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MAGAZINE

NO 3 – 2018 | QUARTERLY INVESTOR UPDATE

NOVO NORDISK RESEARCH CENTRE OPENS IN OXFORD

PHASE 2 DATA FOR SOMAPACITAN DEMONSTRATE BIG POTENTIAL

CONNECTED INSULIN PENS POISED FOR LAUNCH



NINE MONTHS OF SOLID GROWTH AND IMPORTANT MILESTONES

We are off to a very good start with Ozempic® which is strengthening our leadership position in the expanding GLP-1 market. Our other key innovative products Victoza®, Saxenda®, Tresiba® and Xultophy® continue the solid contribution to sales growth in the first nine months of 2018.

Sales increased by 4% in local currencies and decreased by 2% in Danish kroner to DKK 82.1 billion. Operating profit decreased by 6% in Danish kroner and increased by 2% in local currencies to DKK 36.5 billion, impacted by the significant depreciation of the US dollar and related currencies versus the Danish krone in the first half of 2018 compared with the same period in 2017.

In February 2018, we launched Ozempic® in the USA, a new once-weekly GLP-1, and the weekly new-to-brand prescription market share for Ozempic® has now reached 19% strengthening the total Novo Nordisk GLP-1 market share. Ozempic® has now been launched in seven countries in Europe and in North America.

Since August 2018, we have announced phase 3a results from additional three of the 10 clinical trials in the PIONEER programme for oral semaglutide, a new once-daily GLP-1 tablet for people with type 2 diabetes. The trials confirmed statistically significant reductions in both HbA_{1c} and weight for oral semaglutide compared to placebo in people with renal impairment, add-on treatment to insulin and dulaglutide in Japanese people.

With our ambition to bring innovative treatments to patients, we have made some important changes aimed at boosting our R&D innovation as well as redirecting resources in other parts of the organisation to focus on our future growth drivers. We have communicated plans to restructure the R&D organisation to accelerate the expansion and diversification of its pipeline and to enable increased investment in transformational biological and technological innovation.

For 2018, sales growth is now expected to be 4-5% and operating profit growth is still expected to be 2-5%, both measured in local currencies. Sales growth reported in Danish kroner is now expected to be 4 percentage points lower than in local currencies while operating profit growth is still expected to be 7 percentage points lower than in local currencies.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lars Fruergaard Jørgensen'.

*Lars Fruergaard Jørgensen
President and CEO, Novo Nordisk*



As part of the 'Hypos Matter' campaign, participants on this year's diabetes congress EASD had the possibility to, via virtual reality, try what it may feel like to have a hypo.



TRESIBA® REVITALISED WITH NEW 'HYPOS MATTER' CAMPAIGN

In 2017, the clinical trial DEVOTE demonstrated that Tresiba® is superior to insulin glargine U100 (Lantus®) when it comes to reducing the risk of severe hypoglycaemia (low blood sugar) in people with type 2 diabetes. In fact, Tresiba® reduces the risk by no less than 40% – and the product reduces the risk of severe nocturnal hypoglycaemia by a full 53% compared with insulin glargine U100.

Since then, the results have been incorporated in a number of Tresiba® label updates, including in the US and the EU. As a result, Novo Nordisk has in 2018 conducted a 'second launch' of the product in more than

40 countries – underpinned by the awareness campaign 'Hypos Matter'.

"We are relaunching Tresiba® with an updated label, and focus on running the 'Hypos Matter' campaign, which highlights the importance of reducing the risk of severe hypoglycaemia," says Camilla Sylvest, executive vice president of Commercial Strategy & Corporate Affairs.

"Hypoglycaemic events are feared by people living with diabetes and their relatives, and underestimated in terms of frequency and importance. Offering a product that reduces the risk of severe hypoglycaemia is extremely meaningful."

In 2018, Tresiba® has been relaunched in the US, Canada and Japan. On all three markets, Tresiba® is showing good momentum.

In Japan, the product has obtained a market share (volume) of 44% and contributed to Novo Nordisk's overall market share (volume) of 52% in the basal insulin segment. In the US, the Tresiba® label was updated in March. This has contributed to a market share (volume) of 14% on the American market, and Tresiba® has within the last year increased its market share by 5%. Novo Nordisk's total market share within basal insulin on the US market is now 36%. Tresiba® is showing strong results in

Canada too. Since the launch in October 2017 the product has achieved a market share of 5,1%.

In October it was furthermore communicated that Novo Nordisk will relaunch Tresiba® in the German market on 1 December 2018.

Tresiba® is currently launched in more than 70 markets. In October, the European Association for the Study of Diabetes (EASD) and the American Diabetes Association (ADA) presented their updated treatment guidelines. They now recommend Tresiba® as one of two preferred products within the basal insulin segment.

**DIABETES CARE AND
OBESITY SALES
INCREASED BY**

5%

(local currencies)

**OPERATING PROFIT
INCREASED BY**

2%

(local currencies)

**DILUTED EARNINGS
PER SHARE
INCREASED BY**

3%

**BIOPHARMACEUTICALS
SALES INCREASED BY**

1%

(local currencies)

HIGHLIGHTS FROM THE FIRST NINE MONTHS OF 2018

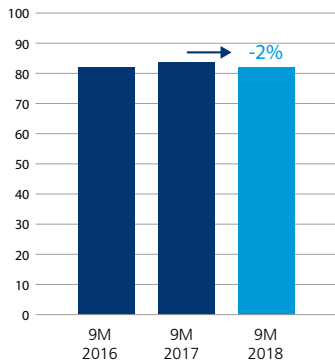
Novo Nordisk's operating profit decreased by 6% in Danish kroner and increased by 2% in local currencies in the first nine months of 2018.

- Sales decreased by 2% in Danish kroner and increased by 4% in local currencies to DKK 82.1 billion.
 - Sales of Victoza® increased by 6% to DKK 17.8 billion (12% in local currencies).
 - Sales of Ozempic® were DKK 804 million and the total GLP-1 franchise increased 10% (18% in local currencies).
 - Sales of Saxenda® increased by 42% to DKK 2.6 billion (53% in local currencies).
 - Sales of Tresiba® increased by 8% to DKK 5.9 billion (15% in local currencies).
 - Sales in International Operations increased by 2% (8% in local currencies).
 - Sales in North America Operations decreased by 6% (increased 1% in local currencies).
 - Sales within diabetes care and obesity decreased by 1% to DKK 69.0 billion (increased by 5% in local currencies). Sales within biopharmaceuticals decreased by 6% to DKK 13.1 billion (1% in local currencies).
- Operating profit decreased by 6% in Danish kroner and increased by 2% in local currencies to DKK 36.5 billion, impacted by the significant depreciation of the US dollar and related currencies versus the Danish krone in the first half of 2018 compared with the same period in 2017. Adjusting for severance costs related to lay-offs in the third quarter of 2018, operating profit increased by 4% in local currencies.
- Net profit increased by 1% to DKK 30.1 billion. Diluted earnings per share increased by 3% to DKK 12.40.
- In February 2018, Novo Nordisk launched Ozempic® in the USA, a new once-weekly GLP-1, and the weekly new-to-brand prescription market share for Ozempic® has now reached 19% strengthening the total Novo Nordisk GLP-1 market share. Ozempic® has now been launched in seven countries in Europe and in North America.
- Since August 2018, Novo Nordisk has announced phase 3a results from additional three of the 10 clinical trials in the PIONEER programme for oral semaglutide, a new once-daily GLP-1 tablet for people with type 2 diabetes. The trials confirmed statistically significant reductions in both HbA_{1c} and weight for oral semaglutide compared to placebo in people with renal impairment, add-on treatment to insulin and dulaglutide in Japanese people.
- Novo Nordisk has communicated plans to restructure the R&D organisation to accelerate the expansion and diversification of its pipeline and to enable increased investment in transformational biological and technological innovation. A number of additional restructuring initiatives across functions and geographies have been initiated to support the commercial activities for the portfolio of innovative products. As a consequence, the total workforce is expected to be reduced by approximately 1,300 employees before the end of 2018 and the majority of these reductions have been implemented as of 1 November 2018.
- For 2018, sales growth is now expected to be 4-5% and operating profit growth is still expected to be 2-5%, both measured in local currencies. Sales growth reported in Danish kroner is now expected to be 4 percentage points lower than in local currencies while operating profit growth is still expected to be 7 percentage points lower than in local currencies.

Read more in the company announcement of 1 November 2018 at novonordisk.com/media.

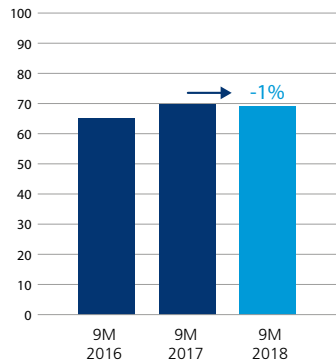
TOTAL SALES

DKK billion



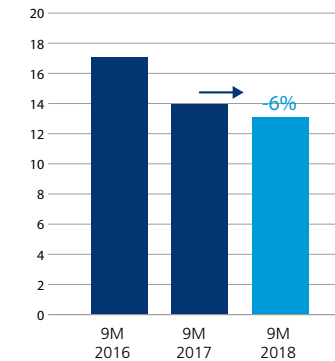
DIABETES CARE AND OBESITY SALES

DKK billion



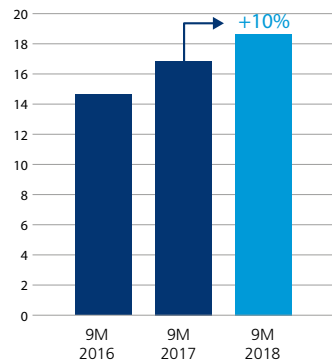
BIOPHARMACEUTICALS SALES

DKK billion



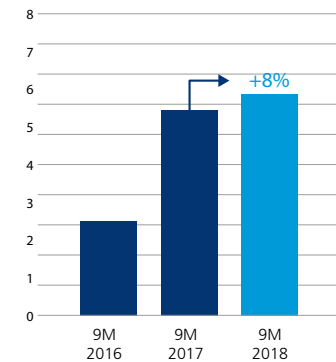
GLP-1 SALES

DKK billion



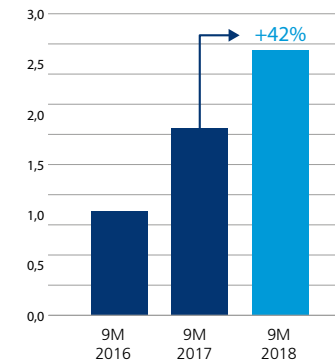
TRESIBA® SALES

DKK billion



SAXENDA® SALES

DKK billion



KEY FIGURES FOR THE FIRST NINE MONTHS OF 2018

Amounts are in DKK million, except for number of shares, earnings per share and full-time equivalent employees.

	Q3 2018	Q3 2017	% change Q3 2017 to Q3 2018
INCOME STATEMENT			
Net sales	82,099	83,704	(2%)
Gross profit	69,135	70,772	(2%)
<i>Gross margin</i>	84.2%	84.6%	
Sales and distribution costs	20,669	20,045	3%
<i>Percent of sales</i>	25.2%	23.9%	
Research and development costs	10,261	10,031	2%
<i>Percent of sales</i>	12.5%	12.0%	
Administrative costs	2,647	2,666	(1%)
<i>Percent of sales</i>	3.2%	3.2%	
Other operating income, net	907	890	2%
Operating profit	36,465	38,920	(6%)
<i>Operating margin</i>	44.4%	46.5%	
Financial items (net)	780	(811)	N/A
Profit before income taxes	37,245	38,109	(2%)
Income taxes	7,114	8,232	(14%)
Effective tax rate	19.1%	21.6%	
Net profit	30,131	29,877	1%
<i>Net profit margin</i>	36.7%	35.7%	
OTHER KEY NUMBERS			
Depreciation, amortisation and impairment losses	2,283	2,277	0%
Capital expenditure (tangible assets)	6,213	5,636	10%
Net cash generated from operating activities	37,204	35,136	6%
Free cash flow	29,223	29,722	(2%)
Total assets	101,895	97,891	4%
Equity	47,512	46,946	1%
Equity ratio	46.6%	48.0%	
Average number of diluted shares outstanding (million)	2,430.8	2,484.5	(2%)
Diluted earnings per share / ADR (in DKK)	12.40	12.03	3%
Full-time equivalent employees end of period	43,161	41,656	4%

FORWARD-LOOKING STATEMENT

This document contains a summary of information made by Novo Nordisk in connection with the issuing of our company announcement of 1 November 2018. The company announcement contains forward-looking statements with respect to the business, objectives and plans of Novo Nordisk and its current goals, and expectations relating to its future economic performance. These statements are based on current plans, estimates and projections. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific. Novo Nordisk cautions that a number of important factors, including those described in this document, could cause actual results to differ materially from those contemplated in any forward-looking statements. Factors that may affect future results include, but are not limited to, global as well as local political and economic conditions, including interest rate and currency exchange rate fluctuations, delay or failure of projects related to research and/or development, unplanned loss of patents, interruptions of supplies and production, product recalls, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, reliance on information technology, Novo Nordisk's ability to successfully market current and new products, exposure to product liability and legal proceedings and investigations, changes in governmental laws and related interpretation thereof, including on reimbursement, intellectual property protection and regulatory controls on testing, approval, manufacturing and marketing, perceived or actual failure to adhere to ethical marketing practices, investments in and divestitures of domestic and foreign companies, unexpected growth in costs and expenses, failure to recruit and retain the right employees, and failure to maintain a culture of compliance. Please also refer to the overview of risk factors in 'The risks of doing business' on pages 42–43 of the *Annual Report 2017*, available at novonordisk.com, and Novo Nordisk's Form 20-F filed with the US Securities and Exchange Commission for examples of forward-looking statements and a discussion of certain factors which could cause actual results to differ materially from those contemplated in any forward-looking statements. The forward-looking statements contained in this document are made as of the date of the above-mentioned company announcement and, unless required by law, Novo Nordisk is under no duty and undertakes no obligation to update or revise any forward-looking statement after the distribution of the company announcement, whether as a result of new information, future events or otherwise.

27.7

MILLION PEOPLE USE
OUR **DIABETES CARE**
PRODUCTS

NOVO NORDISK'S SHARE
OF THE **GLOBAL DIABETES**
MARKET MEASURED
IN VALUE:

28%

OUR PRODUCTS
ARE MARKETED
IN MORE THAN

170

COUNTRIES

PHASE 2 DATA FOR SOMAPACITAN DEMONSTRATE BIG POTENTIAL AS A TREATMENT FOR CHILDHOOD GROWTH HORMONE DEFICIENCY



In September, Novo Nordisk presented data from REAL 3, the clinical phase 2 trial for somapacitan, a novel growth hormone in development for once-weekly administration.

The data showed that somapacitan matched the therapeutic benefits of Novo Nordisk's once-daily Norditropin® in children with growth hormone deficiency.

“Today, children with growth hormone deficiency require daily injections, which can be a considerable treatment burden for children and their caregivers,” says lead investigator Professor Lars Sävendahl of the Karolinska Institutet and Paediatric Endocrinology Unit, Karolinska University Hospital, Stockholm, Sweden. “A once-weekly treatment would represent a significant development for these children and their families, helping them to live less disrupted lives.”

The trial demonstrated dose dependency with no statistically significant difference in height velocity between somapacitan and daily growth hormone at the two upper doses of somapacitan. The mean annualised height velocity for the three dose levels of somapacitan was 8.0 cm, 10.9 cm and 12.9 cm respectively, compared with 11.4 cm for daily Norditropin®.

Childhood growth hormone deficiency is a rare condition in which there is not enough growth hormone circulating in the blood to ensure normal growth.

Childhood growth hormone deficiency is a rare condition in which there is not enough growth hormone circulating in the blood to ensure normal growth. Affected children experience slowed or halted growth from the age of two or three onwards. If treatment is started early, affected children may grow to a normal height. Currently available growth hormone treatments must be administered as a daily subcutaneous injection.

“The injection fatigue following years of daily administration could negatively impact adherence, thereby leading to worse treatment outcomes,” says Mads Krogsgaard Thomsen, executive vice president and chief science officer of Novo Nordisk. “In line with our long-term commitment, we’re investigating the potential of somapacitan as a once-weekly growth hormone treatment for children with growth hormone deficiency.”

In July 2018, the Committee for Orphan Medicinal Products (COMP) Europe issued a positive opinion on the application for orphan drug designation for somapacitan for the treatment of growth hormone deficiency.

Approximately 830,000 children are born each year with a growth-related disorder that can be treated with growth hormone. Novo Nordisk expects to initiate phase 3 trials of somapacitan in children during the first half of 2019.

The connected insulin pens can, for example, indicate whether the patient has taken the right dosage, at what time and how this affects their blood sugar.

NOVO NORDISK PLANS THE FIRST GLOBAL LAUNCH OF CONNECTED INSULIN PENS

In October, Novo Nordisk announced plans to make the durable, connected insulin pens NovoPen® 6 and NovoPen Echo® Plus commercially available in a number of markets from 2019.

The connected pens are part of Novo Nordisk's strategy within digital health, which aims to ensure that users achieve better treatment results.

"We know that even though our insulin products are really good, patients don't always manage to achieve perfect treatment results in real life. So the aim behind the

new connected solutions is to enhance the product experience for patients," says Kenneth Strømdahl, senior vice president of Device R&D.

With insulin, for example, the new pens can indicate whether the patient has taken the right dosage, at what time and how this affects their blood sugar. The connected pens can store data for up to three months.

"The digital solutions provide opportunities for a better dialogue between patient and doctor. In this way we're helping to ease the

patient's efforts in relation to controlling a chronic disease while maximising the advantages of our medicine," says Kenneth Strømdahl.

To support the future integration of its connected insulin pens with broader digital health solutions, Novo Nordisk has signed new partnership agreements with leading technology companies within diabetes.

"Our non-exclusive partnership strategy allows us to integrate our solutions with the various digital platforms, such as blood

glucose measurement devices, that people are already using to help manage their diabetes," says Camilla Sylvest, executive vice president of Commercial Strategy & Corporate Affairs. "We firmly believe that this will help more people realise the full benefit of our innovative medicines and ease their effort of managing diabetes."

The launch of Novo Nordisk's first connected insulin pens, NovoPen® 6 and NovoPen Echo® Plus, will commence in the first quarter of 2019 and roll out to over 50 countries in the coming years.



NOVO NORDISK OPENS RESEARCH CENTRE IN OXFORD

It has been almost two years since Novo Nordisk entered into a strategic alliance with the University of Oxford. The partnership took concrete form in early September with the opening of Novo Nordisk Research Centre Oxford.

The official inauguration of the centre took place in the middle of the Old Road campus of the University of Oxford University. In addition to Novo Nordisk and Oxford employees, the guest list also featured prominent politicians and academics.

“I’m incredibly optimistic,” said Greg Clark, the British Secretary of State for Business, Energy and Industrial Strategy. “You’ve got a fantastic facility. You’ve got some of the best brains in the research and the analysis of diabetes. Combined with the technology, with the computing power, this has got to be a place of real breakthroughs. This is going to make a difference to people for many years to come.”

The Danish Minister for Higher Education and Science, Tommy Ahlers, welcomed the collaboration between the private and public sectors as well as between Denmark

From left to right: Greg Clark (UK secretary of state for Business, Energy and Industrial Strategy), Sir John Bell (Regius Professor, University of Oxford), Mads Krosgaard Thomsen (Chief Science Officer, Novo Nordisk), Tommy Ahlers (Danish minister for higher education and science).

and the UK. “The only way to make excellent research is through collaboration,” he said. “No matter what happens in the world, we have to make sure that research is international.”

The centre reflects what Jacob Sten Petersen, corporate vice president of stem cell research, Novo Nordisk, called an “ideal public-private partnership” and is indeed a marriage between the two entities: a proud, independent academic establishment going back almost 1,000 years and an equally proud pharmaceutical institution with an almost 100-year history of helping millions of people with diabetes.

Novo Nordisk Research Centre Oxford aims to leverage the shared expertise of some of the brightest minds in science and academia to enhance Novo Nordisk’s understanding of cardiometabolic disease.

“The unit is built to support early research across our core therapy areas, with a focus on cardiometabolic disease, but also with the capabilities and freedom to evaluate innovative ideas outside these core areas,” explained Marcus Schindler, senior vice president of Global Drug Discovery, Novo Nordisk.

Novo Nordisk expects the partnership with the University of Oxford to pave the way for a new way of working within R&D, leveraging cutting-edge technology and world-leading expertise to speed up the drug development process.



FINANCIAL CALENDAR

1 FEBRUARY 2019

Full year 2018

3 MAY 2019

First three months of 2019

9 AUGUST 2019

First six months of 2019

SHAREHOLDER INFORMATION

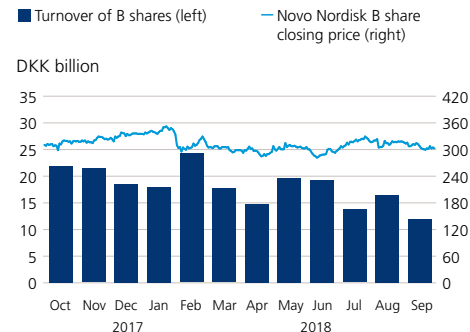
SHARE PRICE PERFORMANCE

Novo Nordisk share price and indexed peers



* Pharma peers comprise AstraZeneca, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Lundbeck, Merck, Novartis, Pfizer, Roche and Sanofi.

PRICE DEVELOPMENT AND MONTHLY TURNOVER OF NOVO NORDISK B SHARES



FOR MORE NEWS FROM NOVO NORDISK, VISIT

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Product names

Not all products mentioned in *Share* have been introduced worldwide. Trade names may vary from country to country.

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