee. The director must maintain a shareholding corresponding to at least one year's base fee for as long as he/she is a member of the Company's Board of Directors.



## 2.4 FEES TO AUDITORS

EUR million	2018/19	2017/18
<b>PricewaterhouseCoopers</b>		
Statutory audit	(0.6)	(0.6)
Audit-related services	-	-
Tax advisory services	(0.1)	(0.1)
Other services	(0.3)	(0.1)
<b>Total</b>	<b>(1.0)</b>	<b>(0.8)</b>

Fee for other services than statutory audit services rendered by PricewaterhouseCoopers Statsautoriseret Revisionspartnerselskab to the Group amounts to EUR 0.3 million and consists mainly of advisory services.

## 2.5 SPECIAL ITEMS

### ACCOUNTING POLICIES

Special items comprise material amounts that cannot be attributed to recurring operations, such as income and expenses related to divestment, closure or restructuring of subsidiaries and business lines from the time the decision is made. Also classified as special items are, if major, gains and losses on disposal of subsidiaries not qualifying for

recognition as discontinued operations in the income statement, as well as transaction costs and adjustments to purchase prices relating to the acquisition of entities. Material non-recurring income and expenses that originate from prior years or from projects related to the strategy for the development of the Group and process optimizations are classified as special items.

EUR million	2018/19	2017/18
Costs related to closing of Finnish culture plant, acquisition and integration of Hundsbichler business and establishing microbiome joint venture	(2.3)	-
<b>Total</b>	<b>(2.3)</b>	<b>-</b>

## 2.6 FINANCIAL INCOME

### ACCOUNTING POLICIES

Financial income and expenses comprise interest receivable and interest payable, commission, the interest component of payments under finance leases, surcharges and refunds

under Denmark's on-account tax scheme, and value adjustments of financial fixed assets, derivative financial instruments and items denominated in a foreign currency.

EUR million	2018/19	2017/18
Interest income	5.1	1.6
Foreign exchange gains	30.7	34.3
Foreign exchange gains on derivatives	0.7	1.5
<b>Total</b>	<b>36.5</b>	<b>37.4</b>

## 2.7 FINANCIAL EXPENSES

### ACCOUNTING POLICIES

See note 2.6 above.

EUR million	2018/19	2017/18
Interest expenses	(15.6)	(9.3)
Borrowing costs related to construction of assets	1.3	0.6
Foreign exchange losses	(30.5)	(46.3)
Foreign exchange losses on derivatives	(2.7)	(1.4)
Losses on derivatives transferred from other comprehensive income	(1.9)	(1.1)
Other financial expenses including amortized costs	(3.2)	(4.0)
<b>Total</b>	<b>(52.6)</b>	<b>(61.5)</b>

Effective interest expenses amounted to EUR 17.5 million (EUR 10.4 million in 2017/18).

The capitalization rate used to determine the amount of borrowing costs eligible for capitalization is 0.56%.

## 2.8 INCOME TAXES AND DEFERRED TAX

### ACCOUNTING POLICIES

Current tax liabilities and receivables are recognized in the balance sheet at the amounts calculated on the taxable income for the year, adjusted for tax on taxable incomes for prior years and for taxes paid on account.

Deferred tax is measured using the balance sheet liability method in respect of all temporary differences between the carrying amount and the tax base of assets and liabilities. Apart from assets acquired as part of business combinations, deferred tax is not recognized in respect of temporary differences concerning goodwill, office premises and other items where temporary differences have arisen at the time of acquisition without affecting profit for the year or taxable income. In cases where the computation of the tax base may be performed according to different tax rules, deferred tax is measured on the basis of Management's intended use of the asset or settlement of the liability.

### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

Tax and transfer pricing disputes arise from time to time as cross-border transactions receive increasing attention from local tax authorities. The Group recognizes tax assets and liabilities in order to always fulfil tax requirements in all the countries where business is conducted. Management assesses tax assets and liabilities at least annually, based on dialogue with local tax authorities, tax advisors, business plans and knowledge of the business.

EUR million

	2018/19	2017/18
Income taxes		
Current tax on profit for the year	(64.3)	(62.1)
Change in deferred tax concerning profit for the year	(8.8)	(5.9)
<b>Tax on profit for the year</b>	<b>(73.1)</b>	<b>(68.0)</b>
Adjustments concerning previous years	(1.5)	0.1
<b>Tax in the income statement</b>	<b>(74.6)</b>	<b>(67.9)</b>
<b>Tax on other comprehensive income</b>	<b>1.4</b>	<b>(0.3)</b>

	2018/19		2017/18	
<b>Reconciliation of tax rate</b>				
Danish tax rate	22.0%	(71.4)	22.0%	(65.1)
Deviation of non-Danish Group companies from Danish tax rate	0.9%	(3.0)	1.1%	(3.4)
Non-taxable income and non-deductible expenses	(0.6)%	1.8	(0.3)%	0.7
Adjustments concerning previous years	0.5%	(1.6)	0.0%	0.1
Other taxes	0.2%	(0.4)	0.1%	(0.2)
<b>Effective tax rate</b>	<b>23.0%</b>		<b>22.9%</b>	
<b>Tax on profit for the year</b>		<b>(74.6)</b>		<b>(67.9)</b>

## 2.8 INCOME TAXES AND DEFERRED TAX (CONTINUED)

EUR million	2018/19	2017/18
<b>Deferred tax</b>		
Deferred tax at September 1	74.2	63.9
Currency translation	0.2	(0.3)
Change in deferred tax - recognized in the income statement	8.6	10.8
Change in deferred tax - recognized through equity	0.6	(0.2)
<b>Deferred tax at August 31</b>	<b>83.6</b>	<b>74.2</b>
Deferred tax assets	(7.6)	(7.4)
Deferred tax liabilities	91.2	81.6
<b>Deferred tax at August 31</b>	<b>83.6</b>	<b>74.2</b>
<b>Specification of deferred tax</b>		
Intangible assets	64.3	57.8
Property, plant and equipment	24.8	22.7
Non-current assets	-	(0.1)
Tax loss carryforwards	(1.0)	(1.3)
Liabilities	(4.5)	(4.9)
<b>Total deferred tax at August 31</b>	<b>83.6</b>	<b>74.2</b>
<b>Amounts due after 12 months, estimated</b>	<b>83.2</b>	<b>73.8</b>
<b>Tax loss carryforwards</b>		
Total tax loss carryforwards	5.1	6.9
Tax losses expected to be utilized	3.4	3.8
<b>Deferred tax assets from tax losses recognized in the balance sheet</b>	<b>1.0</b>	<b>1.3</b>

## 2.9 EARNINGS PER SHARE

EUR million	2018/19	2017/18
Profit from continuing operations	250.2	228.2
<b>Profit for the year attributable to shareholders of Chr. Hansen Holding A/S</b>	<b>250.2</b>	<b>228.2</b>
Average number of shares	131,852,496	131,852,496
Average number of treasury shares	(132,890)	(216,126)
<b>Average number of shares excluding treasury shares</b>	<b>131,719,606</b>	<b>131,636,370</b>
Average dilutive effect of share options	169,856	167,483
<b>Average number of shares, diluted</b>	<b>131,889,462</b>	<b>131,803,853</b>
<b>Earnings per share (EUR)</b>	<b>1.90</b>	<b>1.73</b>
<b>Earnings per share, diluted (EUR)</b>	<b>1.90</b>	<b>1.73</b>



## 3.1 GOODWILL

### ACCOUNTING POLICIES

Goodwill represents the excess of the cost of an acquisition over the fair value of the identifiable net assets of the acquired company.

The carrying amount of goodwill is allocated to the Group's cash-generating units, which are the operating segments at the acquisition date.

### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

Goodwill is tested annually for impairment, whereby an estimate is made to determine whether the parts of the entity (cash-generating units) related to the goodwill will be able to generate sufficient future positive net cash flows to support the value of goodwill, trademarks with an indefinite useful life and other net assets of the entity in question.

The estimate of future free net cash flows is based on budgets and business plans for the coming five years and on projections for subsequent years. Budgets and business plans are based on specific future business initiatives for which the risks relating to key parameters have been assessed and recognized in estimated future free cash flows. Projections for years following the five-year period are based on general expectations and risks. Key parameters are revenue development, profit margins, proposed capital expenditure and growth expectations.

The discount rate used to calculate recoverable amounts is the weighted average cost of capital before tax.

EUR million

	2019	2018
Cost at September 1	761.7	767.2
Currency translation	6.3	(5.5)
Addition	4.9	-
<b>Cost at August 31</b>	<b>772.9</b>	<b>761.7</b>
The carrying amount of goodwill has been allocated to the identified cash-generating units according to the operating segments as follows:		
Food Cultures & Enzymes	535.4	529.8
Health & Nutrition	237.5	231.9
<b>Total</b>	<b>772.9</b>	<b>761.7</b>

### 3.1 GOODWILL (CONTINUED)

The addition to goodwill in 2018/19 relates to the purchase of Österreichische Laberzeugung Hundsichler GmbH and has been allocated in full to the Food Cultures & Enzymes business unit; refer to note 5.3 Acquisition of entities. (There were no additions to goodwill in 2017/18).

At August 31, 2019, Management performed an impairment test of the carrying amount of goodwill. No basis for impairment was found. The impairment tests compare the carrying amount of the assets to the discounted value of future cash flows (value in use). The future cash flows are based on budgets and Management's estimates of the expected developments the next five years. Revenue growth assumptions, EBIT, working capital and discount rate constitute the most material parameters in the calculations.

At August 31, 2019, an average growth rate of 7% (unchanged from 2017/18) in the five-year period has been applied for revenue in the Food Cultures & Enzymes business unit. Chr. Hansen continues to prioritize the core dairy business whilst developing new adjacencies to outgrow the market and protect/expand the leadership position. The growth projections in Food Cultures & Enzymes is expected to be reached through fundamental market growth, pricing and market share gains; upselling and innovation; conversion; and adjacencies.

In the Health & Nutrition business unit, an average growth rate of 10% (unchanged from 2017/18) in the five-year period has been applied for revenue, in alignment with our long-term ambitions for organic growth in Health & Nutrition. Future growth in Health & Nutrition shall be derived through vast growth opportunities to expand and grow the businesses through driving penetration of probiotics and reinforcing the position in growth markets globally.

The expected growth rate is based on the Company's own market intelligence process, through which information is collected from all key markets to form the basis for future market growth expectations. As a market leader with a global presence, the Company has a unique opportunity to assess the market through direct interactions with customers. The internal expectations are, however, then verified against available market data from external resources, including global market intelligence and research companies.

As well as market growth, the Company also assesses commercial opportunities for conversion of customers to the Company's products, pricing and upselling to existing customers within the five-year period to establish expectations for growth above the expected level of market growth. The assessment is based on the Company's current product portfolio, and ongoing and potential new projects with existing and potential new customers.

A conservative approach has been taken in applying the growth rates for revenue, using the lower range of the long-term financial ambitions set out in Nature's no. 1 Sustainably. Overall, an expected improvement in EBIT margin in the five-year period increasing to above 30% for the Group has been applied for both business units. A pre-tax discount rate of 8.3% (7.8% in 2017/18) has been applied in the impairment test for both business units.

## 3.2 OTHER INTANGIBLE ASSETS

### ACCOUNTING POLICIES

Research expenses are recognized in the income statement as they are incurred. Development costs are recognized as intangible assets if the costs are expected to generate future economic benefits.

Costs for development and implementation of substantial software and IT systems are capitalized and amortized over their expected useful lives.

Trademarks, patents and customer lists acquired are recognized at cost and amortized over their expected useful lives.

Other intangible assets are measured at cost less accumulated amortization and impairment losses.

Borrowing costs in respect of construction of assets are capitalized when it takes more than 12 months for them to be ready for use.

Amortization is carried out systematically over the expected useful lives of the assets:

• Customer lists	7-15 years
• Patents, trademarks and rights	5-20 years
• Software	5-10 years
• Development projects	3-15 years

### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

Finished development projects are reviewed at the time of completion and on an annual basis to determine whether there is any indication of impairment. If there is, an impairment test is carried out for the individual development projects. For development projects in progress, however, an annual impairment test is always performed. The impairment test is performed on the basis of various factors, including future use of the project, the fair value of estimated future earnings or savings, interest rates and risks.

For development projects in progress, Management estimates on an ongoing basis whether each project is likely to generate future economic benefits for the Group in order to qualify for recognition. The development projects are evaluated on technical as well as commercial criteria.

## 3.2 OTHER INTANGIBLE ASSETS (CONTINUED)

EUR million

							2019
	Trade- marks	Patents	Develop- ment projects	Software	Develop- ment projects in progress	Other intangible assets in progress	Total
Cost at September 1	170.4	103.8	66.2	58.1	37.6	7.8	443.9
Currency translation	-	0.5	-	0.1	-	-	0.6
Additions from acquisition	1.0	7.2	-	-	-	-	8.2
Additions for the year	-	-	1.2	2.4	12.2	7.5	23.3
Disposals for the year	-	-	(0.5)	-	(0.3)	-	(0.8)
Transferred	-	-	8.8	4.4	(8.7)	(2.9)	1.6
<b>Cost at August 31</b>	<b>171.4</b>	<b>111.5</b>	<b>75.7</b>	<b>65.0</b>	<b>40.8</b>	<b>12.4</b>	<b>476.8</b>
Amortization and impairment at September 1	(108.8)	(43.1)	(33.9)	(38.9)	-	-	(224.7)
Currency translation	-	-	-	(0.1)	-	-	(0.1)
Amortization for the year	(8.1)	(6.0)	(6.7)	(6.0)	-	-	(26.8)
Disposals for the year	-	-	0.6	-	-	-	0.6
Impairment	-	-	(0.3)	-	-	-	(0.3)
<b>Amortization and impairment at August 31</b>	<b>(116.9)</b>	<b>(49.1)</b>	<b>(40.3)</b>	<b>(45.0)</b>	<b>-</b>	<b>-</b>	<b>(251.3)</b>
<b>Carrying amount at August 31</b>	<b>54.5</b>	<b>62.4</b>	<b>35.4</b>	<b>20.0</b>	<b>40.8</b>	<b>12.4</b>	<b>225.5</b>
Salary expenses for the year included in assets above					9.7	2.9	
Interest for the year included in assets above					0.2	-	

## 3.2 OTHER INTANGIBLE ASSETS (CONTINUED)

EUR million							2018
	Trade- marks	Patents	Develop- ment projects	Software	Develop- ment projects in progress	Other intangible assets in progress	Total
Cost at September 1	170.6	103.9	60.8	54.6	30.8	5.2	425.9
Currency translation	(0.2)	(0.1)	(0.2)	(0.3)	-	(0.1)	(0.9)
Additions for the year	-	-	0.6	1.5	12.0	5.0	19.1
Disposals for the year	-	-	-	-	(0.2)	-	(0.2)
Transferred	-	-	5.0	2.3	(5.0)	(2.3)	-
<b>Cost at August 31</b>	<b>170.4</b>	<b>103.8</b>	<b>66.2</b>	<b>58.1</b>	<b>37.6</b>	<b>7.8</b>	<b>443.9</b>
Amortization and impairment at September 1	(101.2)	(36.0)	(27.5)	(33.3)	-	-	(198.0)
Currency translation	0.4	(0.1)	0.2	-	-	-	0.5
Amortization for the year	(8.0)	(7.0)	(6.6)	(5.6)	-	-	(27.2)
<b>Amortization and impairment at August 31</b>	<b>(108.8)</b>	<b>(43.1)</b>	<b>(33.9)</b>	<b>(38.9)</b>	<b>-</b>	<b>-</b>	<b>(224.7)</b>
<b>Carrying amount at August 31</b>	<b>61.6</b>	<b>60.7</b>	<b>32.3</b>	<b>19.2</b>	<b>37.6</b>	<b>7.8</b>	<b>219.2</b>
Salary expenses for the year included in assets above					8.3	2.7	
Interest for the year included in assets above					0.1	-	

### Trademarks

Of the trademarks, the carrying amount of the Chr. Hansen trademark alone at August 31, 2019 is EUR 14.2 million, with a remaining amortization period of six years.

Chr. Hansen has recognized impairment losses of EUR 0.3 million in 2018/19 in respect of capitalized development costs assessed not to be commercially feasible in light of latest knowledge of market potential (no impairment losses in 2017/18).

### Development projects

Completed development projects and development projects in progress comprise development and testing of new strains for cultures, enzymes and natural colors as well as production techniques. The value of the development projects recognized has been compared to expected sales or cost savings. In cases where indications of impairment have been identified, the relevant assets have been written down. The impairment tests have been prepared similarly to the goodwill impairment test described in note 3.1, based on the value in use of the assets.

### Software

Software comprises expenses for acquiring software licenses and expenses related to internally developed software. The value of the recognized software has been compared to the expected value in use. No indications of impairment have been identified.

### 3.3 PROPERTY, PLANT AND EQUIPMENT

#### ACCOUNTING POLICIES

Property, plant and equipment are measured at cost less accumulated depreciation and less any accumulated impairment charges. Property, plant and equipment in progress are measured at cost. Cost comprises expenses for materials, other expenses directly related to making the asset ready for use and re-establishment expenses, provided that a corresponding provision is made at the same time. Borrowing costs in respect of construction of assets are capitalized when it takes more than 12 months for the assets to be ready for use.

Assets under finance leases are measured at cost less accumulated depreciation. The cost is determined as the lower of the fair value of the assets and the present value of the future minimum lease payments. The internal rate of return of the lease, or an alternative borrowing rate, is used as the discount rate for the calculation of present value.

The useful lives of the individual groups of assets are estimated as follows:

• Buildings	25-50 years
• Plant and machinery	5-20 years
• Other fixtures and equipment	3-10 years

Land is not depreciated.

Depreciation is computed on a straight-line basis.

Gains and losses on the disposal of property, plant and equipment are recognized in the income statement under other operating income and other operating expenses.



### 3.3 PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

EUR million

					2019
	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment in progress	Total
Cost at September 1	220.9	403.4	55.3	103.1	782.7
Currency translation	2.2	3.0	0.9	0.7	6.8
Additions for the year	69.5	4.8	7.0	91.5	172.8
Disposals for the year	(21.1)	(3.7)	(3.2)	-	(28.0)
Transferred	17.4	30.9	7.0	(56.9)	(1.6)
<b>Cost at August 31</b>	<b>288.9</b>	<b>438.4</b>	<b>67.0</b>	<b>138.4</b>	<b>932.7</b>
Depreciation and write-down at September 1	(75.6)	(215.3)	(30.3)	-	(321.2)
Currency translation	(1.2)	(2.0)	(0.7)	-	(3.9)
Depreciation and write-down for the year*	(8.8)	(22.4)	(6.3)	-	(37.5)
Disposals for the year	3.8	2.0	1.9	-	7.7
<b>Depreciation and write-down at August 31</b>	<b>(81.8)</b>	<b>(237.7)</b>	<b>(35.4)</b>	<b>-</b>	<b>(354.9)</b>
<b>Carrying amount at August 31</b>	<b>207.1</b>	<b>200.7</b>	<b>31.6</b>	<b>138.4</b>	<b>577.8</b>
Hereof finance leased assets	56.5	0.2	-	-	56.7
Salary expenses for the year included in assets above				11.8	
Interest for the year included in assets above, see note 2.7 for the interest rate applied				0.1	

\* No write-downs have been made in 2018/19

Land and buildings on land leased for an unlimited term from Scion DTU A/S at Hørsholm, Denmark, have been sold in 2018/19. In 2017/18 those buildings amounted to EUR 17.0 million. At the same time Chr. Hansen A/S leased back the buildings.

Value of mortgaged property, plant and equipment, see note 3.8 regarding other guarantees and commitments at EUR 208.4 million (EUR 204.2 million in 2017/18).

### 3.3 PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

EUR million

					2018
	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment in progress	Total
Cost at September 1	209.7	345.2	48.9	94.8	698.6
Currency translation	(0.5)	(1.3)	(1.4)	(0.3)	(3.5)
Additions for the year	2.5	14.5	3.8	68.0	88.8
Disposals for the year	(0.2)	(0.6)	(0.4)	-	(1.2)
Transferred	9.4	45.6	4.4	(59.4)	-
<b>Cost at August 31</b>	<b>220.9</b>	<b>403.4</b>	<b>55.3</b>	<b>103.1</b>	<b>782.7</b>
Depreciation and write-down at September 1	(68.1)	(193.4)	(25.9)	-	(287.4)
Currency translation	0.4	1.0	0.9	-	2.3
Depreciation and write-down for the year*	(8.1)	(23.1)	(5.4)	-	(36.6)
Disposals for the year	0.2	0.2	0.1	-	0.5
<b>Depreciation and write-down at August 31</b>	<b>(75.6)</b>	<b>(215.3)</b>	<b>(30.3)</b>	<b>-</b>	<b>(321.2)</b>
<b>Carrying amount at August 31</b>	<b>145.3</b>	<b>188.1</b>	<b>25.0</b>	<b>103.1</b>	<b>461.5</b>
Salary expenses for the year included in assets above				10.4	
Interest for the year included in assets above, see note 2.7 for the interest rate applied				0.3	

\* No write-downs have been made in 2017/18

### 3.4 INVENTORIES

#### ACCOUNTING POLICIES

Inventories are measured at the lower of cost and net realizable value. Cost is determined using the first-in, first-out method.

The cost of goods for resale and raw materials and consumables comprises purchase price plus delivery costs. Finished goods and work in progress are measured at cost, comprising costs incurred to bring the product to the current completion stage and location. Costs include the cost of raw materials, consumables, direct wages and salaries and indirect production overheads. Indirect production overheads comprise indirect materials, wages and salaries, maintenance and depreciation of production machinery, buildings and equipment, and production administration and management.

#### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

The calculation of indirect production costs is reviewed regularly in order to ensure that relevant assumptions such as prices, production yield and measures of utilization are incorporated correctly. Changes in the parameters, assumed production yield and utilization levels, etc. could have a significant impact on cost and, in turn, on the valuation of inventories and production costs.

EUR million	2019	2018
Direct materials	97.9	88.4
Other direct and indirect production costs	62.1	58.5
<b>Total</b>	<b>160.0</b>	<b>146.9</b>
<b>Movements in inventory write-downs:</b>		
Inventory write-downs at September 1	3.6	3.1
Inventory write-downs during the year	2.1	2.9
Utilization of inventory write-downs	(2.7)	(2.4)
<b>Inventory write-downs at August 31</b>	<b>3.0</b>	<b>3.6</b>

### 3.5 TRADE RECEIVABLES

#### ACCOUNTING POLICIES

Trade receivables are measured at amortized cost less allowances for lifetime expected credit losses.

To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days overdue. Furthermore, an allowance for lifetime expected credit losses for trade receivables is recognized on initial recognition.

Trade receivables are written off when all possible options have been exhausted and there is no reasonable expectations of recovery.

The cost of allowances for expected credit losses and write-offs for trade receivables are included in Sales and marketing expenses.

#### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

The allowance for expected credit losses for trade receivables is based on historical credit loss experience combined with forward-looking information on macroeconomic factors affecting the credit risk. The expected loss rates are updated at every reporting date.

EUR million

#### Aging of receivables:

	2019	2018
Not due	170.2	148.4
0-30 days overdue	11.3	8.6
31-60 days overdue	2.4	1.9
61-120 days overdue	3.4	1.3
> 120 days overdue	5.4	0.6
<b>Total trade receivables</b>	<b>192.7</b>	<b>160.8</b>

#### Allowances for bad debts:

Allowances at September 1	1.3	0.8
Additions for the year	2.9	0.8
Reversals for the year	(1.1)	(0.3)
<b>Allowances at August 31</b>	<b>3.1</b>	<b>1.3</b>

## 3.6 EMPLOYEE BENEFIT OBLIGATIONS

### ACCOUNTING POLICIES

Contributions to defined contribution plans are charged to the income statement in the year to which they relate. In a few countries, the Group still operates defined benefit plans. The costs for the year of defined benefit plans are determined using the projected unit credit method. This reflects services rendered by employees up to the valuation dates and is based on actuarial assumptions, primarily regarding discount rates used in determining the present value of benefits and projected rates of remuneration growth. Discount rates are based on the market yields of high-rated corporate bonds in the country concerned.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to other comprehensive income in the period in which they arise. Past service costs are recognized immediately in the income statement. Pension assets are only recognized to the extent that it is possible to derive future economic benefits such as refunds from the plan or reductions of future contributions. The Group's defined benefit plans are usually funded by payments from Group companies and by employees to funds independent of the Group. Where a plan is unfunded, a liability for the retirement obligation is recognized in the balance sheet.

#### Employee benefit plans in the Group

Other employee benefit obligations consist of obligations regarding payments made in connection with employee service tenure, long-service benefits and other social benefits.

The Group has entered into pension agreements with a significant share of its employees. The majority of the plans are defined contribution plans, and only a small proportion are defined benefit plans.

#### Defined contribution plans

The Group finances the plans through regular premium payments to independent insurance companies, which are responsible for the pension obligations. Once the pension contributions to the defined contribution plans have been paid, the Group has no further pension obligations toward current or resigned employees.

#### Defined benefit plans

For certain groups of employees, the Group has entered into agreements on the payment of certain benefits, including pensions. These obligations are not or only partly covered by insurance. Unfunded plans have been recognized in the balance sheet, income statement and other comprehensive income as shown below.

### 3.6 EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)

EUR million	2019	2018
<b>Movement in the employee benefit obligations recognized</b>		
Obligations at September 1	12.6	12.4
Currency translation	0.2	(0.1)
Current service expenses	0.3	0.3
Interest expenses	0.2	0.2
Actuarial gains/(losses)	1.1	0.4
Payments made	(0.9)	(0.6)
<b>Employee benefit obligations recognized at August 31</b>	<b>13.5</b>	<b>12.6</b>
<b>Movement in the fair value of plan assets</b>		
Fair value of plan assets at September 1	5.5	5.7
Currency translation	0.2	(0.1)
Expected return on plan assets	0.1	0.1
Actuarial gains/(losses)	0.5	0.2
Benefits paid	(0.6)	(0.4)
<b>Fair value of plan assets at August 31</b>	<b>5.7</b>	<b>5.5</b>
<b>Net benefit obligations at August 31</b>	<b>7.8</b>	<b>7.1</b>
<b>Net employee benefit obligations</b>		
Net obligations at September 1	7.1	6.7
Costs recognized in the income statement	0.4	0.4
Remeasurements recognized in other comprehensive income	0.6	0.2
Employer contributions	(0.3)	(0.2)
<b>Net employee benefit obligations at August 31</b>	<b>7.8</b>	<b>7.1</b>
<b>Weighted average actuarial assumptions applied</b>		
Discount rate	1.9%	1.9%
Future increase in salaries	0.3%	0.3%
Future increase in pensions	1.6%	1.6%
<b>Distribution of plan assets to cover obligation</b>		
Shares	2%	2%
Bonds	84%	86%
Real estate	0%	0%
Cash and cash equivalents	14%	12%
	<b>100%</b>	<b>100%</b>

## 3.7 PROVISIONS

### ACCOUNTING POLICIES

Provisions are recognized when, as a consequence of an event occurring on or before the balance sheet date, the Group has a legal or constructive obligation and it is probable

that economic benefits must be given up to settle the obligation. The obligation is measured on the basis of Management's best estimate of the discounted amount at which the obligation is expected to be met.

EUR million	2019	2018
Provisions at September 1	3.7	3.3
Additions for the year	1.0	0.6
Used during the year	(0.9)	(0.2)
<b>Provisions at August 31</b>	<b>3.8</b>	<b>3.7</b>

The provisions primarily concern US import tariff costs related to previous years and 2018/19.



### 3.8 COMMITMENTS AND CONTINGENT LIABILITIES

EUR million	2019	2018
<b>Operating lease commitments</b>		
Due within 1 year	9.2	8.5
Due between 1 and 5 years	16.9	16.2
Due after 5 years	0.3	0.6
<b>Total</b>	<b>26.4</b>	<b>25.3</b>
Lease commitments relate primarily to leaseholds, car and equipment rental.		
<b>Expensed payments relating to operating leases</b>	<b>8.9</b>	<b>9.6</b>
<b>Individual assets directly pledged</b>		
Land and buildings	80.1	90.8
Plant and machinery	128.3	113.4
<b>Book value of pledged individual assets</b>	<b>208.4</b>	<b>204.2</b>

The calculated liabilities are based on minimum lease payments.

#### Pending court and arbitration cases

Certain claims have been made against the Chr. Hansen Group. Management is of the opinion that the outcome of these disputes will not have a significant effect on the Group's financial position.

At August 31, 2019, Chr. Hansen was the opposing party in 23 diacetyl-related lawsuits based on alleged personal injuries as a result of exposure to diacetyl vapors and the claimant in one diacetyl-related lawsuit. In addition, Chr. Hansen has initiated

one case as claimant in relation to the diacetyl matter.

Management does not believe that diacetyl lawsuits will have a material adverse effect on the Company's financial position or operating results.

#### Change of control

The loan facilities are subject to change-of-control clauses.

Regarding change-of-control clauses in employment contracts, see note 2.3.

## 4.1 SHARE CAPITAL

The Company's share capital has a nominal value of DKK 1,318,524,960 (equivalent to EUR 176.8 million), divided into shares of DKK 10 each. The share capital has been fully paid up.

The Company has not conducted a share buy-back program in the last three years. At August 31, 2019, the Company

held 166,229 treasury shares, corresponding to less than 1% of the total (196,718 treasury shares at August 31, 2018, less than 1% of total shares). All of the treasury shares were held to cover share option programs.

### Number of shares outstanding:

Outstanding at September 1

Purchased during the year

Sold during the year

**Outstanding at August 31**

2019	2018
131,655,778	131,565,160
(64,000)	(65,000)
94,489	155,618
<b>131,686,267</b>	<b>131,655,778</b>

## 4.2 FINANCIAL ASSETS AND LIABILITIES

### ACCOUNTING POLICIES

The Group classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either through OCI or through profit or loss), and
- those to be measured at amortised cost.

The classification depends on the Group's business model for managing the financial assets and the contractual terms of the cash flows.

For assets measured at fair value, gains and losses will either be recorded in profit or loss or OCI.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

Cash and cash equivalents comprise cash balances and unrestricted deposits with banks.

Financial liabilities, including mortgage loans and loans from credit institutions, are initially measured at fair value less transaction costs incurred. Subsequently, the loans are measured at amortized cost. Amortized cost is calculated as original cost less instalments plus/less the accumulated amortization of the difference between cost and nominal value. Losses and gains on loans are thus allocated over the term so that the effective interest rate is recognized in the income statement over the loan period. Financial liabilities are derecognized when settled.

The portion of the debt maturing after one year is recognized as non-current debt and the remainder as current debt.

Other debts are measured at amortized cost. However, derivative financial instruments recognized under other payables are measured at fair value. See "Derivative financial instruments" below.

For accounting purposes, lease obligations are divided into finance and operating leases. Leases are classified as finance leases if they transfer substantially all the risks and rewards incident to ownership to the lessee. All other leases are classified as operating leases.

Finance leases are recognized at inception as lease assets and lease liabilities in the balance sheet at the lower of fair value or present value of the future minimum lease payments, extension options, expected price adjustments, the time of contract termination calculated using the interest rate implicit in the lease.

Subsequently, the capitalized residual lease liability is measured at amortized cost and the lease asset less accumulated depreciation.

Operating lease payments are recognized in the income statement on a straight-line basis over the lease term.

## 4.2 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

EUR million

				2019
	Maturity < 1 year	Maturity > 1 year < 5 years	Maturity > 5 years	Total
<b>ASSETS</b>				
Trade receivables	192.7	-	-	192.7
Other receivables	19.1	-	-	19.1
Cash and cash equivalents	87.4	-	-	87.4
<b>Total</b>	<b>299.2</b>	<b>-</b>	<b>-</b>	<b>299.2</b>
				2018
	Maturity < 1 year	Maturity > 1 year < 5 years	Maturity > 5 years	Total
Trade receivables	160.8	-	-	160.8
Other receivables	21.4	-	-	21.4
Cash and cash equivalents	69.1	-	-	69.1
<b>Total</b>	<b>251.3</b>	<b>-</b>	<b>-</b>	<b>251.3</b>
				2019
	Maturity < 1 year	Maturity > 1 year < 5 years	Maturity > 5 years	Total
<b>LIABILITIES</b>				
Long-term borrowings*	-	609.8	81.4	691.2
Short-term borrowings*	103.9	-	-	103.9
Finance leases*	3.3	16.5	76.0	95.8
Trade payables	132.1	-	-	132.1
Other payables	87.5	-	-	87.5
	<b>326.8</b>	<b>626.3</b>	<b>157.4</b>	<b>1,110.5</b>
Derivative financial instruments	0.2	8.3	-	8.5
<b>Total</b>	<b>327.0</b>	<b>634.6</b>	<b>157.4</b>	<b>1,119.0</b>
				2018
	Maturity < 1 year	Maturity > 1 year < 5 years	Maturity > 5 years	Total
Long-term borrowings*	-	653.0	9.0	662.0
Short-term borrowings*	103.2	-	-	103.2
Trade payables	118.6	-	-	118.6
Other payables	84.6	-	-	84.6
	<b>306.4</b>	<b>653.0</b>	<b>9.0</b>	<b>968.4</b>
Derivative financial instruments	-	0.2	-	0.2
<b>Total</b>	<b>306.4</b>	<b>653.2</b>	<b>9.0</b>	<b>968.6</b>

\* Including future interest payments.

## 4.2 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

EUR million	2019	2018
<b>LONG-TERM BORROWINGS</b>		
Senior bank borrowings	601.4	615.4
Mortgages	69.2	19.6
Finance leases	-	-
<b>Total before amortization of financing expenses</b>	<b>670.6</b>	<b>635.0</b>
Capitalized financing expenses	(1.7)	(2.6)
<b>Total long-term borrowings</b>	<b>668.9</b>	<b>632.4</b>
<b>SHORT-TERM BORROWINGS</b>		
Mortgages	0.6	4.6
Bank borrowings	95.6	90.8
Finance leases	-	-
<b>Total</b>	<b>96.2</b>	<b>95.4</b>

EUR million	2017			2018			2019
CHANGE IN LIABILITIES ARISING FROM FINANCING ACTIVITIES	Debt as at August 31	Financing cash flow	Foreign exchange movements	Debt as at August 31	Financing cash flow	Foreign exchange movements	Debt as at August 31
Short-term borrowings	29.6	62.4	3.4	95.4	0.8	-	96.2
Long-term borrowings	675.6	(40.6)	-	635.0	35.6	-	670.6
Finance leases	-	-	-	-	56.7	-	56.7
<b>Bank and other credit institutions</b>	<b>705.2</b>	<b>21.8</b>	<b>3.4</b>	<b>730.4</b>	<b>93.1</b>	<b>-</b>	<b>823.5</b>

The Group's borrowings are denominated in EUR, USD and DKK.

The terms for the bank debt include a few covenants focusing on the Group's ability to generate sufficient cash flow. The financing of each Group company is monitored

and managed at Group level. In 2018/19, the covenants have been met, and estimates for the income statement, balance sheet and cash flow statement indicate that the covenants will be met by a comfortable margin in 2019/20.

## 4.2 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

EUR million				2019
	Effective interest rate	Maturity	Carrying amount	Interest rate risk
<b>MORTGAGES</b>				
Floating rate*	(0.30%)	0-20 years	67.7	Cash flow
Fixed rate*	1.18%	0-6 years	2.1	Fair value
<b>Total mortgages</b>			<b>69.8</b>	
<b>BANK BORROWINGS</b>				
Floating rate		0-7 years	281.8	Cash flow
Fixed rate**		0-5 years	415.2	Fair value
<b>Total bank borrowings</b>			<b>697.0</b>	
<b>Total borrowings</b>			<b>766.8</b>	

\* Interest rate excluding margin.

\*\* Interest rate swaps have been used to fix the interest rate. These are denominated in EUR and USD and have an average interest rate of 1.13%.

The fair value of mortgages is EUR 70.2 million, whereas the fair value of bank borrowings does not differ significantly from the carrying amount. The fair value is calculated on level 1 in the fair value hierarchy using direct quotes.

## 4.2 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

EUR million

		2019	
CURRENCY OF THE PRINCIPAL	Interest-bearing debt	Floating rate	Fixed rate
EUR	350.7	21%	79%
USD	135.9	33%	67%
DKK	280.2	81%	19%
<b>Total</b>	<b>766.8</b>	<b>45%</b>	<b>55%</b>

	Effective interest rate	Maturity	Carrying amount	Interest rate risk
<b>MORTGAGES</b>				
Floating rate*	(0.02%)	0-9 years	18.5	Cash flow
Fixed rate*	0.88%	0-7 years	5.7	Fair value
<b>Total mortgages</b>			<b>24.2</b>	
<b>BANK BORROWINGS</b>				
Floating rate		0-5 years	122.0	Cash flow
Fixed rate**		0-5 years	584.2	Fair value
<b>Total bank borrowings</b>			<b>706.2</b>	
<b>Total borrowings</b>			<b>730.4</b>	

\* Interest rate excluding margin.

\*\* Interest rate swaps have been used to fix the interest rate. These are denominated in EUR and USD and have an average interest rate of 1.09%.

The fair value of mortgages is EUR 25.5 million, whereas the fair value of bank borrowings does not differ significantly from the carrying amount. The fair value is calculated on level 1 in the fair value hierarchy using direct quotes.

EUR million

		2018	
CURRENCY OF THE PRINCIPAL	Interest-bearing debt	Floating rate	Fixed rate
EUR	422.8	35%	65%
USD	128.7	0%	100%
DKK	178.9	69%	31%
<b>Total</b>	<b>730.4</b>	<b>37%</b>	<b>63%</b>

## 4.2 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

### FINANCIAL RISKS

Being an international company, Chr. Hansen is exposed to currency and interest rate fluctuations.

Chr. Hansen's corporate Treasury department monitors and manages risks related to currency exposure and interest rate levels in accordance with the corporate Treasury Procedure approved by the Board of Directors. The procedure reflects how Chr. Hansen manages financial risks and contains rules defining, not only how financial instruments are used to hedge risks, but also an acceptable level of risk exposure and use of counterparties.

### Funding and liquidity

Funding and adequate liquidity are fundamental factors in driving an expanding business, and management of both is an integral part of Chr. Hansen's continuous budget and forecasting process. To ensure focus on managing the risks related to funding and liquidity, Chr. Hansen's corporate Treasury department manages and monitors funding and liquidity for the entire Group and ensures the availability of the required liquidity through cash management and uncommitted as well as committed facilities.

### Foreign exchange

To reduce exposure to exchange rate changes, Chr. Hansen trades primarily in EUR and USD. However, trading also takes place in other currencies. Currency exposure is mainly managed by having revenue and expenses in the same currency. Where this is insufficient to manage the risk, Chr. Hansen's corporate Treasury department performs hedging in accordance with the Treasury Procedure. See note 4.3 for further information.

### Interest rates

Interest rate risk mainly relates to interest on debt. Debt is financed at the market rate plus a margin. The risk is limited by entering into interest hedging agreements in accordance with the Treasury Procedure (note 4.3).

### Credit

Credit risks mainly relate to trade receivables and other receivables. The risk is limited due to Chr. Hansen's diverse customer base representing multiple industries and businesses on international markets where the Company cooperates with many large and medium-sized partners. When dealing with smaller businesses, the Company sells mainly through distributors, thus reducing the credit risk regarding these customers.

### Counterparty risk

Counterparty risk for cash, deposits and financial instruments is handled by only engaging with financial institutions that have a satisfactory long-term credit rating. Chr. Hansen's core financial counterparties currently have long-term credit ratings of AA or A. Chr. Hansen's Treasury Procedure also defines a credit limit for each counterparty.



## 4.3 DERIVATIVE FINANCIAL INSTRUMENTS

### ACCOUNTING POLICIES

Derivative financial instruments are initially recognized at fair value on the date the derivative contract is entered into and are subsequently remeasured at fair value. The fair values of derivative financial instruments are included in other receivables and other payables, respectively, and positive and negative values are offset only when the Group has the right and the intention to settle financial instruments net. Fair values of derivative financial instruments are computed on the basis of current market data and generally accepted valuation methods.

Certain derivative financial instruments are designated as one of the following:

- Hedges of the fair value of recognized assets or liabilities or a firm commitment (fair value hedges)
- Hedges associated with highly probable forecasted transactions (cash flow hedges)
- Hedges of a net investment in a foreign operation (net investment hedges)

Changes in the fair value of derivative financial instruments designated as and qualifying for recognition as a fair value hedge of recognized assets and liabilities are recognized in the income statement together with changes in the value of

the hedged asset or liability with respect to the hedged portion.

The effective part of changes in the fair value of derivative financial instruments used for cash flow hedges is recognized in other comprehensive income and presented as a separate reserve in equity. The reserve is transferred to the income statement on realization of the hedged transactions. If a derivative financial instrument used to hedge expected future transactions expires, is sold or no longer qualifies for hedge accounting, any accumulated fair value reserve remains in equity until the hedged transaction is concluded. If the transaction is no longer expected to be concluded, any fair value reserve accumulated under equity is transferred to the income statement.

Changes in the fair value of derivative financial instruments used for net investment hedges that effectively hedge currency fluctuations in these entities are recognized directly in the Consolidated Financial Statements in a separate translation reserve in equity.

Realized gains and losses on derivative financial instruments are recognized in the income statement as financial income or financial expenses.

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#### Derivative financial instruments in the Group

The Group is exposed to market risk, primarily risks relating to currency and interest rates, and uses financial instruments to hedge recognized and future transactions. The Group only enters into hedging agreements that relate to the underlying business.

#### Interest rate risk

Interest rate swaps are used for cash flow hedging where the underlying floating interest rates are hedged into fixed interest rate. According to corporate Treasury Procedure min. 50% of interest rate risk relating to debt must be in fixed interest rate. At August 31, 2019, the open interest rate swaps had the following market values:

## 4.3 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

EUR million

				2019	
	Expiry	Contract amount	Gain/(loss)	Recognized in income statement	Recognized in fair value reserve
EUR 75 million interest rate swaps*	Aug. 2022	75.0	(1.6)	(0.7)	(0.9)
EUR 50 million interest rate swaps*	Aug. 2021	50.0	(0.5)	(0.2)	(0.3)
EUR 75 million interest rate swaps*	Aug. 2023	75.0	(2.7)	(1.2)	(1.5)
USD 25 million interest rate swaps	Aug. 2020	22.7	(0.2)	-	(0.2)
USD 25 million interest rate swaps	Aug. 2021	22.7	(0.6)	-	(0.6)
USD 50 million interest rate swaps**	Aug. 2023	45.3	(2.7)	-	(2.7)
<b>Total</b>		<b>290.7</b>	<b>(8.3)</b>	<b>(2.1)</b>	<b>(6.2)</b>

\* Interest rate swaps with forward start 2020.

\*\* Interest rate swaps with forward start Nov. 2018.

				2018	
	Expiry	Contract amount	Gain/(loss)	Recognized in income statement	Recognized in fair value reserve
EUR 75 million interest rate swaps	Aug. 2022	75.0	-	-	-
EUR 50 million interest rate swaps	Aug. 2021	50.0	-	-	-
EUR 75 million interest rate swaps	Aug. 2023	75.0	-	-	-
USD 100 million interest rate swaps	Nov. 2018	85.8	0.3	-	0.3
USD 25 million interest rate swaps	Aug. 2020	21.5	-	-	-
USD 25 million interest rate swaps	Aug. 2021	21.5	-	-	-
USD 50 million interest rate swaps	Aug. 2023	42.9	-	-	-
<b>Total</b>		<b>371.7</b>	<b>0.3</b>	<b>-</b>	<b>0.3</b>

The fair value is calculated using a valuation model based primarily on observable market data, corresponding to level 2 in the fair value hierarchy. There is no currency risk related to the Group's swaps.

The interest on the Group's financing facilities is based on a floating interest rate plus a margin. Due to the current negative

interest rate environment and floor on loan agreements the EUR swaps were ineffective in Q4 2019. Average fixed rate on USD swaps are 2.75-2.85%. EUR swaps are forwarded starting August 2020 and both EUR and USD swaps are designed with a bullet notional.

### 4.3 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

EUR million	2019	2018
Outstanding debt with fixed interest rate or hedged through interest rate swaps	54%	63%
Total debt, average maturity in years	3.1	3.7
Effect on total debt of a 1 percentage point increase in interest rates	(4.6)	(5.9)
Effect on interest rate swaps of a 1 percentage point increase in interest rates*	0.9	0.8
<b>Net effect</b>	<b>(3.7)</b>	<b>(5.1)</b>

\* Excluding interest rate swaps with forward start 2020.

An increase of 1%-point in the average interest rate on the Group's interest-bearing debt including swaps would reduce the Group's earnings before tax by EUR 3.7 million (EUR 5.1 million for 2017/18) over the next 12-month period and have a

positive effect on equity of EUR 7.7 million (negative effect of EUR 0.2 million in 2017/18).

## 4.3 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Currency hedging of balance sheet position and future cash flows

EUR million

					2019
NET OUTSTANDING FORWARD EXCHANGE CONTRACTS	Nominal principal	Gain/loss in income statement	Recognized in fair value reserve	Fair value of principal	Maximum maturity (months)
USD	12.7	-	-	12.7	2.0
AUD	5.4	-	-	5.4	3.0
SGD	1.5	-	-	1.5	3.0
DKK	(19.6)	-	-	(19.6)	
<b>Total</b>		-	-	-	

					2018
	Nominal principal	Gain/loss in income statement	Included in fair value reserve	Fair value of principal	Maximum maturity (months)
USD	8.6	-	-	8.6	1.0
AUD	6.5	0.1	-	6.4	3.0
SGD	0.9	-	-	0.9	2.0
CZK	2.1	-	-	2.1	2.0
DKK	(18.1)	-	-	(18.1)	
<b>Total</b>		<b>0.1</b>	-	<b>(0.1)</b>	

The fair value is calculated using a valuation model based primarily on observable market data, corresponding to level 2 in the fair value hierarchy. All contracts are used for fair value hedges.

The overall purpose of managing currency risk is to minimize the effect of short-term currency movements on earnings and

cash flow. The Group's main currencies are EUR, USD and USD-related currencies. Exposure is limited by assets, debt and expenses to a certain degree matching the geographic segmentation of sales. Investments in subsidiaries are not hedged. The fair value is based on direct quotes corresponding to level 2 in the fair value hierarchy.

### FOREIGN EXCHANGE SENSITIVITY ANALYSIS

Net profit effect	2018/19	2017/18
Increase of 5%	0.1	1.2
Decrease of 5%	(0.1)	(1.2)

Financial instruments are defined as cash, trade receivables, trade payables, current and non-current loans and foreign exchange forwards.

## 5.1 SHARE-BASED PAYMENT

### ACCOUNTING POLICIES

The share programs are accounted for on an accrual basis over the service period. Share options issued are measured at fair value at the grant date multiplied by the probability of vesting. Matching shares are measured as the value of the maximum number of matching shares to be granted multiplied the probability of vesting. The probabilities are adjusted every year until vesting.

#### Matching shares program

Long-term matching shares programs are granted to the Executive Board and certain key employees.

Under the program, the participants are required to acquire a number of existing shares in Chr. Hansen Holding A/S (investment shares) and retain ownership of such shares for a predefined holding period of three years. Upon expiration of the holding period and subject

to fulfillment of certain predefined performance targets and continued employment at the vesting date, the participants will be entitled to receive up to 5.5 additional shares in Chr. Hansen Holding A/S (matching shares) per investment share for no consideration.

The theoretical market value of the program in 2018/19 was EUR 4.8 million, based on fulfillment of all predefined performance targets (EUR 3.7 million in 2017/18). The fair value at grant was EUR 3.9 million, taking into consideration the assessed likelihood of meeting the no-market condition (EUR 3.2 million in 2017/18).

EUR 1.0 million was expensed in 2018/19 relating to the matching shares programs, including accelerations and reversals (EUR 1.2 million in 2017/18).

Matching shares programs	Program 1	Program 2	Program 3	Program 4	Program 5
Year allocated	2014/15	2015/16	2016/17	2017/18	2018/19
Vesting conditions (KPIs)	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR
Vesting	Nov. 2017	Nov. 2018	Nov. 2019	Nov. 2020	Nov. 2021
Average fair market value of matching shares	EUR 26.4	EUR 36.8	EUR 44.2	EUR 54.6	EUR 72.0
<b>Assumptions:</b>					
Dividend	1.5%	1.5%	1.5%	1.5%	1.5%
Period	3 years	3 years	3 years	3 years	3 years
TSR peer group likelihood	50.0%	50.0%	50.0%	50.0%	50.0%

## 5.1 SHARE-BASED PAYMENT (CONTINUED)

Number of matching shares	Executive Board	Key employees	Former employees	Total
<b>Outstanding at August 31, 2017</b>	<b>43,808</b>	<b>75,004</b>	<b>38,869</b>	<b>157,681</b>
Allocated	31,592	27,143	-	58,735
Transferred	(22,825)	(26,588)	49,413	-
Forfeited	-	-	(35,817)	(35,817)
Exercised	(14,728)	(22,376)	(20,328)	(57,432)
<b>Outstanding at August 31, 2018</b>	<b>37,847</b>	<b>53,183</b>	<b>32,137</b>	<b>123,167</b>
Allocated	21,348	19,555	242	41,145
Transferred	(10,869)	(6,915)	17,784	-
Forfeited	-	-	(12,774)	(12,774)
Exercised	(4,588)	(15,220)	(23,688)	(43,496)
<b>Outstanding at August 31, 2019</b>	<b>43,738</b>	<b>50,603</b>	<b>13,701</b>	<b>108,042</b>

### Short-term restricted stock unit (RSU) programs

The short-term RSU programs are granted to the Executive Board and other key employees based on fulfillment of individual key performance indicators. The RSUs are granted as share options with an exercise price of up to DKK 1 and vest gradually over a three-year period. Subject to the person still being employed with Chr. Hansen, each share option may be exercised to purchase one existing share in Chr. Hansen Holding A/S.

The value of RSUs allocated in 2018/19 (RSU program 10) was estimated to be EUR 4.9 million (EUR 2.8 million in 2017/18). The number of RSUs allocated, their value and underlying assumptions will be finally determined in November 2019.

EUR 3.2 million was expensed in 2018/19 relating to the short-term RSU programs (EUR 2.9 million in 2017/18). There were no outstanding exercisable RSUs at August 31, 2019.

RSU programs	Program 5	Program 6	Program 7	Program 8	Program 9	Program 10
Year allocated	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Vesting	Nov. 2015, 2016 & 2017	Nov. 2016, 2017 & 2018	Nov. 2017, 2018 & 2019	Nov. 2018, 2019 & 2020	Nov. 2019, 2020 & 2021	Nov. 2020 & 2021
Weighted average share price during exercise period	EUR 56.3	EUR 52.1	EUR 69.8	EUR 55.2	Not vested	Not granted
Average Black-Scholes value of options	EUR 33.8	EUR 53.5	EUR 52.3	EUR 74.4	EUR 92.2	EUR 83.3*
Assumptions:						
Risk-free interest rate, average	(0.01)%	(0.35)%	(0.57)%	(0.57)%	(0.55)%	
Volatility, average	18.8%	24.2%	21.3%	18.6%	24.7%	
Dividend	1.5%	1.0%	1.0%	0.9%	0.8%	
Period	2-5 years	2-5 years	2-5 years	2-5 years	2-5 years	2-5 years

\* Estimated value, based on average share price in Q4 2018/19.

## 5.1 SHARE-BASED PAYMENT (CONTINUED)

RSUs (number)	Executive Board	Key employees	Former employees	Total
<b>Outstanding at August 31, 2017</b>	<b>14,608</b>	<b>121,029</b>	<b>9,450</b>	<b>145,087</b>
Adjustment to allocation	541	5,989	-	6,530
Allocated	4,796	32,777	2,010	39,583
Transferred	(5,393)	(8,716)	14,109	-
Exercised	(5,448)	(42,008)	(4,900)	(52,356)
Forfeited	-	-	(8,136)	(8,136)
<b>Outstanding at August 31, 2018</b>	<b>9,104</b>	<b>109,071</b>	<b>12,533</b>	<b>130,708</b>
Adjustment to allocation	503	420	(1,954)	(1,031)
Allocated	5,304	60,601	-	65,905
Transferred	(1,820)	(8,071)	9,891	-
Exercised	(2,029)	(37,968)	(9,087)	(49,084)
Forfeited	-	-	(3,365)	(3,365)
<b>Outstanding at August 31, 2019</b>	<b>11,062</b>	<b>124,053</b>	<b>8,018</b>	<b>143,133</b>

## 5.2 NON-CASH ADJUSTMENTS

EUR million

	2018/19	2017/18
Depreciation, amortization and impairment losses	64.6	63.8
Gains and losses from disposal of assets	(0.3)	(0.4)
Share-based payment	0.4	1.5
Change regarding employee benefits	(0.1)	(0.1)
Change in provisions	0.7	1.1
<b>Total</b>	<b>65.3</b>	<b>65.9</b>

## 5.3 ACQUISITION OF ENTITIES

### ACCOUNTING POLICIES

On acquisition of subsidiaries, joint ventures and associates, the acquisition method is applied, and acquired assets, liabilities and contingent liabilities are measured on initial recognition at fair value at the time control is deemed to exist. Identifiable intangible assets are recognized if they can be separated and the fair value can be reliably measured. Deferred tax on revaluations is recognized.

Any positive differences between cost and fair value of the assets, liabilities and contingent liabilities acquired on acquisition of subsidiaries are recognized as goodwill under intangible assets. The cost is stated at the fair value of shares, debt instruments, and cash and cash equivalents. Goodwill is not amortized but is tested annually for impairment. Negative balances (negative goodwill) are recognized in the income statement at the date of acquisition. Positive differences on acquisition of joint ventures and associates are recognized in the balance sheet under investments in joint ventures and associates.

If the initial accounting for a business combination can be determined only provisionally by the end of the period in which the combination is effected, adjustments made to the provisional fair value of acquired assets, liabilities and contingent liabilities or cost of the acquisition within 12 months of the acquisition date are reflected in the initial goodwill. The adjustment is calculated as if it had been

recognized at the acquisition date, and comparative figures are restated.

Changes in estimates of the cost of the acquisition that are contingent on future events are recognized in the income statement.

Acquired entities are recognized in the Consolidated Financial Statements from the time of the acquisition.

For acquisitions of entities, the assets, liabilities and contingent liabilities of the acquiree are recognized using the acquisition method. The most significant assets acquired generally comprise goodwill, trademarks, non-current assets, receivables and inventories.

No active market exists for the majority of the acquired assets and liabilities, in particular in respect of acquired intangible assets. Accordingly, Management makes estimates of the fair value of acquired assets, liabilities and contingent liabilities. Depending on the nature of the item, the determined fair value of an item may be associated with uncertainty and possibly adjusted subsequently.



## 5.3 ACQUISITION OF ENTITIES (CONTINUED)

On October 4, 2018, Chr. Hansen acquired full ownership of the assets of Österreichische Laberzeugung Hundsbichler GmbH. Hundsbichler's products are widely recognized for their high quality.

Details of the purchase consideration, net assets acquired and goodwill are as follows:

EUR million	2018/19
<b>PURCHASE CONSIDERATION</b>	
Cash paid	9.3
Cash consideration	5.2
Adjustment for fair value of cash	(1.2)
<b>Fair value of total consideration</b>	<b>13.3</b>

Goodwill represents synergies from innovation, sales and technology.

According to IFRS 3, the acquired assets are recognized at fair value in the opening balance based on market participants' use of assets, even if the acquirer does not intend to use them or does not intend to use them in a way that is similar to what would be expected. Cash consideration is contingent on agreed performance measures to be achieved within three years, recognized based on management judgement.

EUR million	2018/19
<b>FAIR VALUE OF NET ASSETS ACQUIRED</b>	
Trademarks	1.0
Technology (patents and other rights)	6.3
Customer relations	0.9
Inventories	0.2
<b>Net identifiable assets acquired</b>	<b>8.4</b>
Fair value of total consideration	13.3
<b>Goodwill from acquisition</b>	<b>4.9</b>

The costs totaling EUR 0.3 million relating to the acquisition and integration of Hundsbichler are recognized as special items.

The acquisition on October 4, 2018 of Hundsbichler has contributed to optimize and utilize synergies in technology and innovation, however, there has only been a minor impact on the Group's sales and earnings in 2018/19.

## 5.4 RELATED PARTIES

Related parties are defined as parties with control or significant influence, including Group companies.

At August 31, 2019, Novo Holdings A/S, Denmark, held 21.98% of the share capital in Chr. Hansen Holding A/S (significant influence).

In addition, Capital Group Companies Inc., US, held 10.37%, APG Asset Management N.V., Netherlands, held 5.01% and WCM Investment Management, US, held 5.00%.

Other related parties include members of the Group's Executive Board and Board of Directors together with their immediate families.

All agreements relating to transactions with these parties are based on market price (arm's length). The majority of the agreements are renegotiated regularly. The Group had the following transactions with related parties:

EUR million

### TRANSACTIONS WITH RELATED PARTIES

Novo Holdings A/S Group

	2018/19
Purchases of goods, materials and services	Financial liabilities
9.7	0.1

Novo Holdings A/S Group

	2017/18
Purchases of goods, materials and services	Financial liabilities
9.8	0.8

Fees and other consideration to the Executive Board and Board of Directors are specified in note 2.3.  
Share-based payment is specified in note 5.1.

## 5.5 EVENTS AFTER THE BALANCE SHEET DATE

No events of importance to the Annual Report have occurred after the balance sheet date.

**5.6 LIST OF GROUP COMPANIES AT AUGUST 31, 2019**

Entity	Country	Currency	Nominal capital (000)	Chr. Hansen share in %	Production	Sales	Other
Chr. Hansen Argentina S.A.I.C.	Argentina	ARS	648	98		x	
Paprika S.A.	Argentina	ARS	1,300	70			x
Chr. Hansen Pty Ltd	Australia	AUD	1,004	100		x	
Hale-Bopp Australia Pty Ltd	Australia	AUD	30,686	100			x
Chr. Hansen Ind. e Com. Ltda.	Brazil	BRL	17,499	100	x	x	
Chr. Hansen Ltd.	Canada	CAD	24	100		x	
Chr. Hansen Chile SpA	Chile	CLP	4,680	100		x	
Chr. Hansen (Tianjin) Food Ingredients Co. Ltd.	China	CNY	8,000	100	x	x	
Chr. Hansen (Beijing) Trading Co., Ltd.	China	CNY	5,000	100		x	
Chr. Hansen Colombia S.A.S.	Colombia	COP	3,856,597	100		x	
Chr. Hansen Czech Republic s.r.o.	Czech Republic	CZK	470	100	x	x	
BacThera Denmark A/S	Denmark	DKK	2,000	100			x
Chr. Hansen A/S	Denmark	DKK	194,101	100	x	x	x
Chr. Hansen Natural Colors A/S	Denmark	DKK	10,000	100	x	x	
Chr. Hansen Finland Oy	Finland	EUR	3	100	x	x	
Chr. Hansen France SAS	France	EUR	11,100	100	x	x	
Chr. Hansen GmbH	Germany	EUR	1,000	100	x	x	
Halley GmbH	Germany	EUR	25	100			x
Hansen Hellas ABEE	Greece	EUR	1,057	100		x	
Chr. Hansen India Pvt. Ltd	India	INR	24,992	99.6		x	
Chr. Hansen Pars Co. Ltd	Iran	IRR	1,300,000	100		x	
Chr. Hansen Ireland Ltd.	Ireland	EUR	1	100		x	
Chr. Hansen Italia S.p.A.	Italy	EUR	500	100	x	x	
Chr. Hansen Japan Co., Ltd.	Japan	JPY	10,000	100		x	
Chr. Hansen Malaysia SDN. BHD.	Malaysia	MYR	1,000	100		x	
Chr. Hansen de Mexico S.A. de C.V.	Mexico	MXN	25,878	100		x	
Chr. Hansen S.A.	Peru	PEN	1,842	100	x	x	
Chr. Hansen Poland Sp. z o.o.	Poland	PLN	8,950	100		x	
Chr. Hansen SRL	Romania	RON	4	100		x	
Chr. Hansen LLC	Russia	RUB	10,972	100		x	
Chr. Hansen Singapore Pte Ltd.	Singapore	SGD	1,000	100			x
Chr. Hansen, S.L.	Spain	EUR	8,926	100		x	
Chr. Hansen Sweden AB	Sweden	SEK	1,000	100		x	
Chr. Hansen Gıda Sanayi ve Ticaret A.Ş.	Turkey	TRY	140	100		x	
Chr. Hansen Ukraine LLC	Ukraine	UAH	32	100		x	
Chr. Hansen Middle East FZ-LLC	UAE	AED	500	100		x	
Chr. Hansen (UK) Limited	UK	GBP	250	100		x	
Chr. Hansen Inc.	USA	USD	-	100	x	x	
Chr. Hansen Natural Colors LLC	USA	USD	-	100			x

A smiling man with short brown hair, wearing a white quilted jacket, stands in a factory or laboratory setting. He is positioned next to a robotic arm with blue cables. The background shows industrial structures and equipment.

# ANNUAL REPORT 2018/19

# FINANCIAL STATEMENTS

## PARENT

### TECHNOLOGICAL FRONTRUNNER

Speed matters - not least when it comes to screening and improving bacterial strains and cultures.

Chr. Hansen has invested in highly advanced robotic equipment in all Research & Development departments. Not only does that increase our innovation height in product development and shorten the way to market; it also frees up brain power for more value adding activities with customers and sustains growth.

The robots ensure automated processes that are faster and more precise allowing us to check bacterial strains not only for desired properties, such as temperature and growth preference and milk acidification speed, but also for undesired properties such as antibiotic resistance and bacteriophage sensitivity.



# FINANCIAL STATEMENTS – PARENT

# CONTENTS

## **INCOME STATEMENT**

## **STATEMENT OF COMPREHENSIVE INCOME**

## **BALANCE SHEET**

## **STATEMENT OF CHANGES IN EQUITY**

## **CASH FLOW STATEMENT**

## **BASIS OF PREPARATION**

1.1 General accounting policies

1.2 Summary of key accounting estimates

## **RESULTS FOR THE YEAR**

2.1 Depreciation, amortization and impairment losses

2.2 Staff expenses

2.3 Fees to auditors

2.4 Financial income

2.5 Financial expenses

2.6 Income taxes and deferred tax

## **OPERATING ASSETS AND LIABILITIES**

3.1 Intangible assets

3.2 Investments in Group companies

3.3 Receivables from Group companies

3.4 Commitments and contingent liabilities

## **CAPITAL STRUCTURE AND FINANCING**

4.1 Share capital

4.2 Derivative financial instruments

4.3 Credit, currency and interest rate risk

## **OTHER DISCLOSURES**

5.1 Share-based payment

5.2 Non-cash adjustments

5.3 Related parties

5.4 Events after the balance sheet date

**INCOME STATEMENT**

SEPTEMBER 1 – AUGUST 31

EUR million

	Note	2018/19	2017/18
<b>Revenue</b>		-	-
Cost of sales		-	-
<b>Gross profit</b>		-	-
Sales and marketing expenses	2.1	(6.0)	(5.0)
Administrative expenses	2.1 - 2.2 - 2.3	(14.4)	(16.2)
Other operating income		22.7	22.4
Other operating expenses		(1.2)	(0.2)
<b>Operating profit</b>		<b>1.1</b>	<b>1.0</b>
Dividends received from Group companies		135.7	135.8
Gain from sale of Chr. Hansen Properties A/S	3.2	55.4	-
Financial income	2.4	12.3	12.3
Financial expenses	2.5	(21.2)	(18.0)
<b>Profit before tax</b>		<b>183.3</b>	<b>131.1</b>
Income taxes	2.6	(0.7)	(0.3)
<b>Profit for the year</b>		<b>182.6</b>	<b>130.8</b>

# STATEMENT OF COMPREHENSIVE INCOME

SEPTEMBER 1 – AUGUST 31

EUR million

Note	2018/19	2017/18
<b>Profit for the year</b>	<b>182.6</b>	<b>130.8</b>
<b>Items that will be reclassified subsequently to the income statement when specific conditions are met:</b>		
Currency translation to presentation currency	(0.1)	(1.0)
Deferred gains/(losses) on cash flow hedges arising during the year	(6.9)	0.4
Gains/(losses) on cash flow hedges expiring during the year	-	1.1
Tax related to cash flow hedges	1.4	(0.3)
<b>Other comprehensive income for the year</b>	<b>(5.6)</b>	<b>0.2</b>
<b>Total comprehensive income for the year</b>	<b>177.0</b>	<b>131.0</b>

FINANCIAL STATEMENTS – PARENT

# BALANCE SHEET

AT AUGUST 31

EUR million

	Note	2019	2018
<b>ASSETS</b>			
<b>Non-current assets</b>			
<b>Intangible assets</b>			
Software	3.1	0.7	0.8
Intangible assets in progress	3.1	0.2	0.1
<b>Total intangible assets</b>		<b>0.9</b>	<b>0.9</b>
<b>Fixed asset investments</b>			
Investments in Group companies	3.2	942.4	946.6
Receivables from Group companies	3.3	198.0	190.8
<b>Total fixed asset investments</b>		<b>1,140.4</b>	<b>1,137.4</b>
<b>Other non-current assets</b>			
Deferred tax	2.6	2.5	2.8
<b>Total other non-current assets</b>		<b>2.5</b>	<b>2.8</b>
<b>Total non-current assets</b>		<b>1,143.8</b>	<b>1,141.1</b>
<b>Current assets</b>			
<b>Receivables</b>			
Receivables from Group companies		16.0	70.5
Tax receivables		57.3	47.4
Other receivables		1.9	1.0
Prepayments		0.1	0.3
<b>Total receivables</b>		<b>75.3</b>	<b>119.2</b>
<b>Cash and cash equivalents</b>		<b>21.8</b>	<b>28.7</b>
<b>Total current assets</b>		<b>97.1</b>	<b>147.9</b>
<b>Total assets</b>		<b>1,240.9</b>	<b>1,289.0</b>



FINANCIAL STATEMENTS – PARENT

# BALANCE SHEET

AT AUGUST 31

EUR million

## EQUITY AND LIABILITIES

### Equity

Share capital	4.1	176.8	176.8
Reserves		271.1	318.2
<b>Total equity</b>		<b>447.9</b>	<b>495.0</b>

### Liabilities

#### Non-current liabilities

Borrowings		600.5	612.9
<b>Total non-current liabilities</b>		<b>600.5</b>	<b>612.9</b>

#### Current liabilities

Borrowings		92.5	88.1
Trade payables		0.7	0.5
Payables to Group companies		85.6	86.5
Other payables		13.7	6.0
<b>Total current liabilities</b>		<b>192.5</b>	<b>181.1</b>

#### Total liabilities

#### Total equity and liabilities

**1,240.9**   **1,289.0**

Commitments and contingent liabilities	3.4
Derivative financial instruments	4.2
Credit, currency and interest rate risk	4.3
Related parties	5.3
Events after the balance sheet date	5.4

# STATEMENT OF CHANGES IN EQUITY

SEPTEMBER 1 – AUGUST 31

EUR million

				2018/19
	Note	Share capital	Cash flow hedges	Retained earnings Total
<b>Equity at September 1, 2018</b>		<b>176.8</b>	<b>(0.7)</b>	<b>318.9</b> <b>495.0</b>
Total comprehensive income for the year, see statement of comprehensive income		-	(5.5)	182.5 177.0
<b>Transactions with owners:</b>				
Purchase of treasury shares		-	-	(5.3) (5.3)
Exercised share options		-	-	- -
Share-based payment	5.1	-	-	4.7 4.7
Tax related to share-based payment		-	-	0.8 0.8
Dividend		-	-	(224.3) (224.3)
<b>Equity at August 31, 2019</b>		<b>176.8</b>	<b>(6.2)</b>	<b>277.3</b> <b>447.9</b>

During the year, an ordinary dividend for the financial year 2017/18 of EUR 0.87 (DKK 6.47) per share, corresponding to EUR 114 million, and an extraordinary dividend of EUR 0.84 (DKK 6.24) per share, corresponding to EUR 110 million, were paid.

A dividend of EUR 0.95 (DKK 7.07), corresponding to EUR 125 million in total, is proposed for 2018/19.

				2017/18
	Note	Share capital	Cash flow hedges	Retained earnings Total
<b>Equity at September 1, 2017</b>		<b>177.3</b>	<b>(1.9)</b>	<b>401.7</b> <b>577.1</b>
Total comprehensive income for the year, see statement of comprehensive income		(0.5)	1.2	130.3 131.0
<b>Transactions with owners:</b>				
Purchase of treasury shares		-	-	(4.7) (4.7)
Exercised share options		-	-	1.1 1.1
Share-based payment	5.1	-	-	5.5 5.5
Tax related to share-based payment		-	-	1.9 1.9
Dividend		-	-	(216.9) (216.9)
<b>Equity at August 31, 2018</b>		<b>176.8</b>	<b>(0.7)</b>	<b>318.9</b> <b>495.0</b>

During the year, an ordinary dividend for the financial year 2016/17 of EUR 0.85 (DKK 6.33) per share, corresponding to EUR 112 million, and an extraordinary dividend of EUR 0.79 (DKK 5.94) per share, corresponding to EUR 105 million, were paid.

**CASH FLOW STATEMENT**

SEPTEMBER 1 – AUGUST 31

EUR million

	Note	2018/19	2017/18
<b>Operating profit</b>		<b>1.1</b>	<b>1.0</b>
Non-cash adjustments	5.2	0.6	1.8
Change in working capital		58.7	137.1
Interest payments received		6.6	6.3
Interest payments made		(10.6)	(11.1)
Dividends received		135.7	135.8
Taxes paid		(50.4)	(33.6)
<b>Cash flow from operating activities</b>		<b>141.7</b>	<b>237.3</b>
Investments in intangible assets		(0.2)	(0.7)
Sale of subsidiary		59.6	-
<b>Cash flow used for investing activities</b>		<b>59.4</b>	<b>(0.7)</b>
<b>Free cash flow</b>		<b>201.1</b>	<b>236.6</b>
Repayment from/(to) Group companies		37.8	(20.0)
Borrowings		-	60.5
Repayment of long-term loans		(16.2)	(32.3)
Exercise of options		-	1.1
Purchase of treasury shares, net		(5.3)	(4.7)
Dividends paid		(224.3)	(216.9)
<b>Cash flow used for financing activities</b>		<b>(208.0)</b>	<b>(212.3)</b>
<b>Net cash flow for the year</b>		<b>(6.9)</b>	<b>24.3</b>
Cash and cash equivalents at September 1		28.7	4.4
Net cash flow for the year		(6.9)	24.3
<b>Cash and cash equivalents at August 31</b>		<b>21.8</b>	<b>28.7</b>

## 1.1 GENERAL ACCOUNTING POLICIES

### ACCOUNTING POLICIES

The Financial Statements of Chr. Hansen Holding A/S as Parent Company have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and additional further requirements in the Danish Financial Statement Act.

The accounting policies for the Company are the same as for the Chr. Hansen Group, see notes to the Consolidated Financial Statements, with the exception of the following.

#### Other income and expenses

Other income and expenses comprise income that is of a secondary nature to the activities of the Company, including income from management and service agreements.

#### Investments in Group companies

Accounting policies for investments in Group companies and related transactions are presented in note 3.2.

## 1.2 SUMMARY OF KEY ACCOUNTING ESTIMATES

### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

In preparing the Financial Statements for Chr. Hansen Holding A/S, Management makes various accounting estimates and assumptions that form the basis of recognition and measurement of the Parent Company's assets and liabilities.

The most significant accounting estimates and judgments for the Chr. Hansen Group are presented in the notes to the Consolidated Financial Statements.

Other accounting estimates and judgments considered key for the Company are:

- Investments in Group companies (note 3.2)

#### Estimation uncertainty

Determining the carrying amount of some assets and liabilities requires judgments, estimates and assumptions to be made concerning future events.

The judgments, estimates and assumptions made are based on historical experience and other factors that Management assesses to be reliable, but which are inherently associated with uncertainty and unpredictability. These assumptions may prove incomplete or incorrect, and unexpected events or circumstances may arise.

Assumptions about the future and estimation uncertainty at the balance sheet date are described in the notes where there is a significant risk of changes that could result in material adjustments to the carrying amount of assets or liabilities within the next financial year.

#### Judgments in applying accounting policies

In applying the Group's accounting policies, Management makes judgments that may significantly influence the amounts recognized in the Financial Statements.

## 2.1 DEPRECIATION, AMORTIZATION AND IMPAIRMENT LOSSES

EUR million	2018/19	2017/18
<b>AMORTIZATION</b>		
<b>Intangible assets</b>		
Administrative expenses	(0.2)	(0.3)
<b>Total depreciation, amortization and impairment losses</b>	<b>(0.2)</b>	<b>(0.3)</b>

## 2.2 STAFF EXPENSES

EUR million	2018/19	2017/18
Wages and salaries, etc.	(13.3)	(13.7)
Pension expenses - defined contribution plans	(1.0)	(0.8)
Social security, etc.	(0.1)	-
Salaries and other remuneration of the Executive Board and Board of Directors of Chr. Hansen Holding A/S	(5.2)	(4.3)
<b>Total</b>	<b>(19.6)</b>	<b>(18.8)</b>
<b>Average number of employees</b>	<b>67</b>	<b>56</b>
<b>Remuneration of the Executive Board and Board of Directors:</b>		
<b>Executive Board</b>		
Salaries, etc.	(3.6)	(3.0)
Pension - defined contribution plans	(0.4)	(0.3)
Share-based payment	(0.9)	(1.1)
<b>Total</b>	<b>(4.9)</b>	<b>(4.4)</b>
<b>Board of Directors</b>		
Fees	(1.1)	(1.1)

## 2.3 FEES TO AUDITORS

EUR million	2018/19	2017/18
<b>PricewaterhouseCoopers</b>		
Statutory audit	(0.1)	(0.1)
Other services	(0.1)	(0.1)
<b>Total</b>	<b>(0.2)</b>	<b>(0.2)</b>

## 2.4 FINANCIAL INCOME

EUR million	2018/19	2017/18
Interest from Group companies	6.6	6.3
Foreign exchange gains on derivatives	0.3	1.1
Foreign exchange gains	5.4	4.9
<b>Total</b>	<b>12.3</b>	<b>12.3</b>

Effective interest income amounted to EUR 0.0 million (EUR 0.0 million in 2017/18).

## 2.5 FINANCIAL EXPENSES

EUR million	2018/19	2017/18
Interest paid to Group companies	-	(0.2)
Foreign exchange losses on derivatives	(2.3)	-
Interest expenses	(8.8)	(7.6)
Foreign exchange losses	(7.4)	(6.4)
Losses on derivatives transferred from other comprehensive income	(1.4)	-
Other financial expenses including amortized costs	(1.3)	(3.8)
<b>Total</b>	<b>(21.2)</b>	<b>(18.0)</b>

Effective interest expenses amounted to EUR 11.6 million (EUR 11.6 million in 2017/18).

## 2.6 INCOME TAXES AND DEFERRED TAX

EUR million

	2018/19	2017/18
Current tax on profit for the year	0.5	0.3
Change in deferred tax concerning profit for the year	(0.1)	(0.3)
<b>Tax on profit for the year</b>	<b>0.4</b>	<b>-</b>
Adjustments concerning previous years	(1.1)	(0.3)
<b>Tax in the income statement</b>	<b>(0.7)</b>	<b>(0.3)</b>
<b>Tax on other comprehensive income</b>	<b>1.4</b>	<b>(0.3)</b>

	2018/19		2017/18	
<b>Reconciliation of tax rate</b>				
Danish tax rate	22.0%	40.3	22.0%	(28.8)
Non-taxable income and non-deductible expenses	(20.8)%	(42.4)	(22.0)%	28.9
Adjustments concerning previous years	0.6%	1.1	0.2%	(0.3)
Other taxes	0.1%	0.3	0.0%	(0.1)
<b>Effective tax rate</b>	<b>1.9%</b>		<b>0.0%</b>	
<b>Tax on profit for the year</b>		<b>(0.7)</b>		<b>(0.3)</b>

### Deferred tax

EUR million

	2018/19	2017/18
Deferred tax at September 1	2.8	2.7
Currency adjustments	(0.2)	0.1
Change in deferred tax - recognized in the income statement	0.5	(0.2)
Change in deferred tax - recognized through equity	(0.6)	0.2
<b>Deferred tax asset at August 31</b>	<b>2.5</b>	<b>2.8</b>
<b>Specification of deferred tax</b>		
Intangible assets	(0.1)	(0.2)
Current assets	-	0.2
Liabilities	2.6	2.8
<b>Total deferred tax at August 31</b>	<b>2.5</b>	<b>2.8</b>

### 3.1 INTANGIBLE ASSETS

EUR million

			2019
	Software	Intangible assets in progress	Total
Cost at September 1	3.1	0.1	3.2
Additions for the year	-	0.2	0.2
Transferred	0.1	(0.1)	-
<b>Cost at August 31</b>	<b>3.2</b>	<b>0.2</b>	<b>3.4</b>
Amortization at September 1	(2.3)	-	(2.3)
Amortization for the year	(0.2)	-	(0.2)
<b>Amortization at August 31</b>	<b>(2.5)</b>	<b>-</b>	<b>(2.5)</b>
<b>Carrying amount at August 31</b>	<b>0.7</b>	<b>0.2</b>	<b>0.9</b>

			2018
Cost at September 1	2.5	-	2.5
Additions for the year	0.6	0.1	0.7
Transferred	-	-	-
<b>Cost at August 31</b>	<b>3.1</b>	<b>0.1</b>	<b>3.2</b>
Amortization at September 1	(2.0)	-	(2.0)
Amortization for the year	(0.3)	-	(0.3)
<b>Amortization at August 31</b>	<b>(2.3)</b>	<b>-</b>	<b>(2.3)</b>
<b>Carrying amount at August 31</b>	<b>0.8</b>	<b>0.1</b>	<b>0.9</b>

#### Software

Software comprises expenses for acquiring software licenses and expenses related to internal development of software within the Group.

The value of the recognized software has been compared to the expected value in use. No indications of impairment have been identified.



## 3.2 INVESTMENTS IN GROUP COMPANIES

### ACCOUNTING POLICIES

#### Dividends from Group companies

Dividends from Group companies are recognized as income in the income statement of the Parent Company in the financial year in which the dividend is declared. If the carrying amount of an investment in a subsidiary exceeds the carrying amount of the net assets in the subsidiary's financial statements, or the dividend exceeds the total comprehensive income of the subsidiary in the period in which the dividend is declared, the carrying amount of the subsidiary is tested for impairment.

#### Investments in Group companies

Investments in Group companies are measured at cost. If the cost exceeds the recoverable amount, it is written down.

### KEY ACCOUNTING ESTIMATES AND JUDGMENTS

Management performs an annual test for indications of impairment of investments in Group companies. Impairment tests are conducted in the same way as for goodwill in the Chr. Hansen Group, see note 3.1 to the Consolidated Financial Statements.

There were no indications of impairment of the investments in 2018/19 or 2017/18.

EUR million

	2019	2018
Cost at September 1	946.6	948.9
Currency translation	-	(2.3)
Disposals for the year	(4.2)	-
<b>Cost at August 31</b>	<b>942.4</b>	<b>946.6</b>

See note 5.6 to the Consolidated Financial Statements for a list of Group companies.

### 3.3 RECEIVABLES FROM GROUP COMPANIES

#### ACCOUNTING POLICIES

All Intercompany loans and receivables are assessed for impairment on the same basis as external receivables. The expected loss rates are based on the payment profiles of sales over a period of 12 months and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the intercompany customers to settle the receivables.

EUR million	2019	2018
<b>Due between 1 and 5 years</b>		
Loans to Group companies	198.0	190.8
<b>Total</b>	<b>198.0</b>	<b>190.8</b>

### 3.4 COMMITMENTS AND CONTINGENT LIABILITIES

#### Operating leases

Lease commitments primarily related to car and equipment rental: EUR 0.2 million is due within 1 year and EUR 0.3 million is due between 1 and 5 years (EUR 0.2 million due within 1 year and EUR 0.3 million due between 1 and 5 years in 2017/18). Payments of EUR 0.2 million were expensed in 2018/19 (EUR 0.3 million in 2017/18).

#### Other guarantees and liabilities

Chr. Hansen Holding A/S is jointly and severally liable for Chr. Hansen A/S's drawings on the Group's credit facility. Chr. Hansen A/S had not drawn on the facility at August 31, 2019 or at August 31, 2018.

Chr. Hansen Holding A/S is jointly taxed with other companies in the Chr. Hansen Group. Chr. Hansen Holding A/S is jointly and unlimited liable for the Danish income taxes together with

the other jointly taxed companies, and withholding taxes on dividends, interests and royalties related to the jointly taxed companies.

#### Pending court and arbitration cases

Certain claims have been made against Chr. Hansen Holding A/S. Management is of the opinion that the outcome of these disputes will not have a significant impact on the Company's financial position.

#### Change of control

The loan facilities are subject to change-of-control clauses. Regarding change-of-control clauses in Management contracts, please see note 2.3 to the Consolidated Financial Statements.

## 4.1 SHARE CAPITAL

The Company's share capital has a nominal value of DKK 1,318,524,960 (equivalent to EUR 176.8 million), divided into shares of DKK 10 each. The share capital has been fully paid up.

The Company has not conducted a share buy-back program in the last three years.

At August 31, 2019, the Company held 166,229 treasury shares, corresponding to less than 1% of the total (196,718 treasury shares at August 31, 2018, less than 1% of total shares). All of the treasury shares were held to cover share option programs.

### Number of shares outstanding:

Outstanding at September 1

Purchase of treasury shares

Sold during the year

**Outstanding at August 31**

2019	2018
131,655,778	131,565,160
(64,000)	(65,000)
94,489	155,618
<b>131,686,267</b>	<b>131,655,778</b>

## 4.2 DERIVATIVE FINANCIAL INSTRUMENTS

Chr. Hansen Holding A/S is exposed to market risks, primarily risks relating to currency and interest, and uses financial instruments to hedge recognized and future transactions. Chr. Hansen Holding A/S only enters into hedging agreements that relate to the underlying business.

### Interest rate risk

Interest rate swaps are used for cash flow hedging by hedging the underlying floating interest rates. At August 31, 2019, the outstanding interest rate swaps had the following market value:

EUR million

				2019	
Market value of open interest rate swaps	Expiry	Contract amount	Gain/(loss)	Recognized in income statement	Recognized in fair value reserve
EUR 75 million interest rate swaps*	Aug. 2022	75.0	(1.6)	(0.7)	(0.9)
EUR 50 million interest rate swaps*	Aug. 2021	50.0	(0.5)	(0.2)	(0.3)
EUR 75 million interest rate swaps*	Aug. 2023	75.0	(2.7)	(1.2)	(1.5)
USD 25 million interest rate swaps	Aug. 2020	22.7	(0.2)	-	(0.2)
USD 25 million interest rate swaps	Aug. 2021	22.7	(0.6)	-	(0.6)
USD 50 million interest rate swaps**	Aug. 2023	45.3	(2.7)	-	(2.7)
<b>Total</b>		<b>290.7</b>	<b>(8.3)</b>	<b>(2.1)</b>	<b>(6.2)</b>

				2018	
	Expiry	Contract amount	Gain/(loss)	Recognized in income statement	Recognized in fair value reserve
EUR 75 million interest rate swaps*	Aug. 2022	75.0	-	-	-
EUR 50 million interest rate swaps*	Aug. 2021	50.0	-	-	-
EUR 75 million interest rate swaps*	Aug. 2023	75.0	-	-	-
USD 100 million interest rate swaps	Nov. 2018	85.8	0.3	-	0.3
USD 25 million interest rate swaps	Aug. 2020	21.5	-	-	-
USD 25 million interest rate swaps	Aug. 2021	21.5	-	-	-
USD 50 million interest rate swaps**	Aug. 2023	42.9	-	-	-
<b>Total</b>		<b>371.7</b>	<b>0.3</b>	<b>-</b>	<b>0.3</b>

The fair value is calculated using a valuation model based primarily on observable market data, corresponding to level 2 in the fair value hierarchy. There is no currency risk related to the Company's swaps.

The interest on the Company's financing facilities is based on a floating interest rate plus a margin. At August 31, 2019, 54% of outstanding debt was hedged through interest rate swaps or loans at fixed interest rates (64% at August 31, 2018). The

total debt had an average maturity of 3.1 years at August 31, 2019 (3.7 years at August 31, 2018). An increase of 1%-point in the average interest rate on the Company's interest-bearing debt excluding swaps would reduce the Company's earnings before tax by EUR 4.0 million over the next 12-month period (EUR 5.8 million in the financial year 2017/18). The effect of a 1%-point interest rate change on the swaps entered into would be EUR 0.9 million (EUR 4.9 million in 2017/18).

## 4.2 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

EUR million	2019	2018
<b>Financial assets</b>		
Receivables from Group companies	16.0	70.5
Tax receivables	57.3	47.4
Other receivables and prepayments	2.0	1.3
Cash and cash equivalents	21.8	28.7
<b>Total financial assets</b>	<b>97.1</b>	<b>147.9</b>
<b>Financial liabilities</b>		
Borrowings	693.0	701.0
Trade payables	0.7	0.5
Other financial liabilities	99.3	92.5
<b>Financial liabilities</b>	<b>793.0</b>	<b>794.0</b>
<b>Classification of financial assets</b>		
Loans and receivables	97.1	147.9
<b>Total</b>	<b>97.1</b>	<b>147.9</b>
<b>Classification of financial liabilities</b>		
Financial liabilities measured at amortized cost	793.0	794.0
<b>Total</b>	<b>793.0</b>	<b>794.0</b>

EUR million	2019	2018
<b>Maturity analysis for financial liabilities</b>		
Borrowings		
0-1 year	92.5	88.1
1-5 years	587.2	612.9
> 5 years	13.3	-
Trade payables		
0-1 year	0.7	0.5
Other financial liabilities		
0-1 year	99.3	92.5
<b>Total</b>	<b>793.0</b>	<b>794.0</b>
Average interest rate	1.0%	1.0%
Borrowings have been reduced by amortization and financing expenses.		
<b>Amortization expenses offset under non-current debt</b>	<b>1.8</b>	<b>2.6</b>

## 4.3 CREDIT, CURRENCY AND INTEREST RATE RISK

### Credit risk

Credit risk for cash and cash equivalents and financial instruments is managed by working only with financial institutions that have a satisfactory credit rating. In general, the risk is considered limited.

### Currency risk

The overall purpose of managing currency risk is to minimize the impact of short-term currency movements on earnings and cash flow. The main currency risk for the Company is loans denominated in USD.

It is the policy of the Company not to hedge investments in subsidiaries.

### Interest risk

The interest on the Company's multicurrency loan facility is based on a floating interest rate plus a margin. Interest rate swaps are utilized to reduce the risk relating to the income statement 54% of the outstanding debt was hedged through interest rate swaps at August 31, 2019 (64% at August 31, 2018).

### Cash flow risk

Chr. Hansen Holding A/S's interest-bearing debt amounted to EUR 694.8 million at August 31, 2019 (EUR 703.5 million at August 31, 2018).

## 5.1 SHARE-BASED PAYMENT

### Matching shares programs

Long-term matching shares programs are granted to the Executive Board and certain key employees. Under the programs, the participants are required to acquire a number of existing shares in Chr. Hansen Holding A/S (investment shares) and retain ownership of such shares for a predefined holding period of three years (the holding period). Upon expiration of the holding period and subject to fulfillment of certain predefined performance targets and continued employment at the vesting date, the participants will be entitled to receive up to four additional shares in Chr. Hansen Holding A/S (matching shares) per investment share for no consideration.

The theoretical market value of the program in 2018/19 was EUR 3.6 million based on fulfillment of all predefined performance targets (EUR 3.1 million in 2017/18). The fair value at grant was EUR 2.9 million, taking into consideration the assessed likelihood of meeting the no-market condition (EUR 2.8 million in 2017/18).

EUR 0.8 million was expensed in 2018/19 relating to the matching shares programs, including accelerations and reversals (EUR 0.9 million in 2017/18).

Matching shares programs	Program 1	Program 2	Program 3	Program 4	Program 5
Year allocated	2014/15	2015/16	2016/17	2017/18	2018/19
Vesting conditions (KPIs)	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR	Org. growth, EBIT, TSR
Vesting	Nov. 2017	Nov. 2018	Nov. 2019	Nov. 2020	Nov. 2021
Average fair market value of matching shares	EUR 26.4	EUR 36.8	EUR 44.2	EUR 54.6	EUR 72.0
<b>Assumptions:</b>					
Dividend	1.5%	1.5%	1.5%	1.5%	1.5%
Period	3 years	3 years	3 years	3 years	3 years
TSR peer group likelihood	50.0%	50.0%	50.0%	50.0%	50.0%

Number of matching shares	Executive Board	Key employees	Former employees	Total
<b>Outstanding at August 31, 2017</b>	<b>43,808</b>	<b>30,427</b>	<b>38,869</b>	<b>113,104</b>
Allocated	31,592	10,303	-	41,895
Transferred	(22,825)	(5,836)	37,025	8,364
Forfeited	-	-	(27,369)	(27,369)
Exercised	(14,728)	(8,936)	(20,328)	(43,992)
<b>Outstanding at August 31, 2018</b>	<b>37,847</b>	<b>25,958</b>	<b>28,197</b>	<b>92,002</b>
Allocated	21,348	8,905	242	30,495
Transferred	(10,869)	(3,522)	14,391	-
Forfeited	-	-	(7,656)	(7,656)
Exercised	(4,588)	(5,936)	(19,748)	(30,272)
<b>Outstanding at August 31, 2019</b>	<b>43,738</b>	<b>25,405</b>	<b>15,426</b>	<b>84,569</b>

## 5.1 SHARE-BASED PAYMENT (CONTINUED)

### Short-term restricted stock unit (RSU) programs

Short-term RSU programs are granted to the Executive Board and other key employees based on fulfillment of individual key performance indicators and continued employment at the vesting date. The RSUs are granted as share options with an exercise price of up to DKK 1 and vest gradually over a three-year period. Subject to the person still being employed with Chr. Hansen, each share option may be exercised to purchase one existing share in Chr. Hansen Holding A/S.

The value of RSUs allocated in 2018/19 (RSU program 10) was estimated to be EUR 1.4 million (EUR 0.9 million in 2017/18). The number of RSUs allocated, their value and underlying assumptions will be finally determined in November 2019.

EUR 0.9 million was expensed in 2018/19 relating to the short-term RSU programs (EUR 0.9 million in 2017/18).

There were no outstanding exercisable RSUs at August 31, 2019.

RSU programs	Program 5	Program 6	Program 7	Program 8	Program 9	Program 10
Year allocated	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Vesting	Nov. 2015, 2016 & 2017	Nov. 2016, 2017 & 2018	Nov. 2017, 2018 & 2019	Nov. 2018, 2019 & 2020	Nov. 2019, 2020 & 2021	Nov. 2020 & 2021
Weighted average share price during exercise period	EUR 55.3	EUR 52.8	EUR 70.8	EUR 62.4	Not vested	Not granted
Average Black-Scholes value of options	EUR 33.8	EUR 53.5	EUR 52.3	EUR 74.4	EUR 92.2	EUR 83.3*
<b>Assumptions:</b>						
Risk-free interest rate, average	(0.01)%	(0.35)%	(0.57)%	(0.57)%	(0.55)%	
Volatility, average	18.8%	24.2%	21.3%	18.6%	24.7%	
Dividend	1.5%	0.01	1.0%	0.9%	0.8%	
Period	2-5 years	2-5 years	2-5 years	2-5 years	2-5 years	2-5 years

\*Estimated value, based on average share price in Q4 2018/19.

RSUs (number)	Executive Board	Key employees	Former employees	Total
<b>Outstanding at August 31, 2017</b>	<b>14,608</b>	<b>18,018</b>	<b>5,575</b>	<b>55,909</b>
Adjustment to allocation	541	(6,453)	-	(5,912)
Allocated	4,796	3,925	2,010	10,731
Transferred	(5,393)	-	5,393	-
Exercised	(5,448)	(5,129)	(2,536)	(13,113)
Forfeited	-	-	(3,511)	(3,511)
<b>Outstanding at August 31, 2018</b>	<b>9,104</b>	<b>10,361</b>	<b>6,931</b>	<b>26,396</b>
Adjustment to allocation	503	3,613	(2,241)	1,875
Allocated	5,304	11,864	-	17,168
Transferred	(2,029)	(4,585)	(4,021)	(10,635)
Exercised	(1,820)	(1,196)	3,016	-
Forfeited	-	-	(928)	(928)
<b>Outstanding at August 31, 2019</b>	<b>11,062</b>	<b>20,057</b>	<b>2,757</b>	<b>33,876</b>



## 5.2 NON-CASH ADJUSTMENTS

EUR million	2018/19	2017/18
Depreciation, amortization and impairment losses	0.2	0.3
Share-based payment	0.4	1.5
<b>Total</b>	<b>0.6</b>	<b>1.8</b>

## 5.3 RELATED PARTIES

Related parties are defined as parties with control or significant influence, including Group companies.

At August 31, 2019, Novo Holdings A/S, Denmark, held 21.98% of the share capital in Chr. Hansen Holding A/S (significant influence).

In addition, Capital Group Companies Inc., US, held 10.37%, APG Asset Management N.V., Netherlands, held 5.01% and WCM Investment Management, US, held 5.00%.

Other related parties include members of the Group's Executive Board and Board of Directors together with their immediate families.

### Transactions with Group companies

EUR million	2018/19	2017/18
Sale of services	22.7	22.4
Interest income	6.6	6.3
Interest expenses	-	(0.2)
<b>Total</b>	<b>29.3</b>	<b>28.5</b>
Amounts receivable at August 31	214.0	261.3
Amounts payable at August 31	85.6	86.5

Transactions with other related parties are specified in note 5.4 to the Consolidated Financial Statements.

## **5.4 EVENTS AFTER THE BALANCE SHEET DATE**

No events have occurred after the balance sheet date of importance to the Annual Report.