novo nordisk

ANNUAL REPORT 2016

A NEW ERA OF DIABETES TREATMENT?

DEFINING TIMES FOR THE US BUSINESS

RISK MANAGEMENT – Protecting long-term value creation

novo nordisk®

"MY DREAM IS TO **ENCOURAGE OTHER PEOPLE WITH DIABETES** AND TELL THEM THAT YOU CAN LIVE A VERY GOOD LIFE; EVEN BECOME A PROFESSIONAL CYCLIST!"

MANATO OHARA

Manato Ohara lives in Kanagawa, Japan, and was diagnosed with type 1 diabetes when he was 10 years old. He is now 12 years old and in first grade of junior high school. He likes playing football and racing his bike in the hope of taking part in the Talent ID Camps designed for juniors by Team Novo Nordisk.

The patients portrayed in this Annual Report have participated of their own accord and solely to express their personal opinions on topics referred to in the articles in which they appear. Use of their pictures as illustrations is in no way intended to associate them with the promotion of any Novo Nordisk products. Any and all views and opinions expressed by patients in this report are solely their own. They have been invited to be included, and were in no way coerced. The views and opinions they express are entirely their own, and do not necessarily reflect the views and opinions of Novo Nordisk.

CONTENTS

All references can be found on p 113.

The Management review, as defined by the Danish Financial Statements Act, is found on pp 1–56 and 97.

This Annual Report is Novo Nordisk's full statutory Annual Report pursuant to Section 149 of the Danish Financial Statements Act. A printed extract of this statutory Annual Report is available in English upon request. Further, a shortened printed version, consisting of the Management review and excerpts from the consolidated statements, is available in Danish upon request. In the event of any discrepancies, the full statutory Annual Report shall prevail.

A CHALLENGING YEAR
LETTER FROM THE CHAIRMAN

For Novo Nordisk's shareholders, 2016 was not a good year. We started the year on a share price of 399.9 kroner and ended on 254.7. That is the brutal fact. The drop was caused by lowered growth expectations for our business in the US, which accounts for around half of Novo Nordisk's total sales, and the resulting revision of the company's long-term financial targets.

What we experienced in the US in 2016 was the interplay of several related developments; with the large and increasing number of people with diabetes in the US, diabetes care has become a major cost driver for insurers and health plans which, in turn, are pushing hard for better deals with healthcare providers and pharmaceutical companies in order to curb costs. The organisations with which Novo Nordisk negotiates rebates and access for its products are the pharmaceutical benefit managers (PBMs), which have seen their negotiating power increase due to a wave of consolidation that has left only a handful of very large PBMs. At the same time, competition among the pharmaceutical companies within diabetes care intensified as new products entered an increasingly crowded marketplace.

As a consequence of these developments, and as we announced in our half-year financial statement, contract negotiations for 2017 resulted in higher-than-anticipated rebates to obtain broader coverage for our products.

Due to the uncertainty it created regarding Novo Nordisk's growth prospects in the US in the coming years, this was not well received by investors. Management has responded to this new situation through a number of measures aimed at prioritising the activities and innovative products with the greatest potential for making a positive change for the people whose lives and well-being depend on our medicines.

On 1 September, the Board of Directors announced a number of changes to Novo Nordisk's Executive Management, including a change of CEO. After more than 34 years with the company, the past 16 of which as CEO, Lars Rebien Sørensen retired on 31 December, passing on the baton to Lars Fruergaard Jørgensen, who joined Novo Nordisk in 1991 and most recently held the post of executive vice president (EVP) in charge of Corporate Development.

The Board had been planning the CEO succession for some years, carefully evaluating a number of candidates for the role, and the Board unanimously found Lars Fruergaard Jørgensen to be the best candidate. He has a very successful 25-year track record at Novo Nordisk, during which he has time and again demonstrated his business acumen and his ability as a strategist, problem solver and great people leader. Furthermore, he personifies the Novo Nordisk Way in every conceivable manner, always bearing in mind what is best for our patients, employees and shareholders in the long run.

During his 16 years as CEO, Lars Rebien Sørensen spearheaded Novo Nordisk's transformation into a global, very successful and highly respected pharmaceutical company. On behalf of the Board of Directors, I want to thank him for his outstanding leadership, steady course and commitment to Novo Nordisk through both good and more challenging times during his 34 years with the company.

Two other changes announced on 1 September took place with immediate effect: Jakob Riis, then EVP and head of Region China, Pacific & Marketing, was appointed EVP and head of North America Operations, while Maziar Mike Doustdar, then EVP and head of International Operations, continued in this role, but with responsibility for all territories except for North America.

Both Jakob Riis and Maziar Mike Doustdar are very experienced leaders who, throughout their careers with Novo Nordisk, have demonstrated their ability to lead their organisations through challenging times. On pp 32–35 and 36–39, you can read more about their plans for the US and International Operations respectively.

Following these changes, two EVPs, Jesper Høiland and Jerzy Gruhn, decided to pursue careers outside of Novo Nordisk. I thank them for their commitment and significant contributions to Novo Nordisk over many years and wish them all the best.

Based on Novo Nordisk's performance in 2016, the Board will at the Annual General Meeting propose a final dividend of 4.60 kroner per share, in addition to the 3 kroner which was paid as an interim dividend in August 2016. Furthermore, the Board has decided to initiate a new share repurchase programme of up to 16 billion kroner, which will commence in February 2017.

On behalf of the Board, I would like to express my appreciation for the leadership shown by Novo Nordisk's management, the hard work and dedication of the entire Novo Nordisk organisation, and the support of our shareholders in what proved to be a challenging year.

Göran Ando
Chairman of the Board of Directors

REFLECTIONS ON 2016

LETTER FROM LARS REBIEN SØRENSEN, CEO UNTIL 31 DECEMBER 2016

In my letter in last year's Annual Report, I predicted that 2016 would be another exciting and challenging year for Novo Nordisk. And indeed it was. The excitement stems from the important advances we made in R&D during the year, while our main challenge was related to our US business.

Despite this challenge, we ended the year growing sales by 6% and adjusted operating profit by 6%, both in local currencies. This was within the range we had announced at the beginning of the year, when we predicted sales growth of 5–9% and adjusted operating profit growth of 5–9%, both in local currencies.

Sales growth was primarily driven by Victoza®, Tresiba® and Saxenda® – key products which we expect to be major growth drivers in the coming years.

Measured in local currencies, Victoza® accounted for 36% of sales growth and remains the market leader in the GLP-1 segment for the treatment of adults with type 2 diabetes. Tresiba® accounted for 47% of sales growth and continues to do well in all the markets in which it is competing with other insulin products on equal reimbursement terms. Sales of Saxenda® are developing according to plan following its launch in the US in 2015, and the product has now been launched in 15 countries.

Looking at how sales developed from a regional perspective, the short version is that we had disappointing sales in the US, Region China rebounded to double-digit growth, while the rest of our regions performed in line with our plans. In the US, sales of insulin and NovoSeven® did not meet our expectations. Insulin sales decreased by 2% in local currencies, primarily due to lower NovoLog® and NovoLog® Mix 70/30 prices and the loss of a major contract for these two products at the beginning of the year. NovoSeven® sales decreased in the US, as some patients using the product entered clinical trials with a competing product in development. For more details, see the performance report on pp 6–13.

In 2017, we will see lower net prices in the US as we had to increase the rebates we offer the pharmaceutical benefit managers (PBMs) in order to ensure broad market access for our products.

In response, we took several measures to align our costs to this new reality. Regrettably, this also meant we had to lay off close to 1,000 of our 42,000 colleagues in the autumn. This was a difficult decision, but with employee costs being by far the largest cost item at Novo Nordisk, there was no way of avoiding it. I would like to thank and wish our former colleagues all the best in their future careers.

While it was our challenges in the US and the related consequences mentioned above that attracted most attention in 2016, we also had exciting news from our pipeline that will further strengthen our product portfolio in the coming years. I would like to highlight three developments:

- At the annual American Diabetes Association (ADA) congress in June, we presented data from the LEADER study demonstrating that Victoza® significantly reduces the risk of major cardiovascular events and death in adults with type 2 diabetes. The results were also published in *The New England Journal of Medicine* and have been submitted to the FDA and the EMA for label update considerations.
- In September, the results of the SUSTAIN 6 study were presented at the European diabetes conference (EASD) and published in *The New England Journal of Medicine*. These showed that semaglutide, our investigational glucagon-like peptide-1 (GLP-1) analogue injected once weekly, significantly reduces the risk of major adverse cardiovascular events in adults with type 2 diabetes at high cardiovascular risk.
- In November, the headline results of the DEVOTE trial in people with type 2 diabetes demonstrated the safe cardiovascular profile and reduced risk of severe hypoglycaemia of Tresiba® compared to insulin glargine U100.

The above data further strengthen the clinical profile of our key products, Victoza® and Tresiba®. The SUSTAIN trial has now been successfully completed, and in December we filed for regulatory approval of semaglutide in the US and in the EU for the treatment of type 2 diabetes. It is advances such as these, through which we find new ways to improve the treatment of people with diabetes and other serious chronic conditions, that have given me immense job satisfaction throughout my years at Novo Nordisk.

On this note, I would like to thank Novo Nordisk's employees for their contributions to our results in 2016, the people who use our products for their confidence in us, our partners and other stakeholders for their collaboration and our shareholders for their continued support. It has been an honour to work for this company for 34 years, the last 16 as its CEO. I owe many people thanks for the support they have given me over the years. I wish you and Novo Nordisk all the best.

Lars Rebien Sørensen
President and chief executive officer
until 31 December 2016

THE ROAD AHEAD
LETTER FROM THE CEO

I am proud and humbled to have been trusted by the Board of Directors to succeed Lars Rebien Sørensen as CEO of Novo Nordisk. When the leadership change was announced on 1 September 2016, I said that I love challenges and therefore cannot think of a more exciting time to be offered this job. On the one hand, Novo Nordisk has never had a stronger product portfolio, and on the other hand we are facing intense pressure from payers and competitors.

The challenges are reflected in our share price development in 2016. I remain confident that my management team and the Novo Nordisk organisation have what it takes to overcome them. A short-term priority will naturally be to grow market shares for our key products while carefully managing our cost base.

Since September, I have spent a lot of time meeting with employees, patients, healthcare professionals, policymakers, investors and professional organisations around the world to understand how they see us and what they expect from us going forward. It was a very rewarding experience. Despite the current challenges, it left me in no doubt that Novo Nordisk is a very special company and that one of my key responsibilities is to keep it that way.

With this in mind, I would like to share my core beliefs regarding what it will take for Novo Nordisk to remain a successful and special company:

Product innovation is and will be the key to our success. If we fail to discover and develop new and better products for people with diabetes and other serious chronic conditions, we will not be successful. I acknowledge that there is an increasing unwillingness to pay for innovation in cost-pressured healthcare systems, but this should not be an excuse for halting innovation, because there is a huge need for better medical treatments. It does, however, have other implications for us: we have to 'raise the innovation bar' – focusing on projects with the highest chance of delivering break-through innovation, we have to source more innovation from outside our own organisation through collaborations with academia and biotech companies, and…

…we have to innovate the way we commercialise our products. Not only pharmaceutical companies but healthcare providers in general are being met with demands from payers to link the prices of their products and services to documented, improved health outcomes for patients. Creating such outcomes-based contracts is easier said than done, but we are working on it as you can read in the article about our business in the US on pp 32–35. It is also in this light that our recent partnerships with technology companies such as IBM Watson Health and Glooko should be seen. These partnerships aim to improve diabetes care via insights from real-time, real-world evidence of the clinical benefits of Novo Nordisk's diabetes treatments and devices.

It is not just what we do, but also how we do it that makes Novo Nordisk a special company. The 'Novo Nordisk Way' describes who we are, where we want to go and the values that characterise our company. Over the years, it has become clear to me that the Novo Nordisk Way is the reason why many of our employees are working here and not somewhere else. It is about always having patients' interests in mind, about always doing what is best in the long run and about doing business in accordance with the 'Triple Bottom Line' business principle, which means that we always consider the financial, environmental and social impacts of our decisions.

In one area I personally think we need to do better: we should be more agile.

We have grown tremendously over the past decade, and with that comes new procedures, new governance bodies, new this, new that, all well intended, but at some point it just becomes too much. In the process, individual accountability risks getting lost and decision-making processes risk becoming too long. One of my priorities for 2017 is to simplify our way of working and thereby make the organisation more agile.

At Novo Nordisk, we have a big responsibility for the 415 million people in the world with diabetes, the millions more who have obesity and the thousands who live with haemophilia or growth disorders. They are our reason for being.

My vision is that, under my tenure as CEO, Novo Nordisk will solidify its position as the world's leading diabetes care company, be the world's leading company within medical treatment of obesity, be among the leading companies in haemophilia, and be recognised by our employees, the patients we serve, our shareholders and other external stakeholders as an outstanding company, both for what we do and how we do it.

I thank you all for your support.

Lars Fruergaard Jørgensen
President and chief executive officer
from 1 January 2017

NOVO NORDISK AT A GLANCE

Novo Nordisk is a global healthcare company, headquartered in Denmark, with more than 90 years of innovation and leadership in diabetes care. This heritage has given us experience and capabilities that also enable us to help people defeat other serious chronic conditions: haemophilia, growth disorders and obesity.

A GLOBAL ORGANISATION WITH A LOCAL PRESENCE

42,446
EMPLOYEES

AFFILIATES OR OFFICES IN **77 COUNTRIES**

RESEARCH AND DEVELOPMENT FACILITIES ON **3 CONTINENTS**

16 PRODUCTION SITES ON **5 CONTINENTS**

PRODUCTS MARKETED IN AROUND **170 COUNTRIES**

STRATEGIC FOCUS AREAS

Expand leadership in **diabetes**

87.3
DKK BILLION **DIABETES** SALES

415
MILLION PEOPLE LIVE WITH **DIABETES**[1]

Pursue leadership in **obesity**

1.6
DKK BILLION **OBESITY** SALES

600
MILLION PEOPLE LIVE WITH **OBESITY**[2]

Pursue leadership in **haemophilia**

10.5
DKK BILLION **HAEMOPHILIA SALES**

420
THOUSAND PEOPLE LIVE WITH **HAEMOPHILIA**[3]

Expand leadership in **growth disorders**

8.8
DKK BILLION **HUMAN GROWTH HORMONE SALES**

3
OUT OF 10,000 CHILDREN LIVE WITH **GROWTH HORMONE DEFICIENCIES**[4]

OUR BUSINESS MODEL

HOW NOVO NORDISK CREATES AND SUSTAINS VALUE

Taking a patient-centred approach, Novo Nordisk provides innovation for the benefit of all of the company's stakeholders. The Triple Bottom Line principle, anchored in the Novo Nordisk Way, is the foundation that makes it possible to optimise the use of resources and maximise value creation in a sustainable way.

RESOURCES

EXTERNAL

- Capital provided by investors
- Insights from patients and expertise from academic and educational institutions
- Raw materials

INTERNAL

- Financial resources to invest in R&D, production capacity and customer outreach
- A skilled and diverse workforce
- Biological research and manufacturing facilities

FOCUS

WE DISCOVER, DEVELOP AND MANUFACTURE INNOVATIVE BIOLOGICAL MEDICINES AND MAKE THEM ACCESSIBLE TO PATIENTS THROUGHOUT THE WORLD

OUR STRATEGY

NOVO NORDISK WAY

VALUE CREATED

- Improved health and quality of life for people with diabetes and other serious chronic diseases
- Return to shareholders
- Contributions to communities
- Tax contributions
- Job creation and productivity
- Capacity and competence building

THE TRIPLE BOTTOM LINE

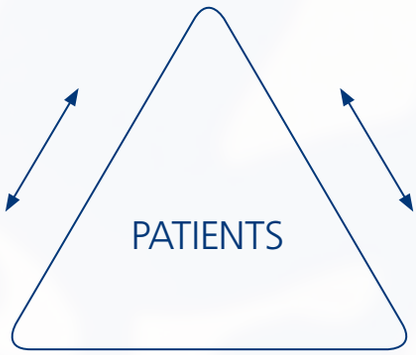
9.9
DKK BILLION EXPENSED ON **COMPANY INCOME TAX** (+14%)

FINANCIALLY RESPONSIBLE

37.9
DKK BILLION IN **NET PROFIT** (+9%)

28
MILLION **PATIENTS** USE OUR DIABETES CARE PRODUCTS (+4%)

59/41
% **MEN/WOMEN** IN MANAGEMENT (0%)



92
THOUSAND TONS OF **CO_2 EMISSIONS** (–14%)

3,293
THOUSAND M^3 **WATER CONSUMPTION** (+5%)

SOCIALLY RESPONSIBLE ⟷ **ENVIRONMENTALLY RESPONSIBLE**

For more information, visit us on novonordisk.com or

2016 PERFORMANCE AND 2017 OUTLOOK

FINANCIAL PERFORMANCE

Novo Nordisk's 2016 performance for sales and adjusted operating profit growth were both in line with the guidance provided in February 2016, although in the lower end of the ranges reflecting a more challenging competitive situation in the USA. The free cash flow exceeded the outlook provided in February 2016, explained by a positive effect from settlement of tax cases related to prior years. Capital expenditure and other results were in line with the latest guidance provided in October 2016.

SALES DEVELOPMENT

Sales increased by 6% measured in local currencies and by 4% in Danish kroner. Sales growth was realised within both diabetes care and biopharmaceuticals, with the majority of growth originating from Tresiba®, Victoza®, Saxenda® and Norditropin® while sales of modern insulin and NovoSeven® declined.

All regions contributed to sales growth; however, the USA was the largest contributor with 37% share of growth measured in local currencies, followed by International Operations and Region China contributing 32% and 19% respectively. Sales growth of 4 % in the USA was positively impacted by approximately 1 percentage point primarily due to non-recurring adjustments to rebates in the Medicaid patient segment related to Norditropin®. Sales growth in International Operations of 14% measured in local currencies was positively impacted by approximately 2.5 percentage points due to the significant inflationary effects in Argentina and Venezuela.

In the following sections, unless otherwise noted, market data are based on moving annual total (MAT) from November 2016 and November 2015 provided by the independent data provider IMS Health.

DIABETES CARE SALES DEVELOPMENT

Sales of diabetes and obesity care products increased by 6% measured in local currencies and by 4% in Danish kroner to DKK 88,949 million. Novo Nordisk is the world leader in diabetes care with a global value market share of 27%.

INSULIN

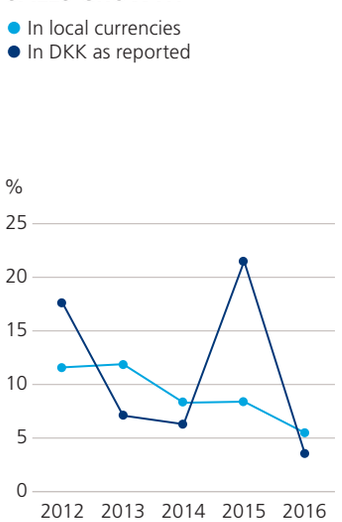
Sales of insulin increased by 3% measured in local currencies and were unchanged in Danish kroner at DKK 63,059 million.

Measured in local currencies, sales growth was driven by International Operations and Region China. Novo Nordisk is the global leader with 46% of the total insulin market and 45% of the market for modern insulin and new-generation insulin, both measured in volume.

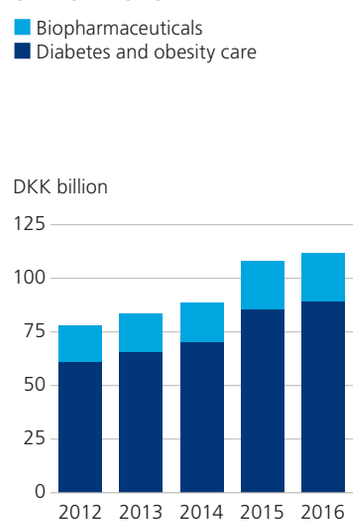
Sales of new-generation insulin (Tresiba®, Xultophy® and Ryzodeg®) reached DKK 4,459 million compared with DKK 1,438 million in 2015.

Sales of Tresiba® (insulin degludec), the once-daily new-generation insulin, reached DKK 4,056 million compared with DKK 1,270 million in 2015. The roll-out of Tresiba® continues and the product has now been launched in 52 countries. In the USA, where Tresiba® was launched broadly in January 2016, the feedback from patients and prescribers is encouraging, and the product has achieved wide commercial and Medicare Part D formulary coverage. By the end of 2016, Tresiba® had captured a 5.5% market share of the US basal insulin market measured by weekly total prescriptions. In Japan, where Tresiba® was launched in March 2013 with similar reimbursement as insulin glargine U100, its share of the basal insulin market has grown

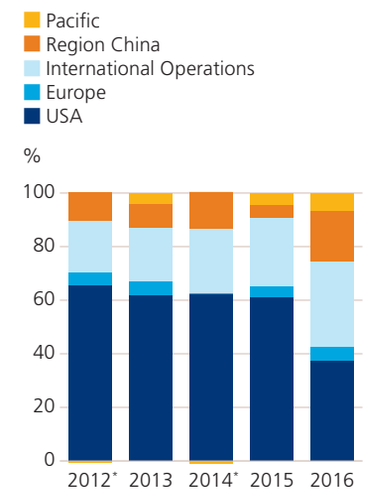
SALES GROWTH



SALES BY SEGMENT



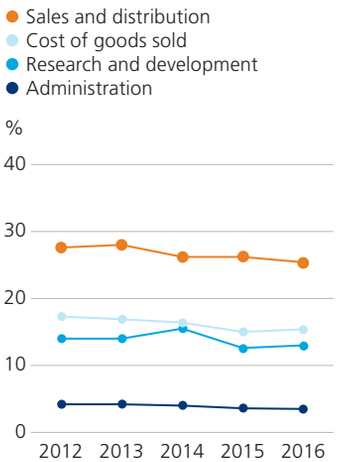
SHARE OF GROWTH IN LOCAL CURRENCIES



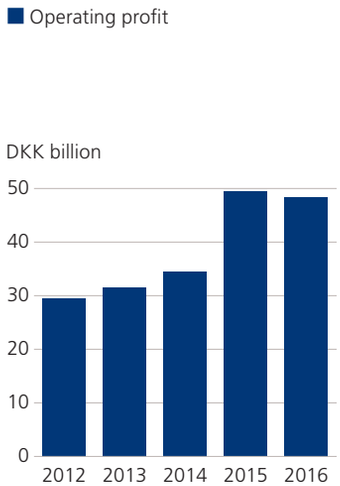
* In 2012 and 2014, Japan & Korea contributed –1% to the total growth.

DEVELOPMENT IN COSTS

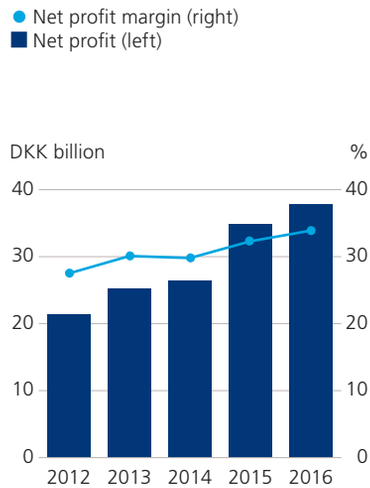
Costs in % of sales



OPERATING PROFIT



NET PROFIT



steadily, and Tresiba® has now captured 39% of the basal insulin market measured by monthly value market share. Similarly, Tresiba® has shown solid penetration in other markets with reimbursement at a similar level to insulin glargine U100, whereas penetration remains modest in markets with restricted market access.

Xultophy® (IDegLira), a once-daily single-injection combination of insulin degludec (Tresiba®) and liraglutide (Victoza®), is currently marketed in nine countries, and launch activities are progressing as planned. In November 2016, Xultophy® 100/3.6 was approved by the US Food and Drug Administration (FDA) and Novo Nordisk plans to launch the product in first half of 2017.

Ryzodeg®, a soluble formulation of insulin degludec and insulin aspart, has now been marketed in 10 countries, and feedback from patients and prescribers is encouraging.

Sales of modern insulin decreased by 3% in local currencies and by 5% in Danish kroner to DKK 47,510 million. Sales declined in the USA, Europe and Pacific partly offset by a positive contribution from International Operations and China. Sales of modern insulin and new-generation insulin in total constitute 82% of Novo Nordisk's sales of insulin measured in value.

VICTOZA®
(GLP-1 THERAPY FOR TYPE 2 DIABETES)

Victoza® sales increased by 12% in local currencies and by 11% in Danish kroner to DKK 20,046 million. Sales growth is driven by the USA and International Operations. The GLP-1 segment's value share of the total diabetes care market has increased to 9.8% compared with 8.0% in 2015. Victoza® is the market leader in the GLP-1 segment with a 58% value market share.

OTHER DIABETES AND OBESITY CARE

Sales of other diabetes and obesity care, which predominantly consists of needles, oral antidiabetic products and Saxenda®, increased by 26% in local currencies and by 24% in Danish kroner to DKK 5,844 million. Saxenda®, liraglutide 3 mg for weight management, was launched in May 2015 and sales were DKK 1,577 million in 2016 compared with DKK 460 million in 2015. In the USA, promotional activities are progressing as planned, and Saxenda® is now the market-leading anti-obesity medication measured in value. Saxenda® has now been launched in 15 countries.

BIOPHARMACEUTICAL SALES DEVELOPMENT

Sales of biopharmaceutical products increased by 4% measured in local currencies and by 2% in Danish kroner to DKK 22,831 million. Sales growth is primarily driven by International Operations, the USA, Europe and Pacific.

HAEMOPHILIA
(BLEEDING DISORDERS THERAPY)

Sales of haemophilia products were unchanged in local currencies and decreased by 2% in Danish kroner to DKK 10,472 million. The sales development was negatively impacted by lower NovoSeven® sales in the USA due to increased competition and patients participating in clinical trials with competing drugs, partly offset by the roll-out of NovoEight® in Europe and the USA and by sales growth for NovoSeven® in Pacific.

NORDITROPIN®
(GROWTH HORMONE THERAPY)

Sales of Norditropin® increased by 14% measured in local currencies and by 12% in Danish kroner to DKK 8,770 million. The sales growth is primarily derived from the USA reflecting a significant positive non-recurring adjustment to rebates in the Medicaid patient segment relating to the period 2010–2015. This positive impact has been partly offset by lower volumes. Novo Nordisk is the leading company in the global growth hormone market with a 23% market share measured in volume.

OTHER BIOPHARMACEUTICALS

Sales of other products within biopharmaceuticals, which predominantly consist of hormone replacement therapy-related (HRT) products, declined by 6% measured in local currencies and by 7% in Danish kroner to DKK 3,589 million. The sales decline reflected a negative impact from the launch of a generic version of Vagifem® in the USA in the fourth quarter.

DEVELOPMENT IN COSTS AND OPERATING PROFIT

The cost of goods sold increased by 6% to DKK 17,183 million, resulting in a gross margin of 84.6%, compared with 85.0% in 2015 measured in Danish kroner. The gross margin was negatively impacted by a negative product mix due to lower NovoSeven® sales partly countered by higher Victoza® sales and a negative price impact reflecting lower modern insulin prices in the USA, which was partly offset by the positive contribution from the non-recurring Medicaid rebate adjustment.

CONTINUED ▶

Sales and distribution costs increased by 3% in local currencies and were unchanged in Danish kroner to DKK 28,377 million. The modest increase in costs is driven by sales force investments in selected countries in International Operations and promotional activities in selected countries within Pacific and Europe, partly offset by lower sales and distribution costs in the USA reflecting cost management.

Research and development costs increased by 7% in both local currencies and Danish kroner to DKK 14,563 million. The increase in costs reflects higher research costs for diabetes and obesity projects as well as impairment charges of intangible assets related to a number of early-stage projects in connection with the updated research and development strategy. Development costs increased due to the initiation of the PIONEER programme for oral semaglutide, where all 10 planned trials have been initiated, and the fast-acting insulin aspart phase 3b development programme. The increase in development costs was partly countered by lower costs related to the completion of the cardiovascular outcomes trial DEVOTE and the SWITCH phase 3b development programme, both for insulin degludec, as well as the phase 3a programme SUSTAIN for the once-weekly GLP-1 analogue semaglutide and lower Biopharmaceuticals development costs.

Administration costs increased by 5% in local currencies and by 3% in Danish kroner to DKK 3,962 million. The higher administrative costs are mainly related to higher employee-related costs in International Operations.

Other operating income (net) was DKK 737 million compared with DKK 3,482 million in 2015. The lower level of income reflects the non-recurring income from the partial divestment of NNIT, an IT service and consultancy company, in connection with the Initial Public Offering on Nasdaq Copenhagen as well as non-recurring income related to the out-licensing of assets for inflammatory disorders, both in 2015.

Operating profit was unchanged in local currencies and decreased by 2% in Danish kroner to DKK 48,432 million. Adjusted for the income related to the partial divestment of NNIT (DKK 2,376 million) and the income related to the out-licensing of assets for inflammatory disorders (DKK 449 million), both in 2015.

FINANCIAL ITEMS (NET) AND TAX

Financial items (net) showed a net loss of DKK 634 million compared with a net loss of DKK 5,961 million in 2015.

In line with Novo Nordisk's treasury policy, the most significant foreign exchange risks for the group have been hedged, primarily through foreign exchange forward contracts. The foreign exchange result was a loss of DKK 576 million compared with a loss of DKK 5,898 million in 2015. The result in 2016 reflects loss on foreign exchange hedging involving especially the US dollar, Japanese yen and Chinese yuan versus the Danish krone.

The effective tax rate for 2016 was 20.7%. The higher tax rate compared with the 2015 level of 19.8% reflects the tax-free gain from the partial divestment of NNIT in 2015, offset by a positive effect from settlement of tax cases related to prior years and the reduction of the corporate income tax rate in Denmark from 23.5% in 2015 to 22.0% in 2016.

KEY INVOICING CURRENCIES	ANNUAL IMPACT ON NOVO NORDISK'S OPERATING PROFIT OF A 5% MOVEMENT IN CURRENCY	HEDGING PERIOD (MONTHS)
USD	DKK 2,100 million	12
CNY	DKK 320 million	9*
JPY	DKK 200 million	14
GBP	DKK 90 million	12
CAD	DKK 80 million	11

* Chinese yuan traded offshore (CNH) used as proxy when hedging Novo Nordisk's CNY currency exposure.

OUTLOOK 2017

The current expectations for 2017 are summarised in the table below:

EXPECTATIONS ARE AS REPORTED, IF NOT OTHERWISE STATED	EXPECTATIONS 2 FEBRUARY 2017
Sales growth	
• in local currencies	–1% to 4%
• as reported	Around 2 percentage points higher
Operating profit growth	
• in local currencies	–2% to 3%
• as reported	Around 2 percentage points higher
Net financials	Loss of around DKK 2.4 billion
Effective tax rate	21%–23%
Capital expenditure	Around DKK 10.0 billion
Depreciation, amortisation and impairment losses	Around DKK 3.0 billion
Free cash flow	DKK 29–33 billion

CAPITAL EXPENDITURE AND FREE CASH FLOW

Net capital expenditure for property, plant and equipment was DKK 7.1 billion compared with DKK 5.2 billion in 2015. Net capital expenditure was primarily related to investments in a new production facility for a range of diabetes active pharmaceutical ingredients, a new diabetes care filling capacity and an expansion of the manufacturing capacity for biopharmaceutical products.

Free cash flow was DKK 40.0 billion compared with DKK 34.2 billion in 2015. The 17% increase compared with 2015 primarily reflects higher cash flow from operating activities including a lower level of tax payments in 2016 due to a positive effect from settlement of tax cases related to prior years. The higher free cash flow is further positively impacted by a higher net profit in 2016, partly countered by a planned increase in inventory levels and trade receivables as well as the non-recurring cash impact from the partial divestment of NNIT in 2015.

OUTLOOK 2017

For 2017, sales growth is expected to be in the range of a decline of 1% to a growth of 4%, measured in local currencies. This reflects expectations for continued robust performance for Victoza® and Tresiba® as well as a contribution from Saxenda® and Xultophy®. These sales drivers are expected to be partly countered by an impact from lower realised prices in the USA, especially in the basal insulin and growth hormone segments, the loss of exclusivity for products within hormone replacement therapy in the USA, further intensifying competition within diabetes and biopharmaceuticals especially in the USA, as well as adverse macroeconomic conditions in several markets in

PERFORMANCE AGAINST LONG-TERM FINANCIAL TARGETS	2016	Target
Operating profit growth	(2.0%)	5%
Operating profit growth adjusted*	3.9%	
Operating profit after tax to net operating assets	150.2%	125%
Cash to earnings	105.4%	
Cash to earnings (three-year average)	102.4%	90%

* Growth in operating profit for 2015 and 2016 are adjusted for DKK 2,376 million for the partial divestment of NNIT and DKK 449 million for the income related to the out-licensing of assets for inflammatory disorders, both in 2015.

International Operations. Growth in 2017 is expected to be unevenly distributed across the quarters as growth is expected to be impacted by two non-recurring events; the adjustment to Medicaid rebates in 2016 for Norditropin®, which primarily impacts the first quarter of 2017, and the launch of a generic version of Vagifem® in the USA, which impacts the first three quarters of 2017. Given the current level of exchange rates versus the Danish krone, growth reported in DKK is expected to be around 2 percentage points higher than the local currency level.

For 2017, operating profit growth is expected to be in the range of a decline of 2% to a growth of 3%, measured in local currencies. The expectation for operating profit growth primarily reflects the modest outlook for sales growth. The outlook also reflects a modest increase in both sales and distribution costs to support continued launch activities and in research and development costs to support the progress of Novo Nordisk's pipeline. Given the current level of exchange rates versus the Danish krone, growth reported in DKK is expected to be around 2 percentage points higher than the local currency level.

For 2017, Novo Nordisk expects financial items (net) to be a loss of around DKK 2.4 billion. The current expectation reflects losses associated with foreign exchange hedging contracts, mainly related to the US dollar, Japanese yen and Chinese yuan versus the Danish krone.

The effective tax rate for 2017 is expected to be in the range of 21–23%, a level broadly similar to the statutory corporate tax rate in Denmark of 22%.

Capital expenditure is expected to be around DKK 10.0 billion in 2017, primarily related to investments in additional capacity for active pharmaceutical ingredient production within diabetes care, a capacity expansion of the diabetes care filling and an expansion of the manufacturing capacity for biopharmaceutical products. Depreciation, amortisation and impairment losses are expected to be around DKK 3.0 billion. Free cash flow is expected to be DKK 29–33 billion. The lower level of free cash flow compared with the DKK 40.0 billion in free cash flow in 2016 reflects increased capital expenditures in 2017 and a low level of tax payments in 2016 due to settlement of tax cases related to prior years.

All of the above expectations are based on the assumptions that the global economic and political environment will not significantly change business conditions for Novo Nordisk during 2017, and that currency exchange rates, especially the US dollar, will remain at the current level versus the Danish krone.

Novo Nordisk has hedged expected net cash flows in a number of invoicing currencies and, all other things being equal, movements in key invoicing currencies will impact Novo Nordisk's operating profit as outlined in the table on the opposite page.

FORWARD-LOOKING STATEMENT

Novo Nordisk's reports filed with or furnished to the US Securities and Exchange Commission (SEC), including this document and the Form 20-F, both expected to be filed with the SEC in February 2017, and written information released, or oral statements made, to the public in the future by or on behalf of Novo Nordisk, may contain forward-looking statements. Words such as 'believe', 'expect', 'may', 'will', 'plan', 'strategy', 'prospect', 'foresee', 'estimate', 'project', 'anticipate', 'can', 'intend', 'target' and other words and terms of similar meaning in connection with any discussion of future operating or financial performance identify forward-looking statements. Examples of such forward-looking statements include, but are not limited to:

- statements of targets, plans, objectives or goals for future operations, including those related to Novo Nordisk's products, product research, product development, product introductions and product approvals as well as cooperation in relation thereto
- statements containing projections of or targets for revenues, costs, income (or loss), earnings per share, capital expenditures, dividends, capital structure, net financial and other financial measures
- statements regarding future economic performance, future actions and outcome of contingencies such as legal proceedings
- statements regarding the assumptions underlying or relating to such statements.

In this document, examples of forward-looking statements can be found under the heading '2016 performance and 2017 outlook' and elsewhere.

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 'Risk management – Protecting long-term value creation' on pp 40–43.

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 this document, whether as a result of new information, future events or otherwise.

RESEARCH AND DEVELOPMENT

2016 was a year in which Novo Nordisk made significant progress in its research and development pipeline and reached several milestones.

Below are the highlights from the key development projects. On pp 20–21, the pipeline overview shows all the compounds in clinical development, and further details on clinical trials can be found in the company announcements and press releases published by Novo Nordisk during 2016, which are available on novonordisk.com.

UPDATED R&D STRATEGY

In October 2016, Novo Nordisk updated its R&D strategy and priorities to reflect the increasingly challenging payer environment, particularly in the US market, by applying an even higher innovation threshold for progressing R&D projects. Novo Nordisk will further intensify exploration of current assets in adjacent disease areas of high unmet need as well as identify new assets using our existing technology platform. In addition to the other areas, NASH (non-alcoholic steatohepatitis), diabetic kidney disease and cardiovascular disease are new areas to be pursued, both in research and development.

As a result of the updated R&D strategy and priorities, Novo Nordisk decided not to progress its current development projects within oral insulin and combinations involving oral insulin. In addition, a number of changes to the portfolio of early-stage projects were also implemented. Furthermore, Novo Nordisk intends to strengthen its activities for in-licensing of early- and mid-stage projects as well as external academic collaborations. Novo Nordisk's current late-stage development portfolio was not affected by the changes.

DIABETES

In January and February 2016, the results from the two double-blinded phase 3b trials SWITCH 1 and 2 were announced. The primary endpoint of the SWITCH 1 trial was met by showing a statistically significantly lower rate of severe or blood glucose confirmed symptomatic hypoglycaemia during the maintenance period of 11% for people with type 1 diabetes treated with Tresiba® compared to insulin glargine U100. The primary endpoint of the SWITCH 2 trial was also met by showing a statistically significantly lower rate of severe or blood glucose confirmed symptomatic hypoglycaemia during the maintenance period of 30% for people with type 2 diabetes treated with Tresiba® compared to insulin glargine U100.

In February 2016, Novo Nordisk initiated the first phase 3a trial with oral semaglutide, an oral formulation of Novo Nordisk's long-acting GLP-1 analogue semaglutide using Emisphere Eligen® technology. The global PIONEER programme comprises 10 clinical trials in total.

In March 2016, Novo Nordisk announced that, in the LEADER study, Victoza® significantly reduced the risk of the composite primary endpoint of cardiovascular (CV) death, non-fatal myocardial infarction and non-fatal stroke by 13%, and the secondary endpoint of CV mortality was also significantly reduced by 22% versus placebo, when added to standard of care in 9,340 adults with type 2 diabetes at high CV risk.

In April 2016, Novo Nordisk announced results from the SUSTAIN 6 trial, where semaglutide, a GLP-1 analogue administered once weekly, when added to standard of care, statistically significantly reduced the risk of the composite primary endpoint of cardiovascular death, non-fatal myocardial infarction and non-fatal stroke by 26% compared to placebo in a study with 3,297 adults with type 2 diabetes with elevated cardiovascular risk. In December 2016, Novo Nordisk filed semaglutide for regulatory approval in the US and the EU, based on the results from the six SUSTAIN trials.

In October 2016, Novo Nordisk announced that it had received a Complete Response Letter (CRL) from the US Food and Drug Administration (FDA) regarding the New Drug Application (NDA) for fast-acting insulin aspart. In the letter, the FDA requested additional information related to the assay for the immunogenicity and the assay used to generate the clinical pharmacokinetics data before the review of the NDA could be completed. Novo Nordisk expects to resubmit the fast-acting insulin aspart NDA as a class II re-submission within the next three months. In January 2017, Novo Nordisk announced that the European Commission had granted marketing authorisation for Fiasp® for the treatment of diabetes in adults and that Novo Nordisk had also received marketing authorisation for Fiasp® from Health Canada.

In November 2016, Novo Nordisk announced that the FDA had approved the New Drug Application (NDA) for Xultophy® 100/3.6, a once-daily, single-injection fixed combination of long-acting insulin degludec (Tresiba®) and the GLP-1 analogue liraglutide (Victoza®). Xultophy® 100/3.6 is indicated as an adjunct to diet and exercise to improve glycaemic control in adults with type 2 diabetes inadequately controlled on basal insulin (less than 50 units daily) or liraglutide (less than or equal to 1.8 mg daily).

In November 2016, Novo Nordisk announced the headline results from the DEVOTE trial, a long-term, randomised, double-blinded and event-driven trial conducted to confirm the cardiovascular safety of Tresiba® (insulin degludec) compared to insulin glargine U100 when added to standard of care. In the trial, more than 7,500 people with type 2 diabetes at high risk of major adverse cardiovascular events were treated for a period of approximately two years. The primary endpoint of the DEVOTE study was defined as the MACE composite outcome of the first occurrence of cardiovascular death, non-fatal myocardial infarction or non-fatal stroke and showed a hazard ratio of 0.91 in favour of Tresiba® relative to insulin glargine U100, with no statistically significant difference between the two treatments. In the trial, Tresiba® demonstrated superiority on the secondary confirmatory endpoint of severe hypoglycaemia: 27% fewer patients in the Tresiba® treated group experienced an episode of severe hypoglycaemia, resulting in a 40% overall reduction in total episodes of adjudicated severe hypoglycaemia with Tresiba® compared to insulin glargine U100.

OBESITY AND OTHER AREAS

In November 2016, Novo Nordisk initiated a phase 2 dose-finding trial in patients with NASH (non-alcoholic steatohepatitis) to investigate the effect of subcutaneous semaglutide once daily for 72 weeks on the histological resolution of NASH. The trial will include 372 patients globally randomised to one of three doses of semaglutide or placebo and is planned to conclude in 2019.

HAEMOPHILIA

In first half of 2016, Novo Nordisk submitted the Marketing Authorisation Application (MAA) to the European Medicines Agency (EMA) and the Biologics Licence Application (BLA) to the FDA for the approval of long-acting factor IX, nonacog beta pegol. Nonacog beta pegol is a glycopegylated recombinant factor IX with a significantly improved pharmacokinetic (PK) profile, developed for patients with haemophilia B.

SOCIAL PERFORMANCE

Social performance has three dimensions: improving access to medical treatment and quality of care for patients, offering a healthy and engaging working environment, and providing assurance that responsible business practices are in place, with the aim of contributing to the communities in which the company operates.

PATIENTS

Of the 415 million people living with diabetes worldwide, three out of four live in low- and middle-income countries with weak healthcare systems, implying that millions of people have inadequate access to diabetes care.

Novo Nordisk's strategy for global access to diabetes care addresses this unmet need. The company's long-term target is to reach 40 million people with its diabetes care products by 2020 – double the 2010 baseline number.

Novo Nordisk provided medical treatments to an estimated 28 million people with diabetes worldwide in 2016, compared with 26.8 million in 2015. This 4% increase was driven by sales of human insulin (0.6 million people) and modern and new-generation insulin (0.5 million people).

Current projections show that it will not be possible to reach this target. This is due to a more challenging market environment than anticipated in 2013 when the long-term target was set. Novo Nordisk remains committed to continuing its efforts to reach more patients and improve diabetes care. In 2016, the company announced a new Novo Nordisk Access to Insulin Commitment with a broader scope to replace the longstanding differential pricing policy. It provides low-income countries and humanitarian relief organisations with an effective guarantee that Novo Nordisk will ensure availability of low-priced human insulin at a lower ceiling price than the previous pricing policy. In 2017, the price will be 4 US dollars per vial.

Novo Nordisk sold human insulin according to the company's differential pricing policy in 22 of the 48 Least Developed Countries in 2016, compared with 23 countries in 2015. The pricing policy is offered through government tenders or private market distributors to all Least Developed Countries (LDCs) as defined by the UN. In 2016, the ceiling price for insulin treatment per patient per day was USD 0.18, while the average realised price for insulin sold under the programme was USD 0.15. The total number of people treated with insulin sold at or below the pricing policy price in the LDCs decreased from 411,000 in 2015 to 349,000 in 2016. Beyond this scheme, Novo Nordisk sells human insulin at similar prices in low-income countries. In 2016, an estimated 6.5 million people were treated with insulin below the LDC ceiling price worldwide compared with 5.5 million people in 2015.

By the end of 2016, solid progress had been achieved by Changing Diabetes® programmes in reaching more people with diabetes and building healthcare capacity. The Changing Diabetes® in Children programme, launched in 2009, operates in nine countries and reaches more than 14,000 children, who receive insulin treatment free of charge. A total of 108 clinics have been set up, and more than 7,000 healthcare professionals have been trained or retrained. In 2017, the programme will be expanded to include another five low-income countries, with a new ambition of reaching 20,000 children. The Changing Diabetes® in Pregnancy programme, also launched in 2009, has screened more than 48,000 women for gestational diabetes, and more than 4,800 women have been diagnosed and subsequently treated. The Base of the Pyramid programme has been expanded in Kenya, Nigeria and Ghana, and in 2017 the programme will be rolled out in Senegal.

In 2014, Novo Nordisk launched Cities Changing Diabetes as a response to the dramatic rise of type 2 diabetes in cities, also called 'urban diabetes'. It is a partnership programme with University College London and Steno Diabetes Center plus a range of local partners, including diabetes and health communities, city governments, academic institutions, city experts and civil society organisations. The aim is to map the problem, share solutions and drive concrete action to fight the diabetes challenge in cities around the world. The partner cities are Copenhagen, Houston, Johannesburg, Mexico City, Shanghai, Tianjin, Vancouver and Rome, representing more than 70 million citizens.

Donations through the World Diabetes Foundation (WDF) in 2016 amounted to 85 million Danish kroner. The WDF is an independent non-profit organisation established by Novo Nordisk in 2002 to help expand access to diabetes care. The foundation invests in sustainable initiatives to build healthcare capacity, with the aim of improving prevention and treatment of diabetes in developing countries. Since 2002, WDF has provided 122 million US dollars in funding to 486 projects in 115 countries. These included projects with a focus on prevention and others aimed at reaching people in the most remote rural areas. Read more on worlddiabetesfoundation.org.

Novo Nordisk also provides financial support to improve global access to haemophilia care. In 2016, the company donated 21 million Danish kroner to the Novo Nordisk Haemophilia Foundation, established in 2005. The foundation supports projects and fellowships in developing and emerging economies. Initiatives focus on capacity building, awareness, diagnosis and patient registries. Read more on nnhf.org.

EMPLOYEES

In November 2016, Novo Nordisk reduced its global workforce by 2% across its organisation. The decision was one of several actions to reduce operating costs in response to a challenging competitive environment, especially in the USA. The workforce reductions affected R&D units, headquarter staff functions and positions in the global commercial organisation mainly in the USA. At the end of 2016, the total number of employees was 42,446, corresponding to 41,971 full-time positions, which is a 3% increase compared with 2015. The growth is primarily driven by expansion within the International Operations sales region and in Product Supply. Employee turnover increased from 9.2% in 2015 to 9.7% in 2016.

Measured on a scale from 1 to 5, with 5 being the best score, the consolidated score in the annual employee survey, eVoice, was 4.4 in 2016, compared with 4.3 in 2015. The survey was conducted in the second quarter of 2016 and measures the extent to which the organisation is working in accordance with the Novo Nordisk Way. The 2016 result reflects a strong culture and commitment to the company's values.

By the end of 2016, gender diversity among managers was 59% men and 41% women. Of the newly promoted managers, 43% were women. All management teams, from entry level upwards, strive for enhanced diversity, with the aim of ensuring a robust pipeline of talent for management positions.

The average frequency rate of occupational accidents with absence in 2016 was 3.0 per million working hours, unchanged from 2015. One Novo Nordisk employee in Pakistan died in a work-related accident. Novo Nordisk is working with a zero-injury mindset and has a long-term commitment

CONTINUED ▶

to continuously improve safety performance. The link between company values and safety behaviour is emphasised to ensure that employees always make the safe choice.

ASSURANCE

Training in business ethics is mandatory and a high priority. Annual business ethics training is required for all employees, including new hires. Business ethics training is therefore a key element of the onboarding programmes. In 2016, 99% of all relevant employees completed and documented their training and passed the related tests, compared with 98% in 2015. This high level is attributed to the constant focus on and communication by senior management of the importance of business ethics compliance.

A total of 52 business ethics reviews were completed in 2016 with 234 findings, compared with 49 reviews in 2015 with 183 findings. It is Group Internal Audit's assessment that the level of compliance is sound. Closure of findings progressed as planned, and there were no overdue findings as of 31 December 2016.

The global facilitator team conducted 84 audits of units' adherence to the Novo Nordisk Way. These facilitations covered approximately 25,000 employees, 12% of whom were interviewed, while feedback was collected from almost 1,000 stakeholders. The facilitations in 2016, as in 2015, showed a high level of compliance with the Novo Nordisk Way. Corrective actions and corresponding deadlines were agreed with local management for all actions. See the article on p 18 and novonordisk.com/about-novo-nordisk/novo-nordisk-way.html for further information. A total of 223 supplier audits, compared with 240 audits in 2015, were conducted in 2016 to assess suppliers' level of compliance with the company's standards for suppliers. These relate to quality as well as to Novo Nordisk's responsible sourcing policy covering the environment, labour, human rights and business ethics.

These audits are undertaken by Novo Nordisk's Corporate Quality organisation. Of the audits carried out in 2016, 27 concerned responsible sourcing criteria, on par with 2015. Only high-risk suppliers, identified through a robust risk assessment, are selected for responsible sourcing audits. There were no critical findings in 2016.

Novo Nordisk had six product recalls from the market in 2016, of which one was critical, compared with two in 2015. Two of the recalls were due to inappropriate product storage in the external distribution chain while four were due to products that did not fully meet specifications. Local health authorities were informed in all instances to ensure that distributors, pharmacies, doctors and patients received appropriate information. Read more on pp 41 and 51.

In 2016, as in 2015, there were no failed inspections by regulatory authorities among those resolved at year-end. A total of 74 inspections were conducted in 2016 at Novo Nordisk's sites, at clinics conducting investigations for Novo Nordisk or for voluntary ISO 9001 certification, compared with 82 inspections in 2015. At year-end, 49 inspections had been passed and 25 were unresolved.

Novo Nordisk acts on its responsibility to respect human rights as set out in the UN Guiding Principles on Business and Human Rights, and observes due diligence. Novo Nordisk recognises that the company has a number of potential impacts with regard to human rights in its operations and business relationships. Actions are taken focusing on salient issues beyond those already addressed by existing programmes such as global labour standards and employee health and safety, bioethics, responsible sourcing and business ethics. In 2016, the focus was on human biosamples for research use, patient safety and security. The company has also strengthened consultations with patients. As of this year, reporting on respect of human rights, using the UN Guiding Principles Reporting Framework, is available in the Communication on Progress at novonordisk.com/annualreport.

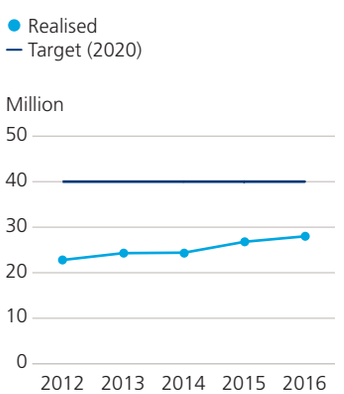
The consolidated reputation score was 79.2 in 2016, compared with 82.4 in 2015. Data was collected from January through October 2016. Although still a strong score, the decline reflects a general trend across the healthcare sector. Reputation among key stakeholders – people with diabetes, general practitioners, diabetes specialists and employees – is an indicator of the extent to which the company lives up to their expectations and the likelihood that they will trust, support and engage with the company.

LONG-TERM SOCIAL TARGETS

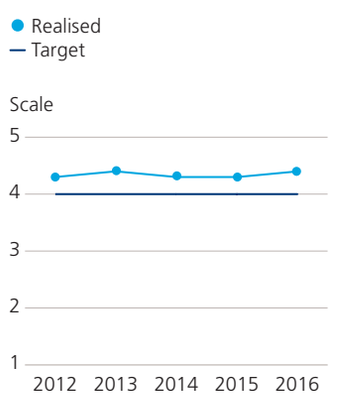
Novo Nordisk has set three long-term social targets to support long-term financial performance, balancing responsibility with profitability, with the aim of creating sustainable value for shareholders and other stakeholders. The social targets reflect strategic priorities to be a sustainable business: helping people live better lives, working the Novo Nordisk Way and safeguarding the reputation of the company.

For further information about social performance, see the social statement on pp 98–101 and the Communication on Progress at novonordisk.com/annualreport.

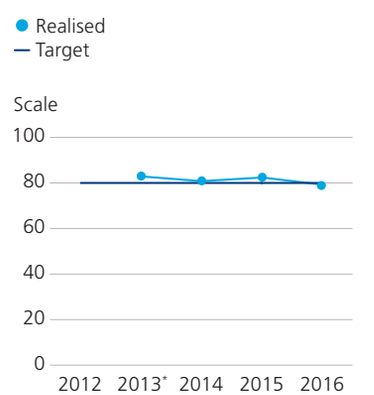
PATIENTS REACHED WITH DIABETES CARE PRODUCTS
Estimate



WORKING THE NOVO NORDISK WAY
Average score in annual employee survey



COMPANY REPUTATION
Mean score among key stakeholders



* In 2013, data for people with diabetes and employees are not included due to lack of availability.

ENVIRONMENTAL PERFORMANCE

Novo Nordisk measures environmental performance across four dimensions: use of resources, emissions, organic residues and waste. All of Novo Nordisk's production facilities are certified according to ISO 14001. The production of active pharmaceutical ingredients in Kalundborg, Denmark, is also certified according to ISO 50001.

In line with expectations, use of resources and waste increased, while organic residues and CO_2 emissions from energy use at production sites and product distribution decreased.

RESOURCES

Despite a sharp focus on process optimisations, energy use increased by 6% and water use by 5% due to increases in production, increased capacity and expansions to meet market demands. Two facilities are located in regions subject to high water stress, consuming 6% of the total water consumption used at Novo Nordisk sites. There were no water shortage incidents and, overall, water consumption at these facilities decreased in 2016.

EMISSIONS, ORGANIC RESIDUES AND WASTE

Novo Nordisk's climate action programme aims to reduce CO_2 emissions throughout the value chain. The current focus includes energy used in production, distribution of products, company cars and business flights. As of 2015, indirect emissions from the supply chain are included in the climate action programme. Novo Nordisk engages with strategic suppliers with the aim of increasing energy efficiency and shifting to renewable energy.

While energy consumption increased, the overall CO_2 emissions from energy consumption decreased from 107,000 tons to 92,000 tons. This is a result of ongoing conversion to less CO_2 intensive energy sources as part of the effort to grow the share of renewable energy. At the end of 2016, 78% of all power for production came from renewable sources. All but one production site in Denmark use gas from biogas plants, and the facility in Brazil makes steam from certified wood. The remaining production facilities use natural gas.

CO_2 emissions from product distribution decreased by 12% to 38,000 tons due to continuous conversion from air transport to distribution by sea.

Organic residues, a by-product of the production of active pharmaceutical ingredients (API), decreased slightly due to changes in the product mix of API. The energy in these residues is first recovered in biogas plants, and the digested slurry is then used as fertiliser on local farmland.

Waste increased by 9% compared with 2015, mainly due to increased pilot production where regeneration of ethanol is not possible. Reducing ethanol waste is a high priority for Novo Nordisk, and efficient regeneration plants enable repeated reuse of the ethanol.

LONG-TERM ENVIRONMENTAL TARGETS

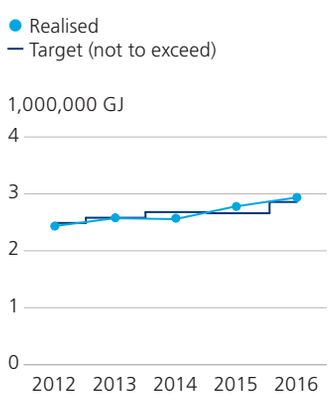
The long-term ambition is to decouple consumption of water and energy from sales growth. The current target is set as a maximum of half of the percentage increase in sales in local currencies, measured as a three-year average. In 2016, sales increased by 6% in local currencies while energy consumption increased by 6% and water consumption increased by 5%. The lower sales growth reflects the challenging business environment in 2016, while the increased consumption of energy and water is the result of new capacity building to meet market demands. Under these circumstances, it is not feasible to meet the current targets for the foreseeable future. New targets are being developed to replace them.

In 2015, Novo Nordisk set a target for all production sites to use electricity from renewable sources by 2020. The company has signed up to the RE100 initiative, a coalition of companies, committed to 100% renewable electricity led by The Climate Group in partnership with CDP, a not-for-profit that runs the global disclosure system for environmental impacts.

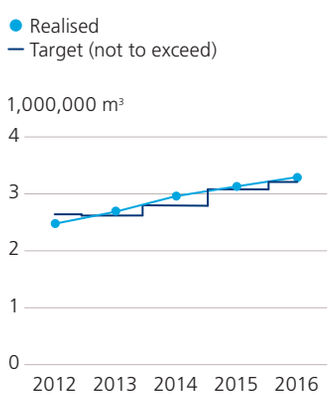
Novo Nordisk plans to set targets for other focus areas under the climate ambition programme. The ambition is to align the targets with the goals of the Paris Agreement to keep the rise in global temperature well below 2 degrees Celcius.

For additional information about environmental performance, see the environmental statement on pp 104–106 and the Communication on Progress at novonordisk.com/annualreport.

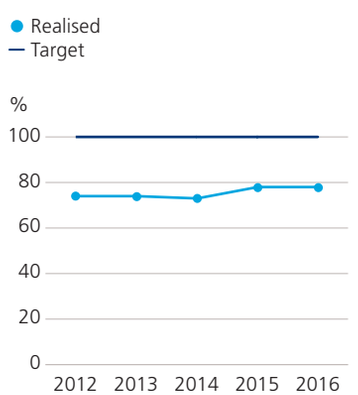
ENERGY CONSUMPTION



WATER CONSUMPTION



SHARE OF RENEWABLE POWER FOR PRODUCTION



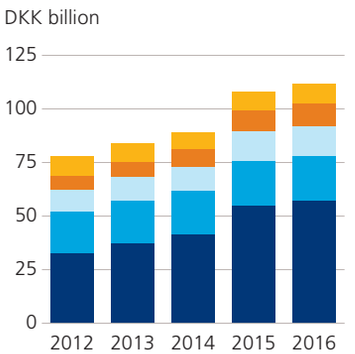
PERFORMANCE HIGHLIGHTS

	2012	2013	2014	2015	2016	2015–2016
FINANCIAL PERFORMANCE						Change
Net sales	78,026	83,572	88,806	107,927	111,780	4%
Sales growth in local currencies[1]	11.6%	11.9%	8.3%	8.4%	5.5%	
Currency effect (local currency impact)	6.0%	(4.8%)	(2.0%)	13.1%	(1.9%)	
Net sales growth as reported	17.6%	7.1%	6.3%	21.5%	3.6%	
Depreciation, amortisation and impairment losses	2,693	2,799	3,435	2,959	3,193	8%
Operating profit	29,474	31,493	34,492	49,444	48,432	(2%)
Net financials	(1,663)	1,046	(396)	(5,961)	(634)	(89%)
Profit before income taxes	27,811	32,539	34,096	43,483	47,798	10%
Net profit for the year	21,432	25,184	26,481	34,860	37,925	9%
Total assets	65,669	70,337	77,062	91,799	97,539	6%
Equity	40,632	42,569	40,294	46,969	45,269	(4%)
Capital expenditure, net	3,319	3,207	3,986	5,209	7,061	36%
Free cash flow[1]	18,645	22,358	27,396	34,222	39,991	17%
FINANCIAL RATIOS						
Percentage of sales:						
Sales outside Denmark	99.4%	99.4%	99.5%	99.7%	99.7%	
Sales and distribution costs	27.6%	28.0%	26.2%	26.2%	25.4%	
Research and development costs	14.0%	14.0%	15.5%	12.6%	13.0%	
Administrative costs	4.2%	4.2%	4.0%	3.6%	3.5%	
Gross margin[1]	82.7%	83.1%	83.6%	85.0%	84.6%	
Net profit margin[1]	27.5%	30.1%	29.8%	32.3%	33.9%	
Effective tax rate[1]	22.9%	22.6%	22.3%	19.8%	20.7%	
Equity ratio[1]	61.9%	60.5%	52.3%	51.2%	46.4%	
Return on equity[1]	54.9%	60.5%	63.9%	79.9%	82.2%	
Cash to earnings[1]	87.0%	88.8%	103.5%	98.2%	105.4%	
Payout ratio[1]	45.3%	47.1%	48.7%	46.6%	50.2%	
Payout ratio adjusted for the partial divestment of NNIT A/S	45.3%	47.1%	48.7%	50.0%	50.2%	
LONG-TERM FINANCIAL TARGETS						Targets
Operating profit growth	31.7%	6.9%	9.5%	43.3%	(2.0%)	5%
Operating profit growth adjusted	31.7%	6.9%	9.5%	35.2%[2]	3.9%[2]	
Operating profit growth in local currencies	20.2%	14.6%	12.7%	20.6%	0.2%	
Operating profit after tax to net operating assets[1]	99.0%	97.2%	101.0%	148.7%	150.2%	125%
Cash to earnings (three-year average)	103.7%	93.9%	93.1%	96.8%	102.4%	90%

1. For definitions, please refer to p 96. **2.** Adjusted for DKK 2,376 million from the partial divestment of NNIT and DKK 449 million from the income related to the out-licensing of assets for inflammatory disorders, both in 2015.

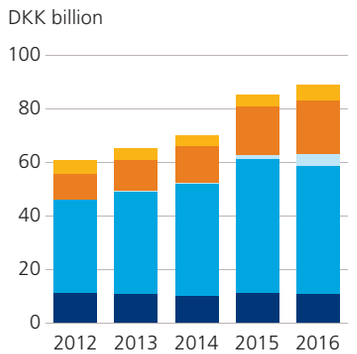
SALES BY GEOGRAPHIC REGION

Pacific
Region China
International Operations
Europe
USA



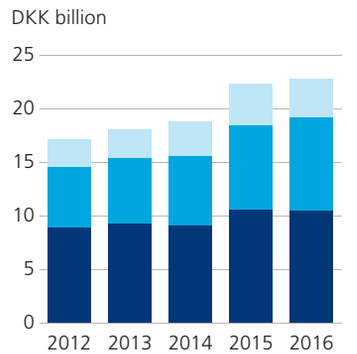
DIABETES AND OBESITY CARE SALES

Other diabetes and obesity care
Victoza®
New-generation insulin
Modern insulin
Human insulin



BIOPHARMACEUTICALS SALES

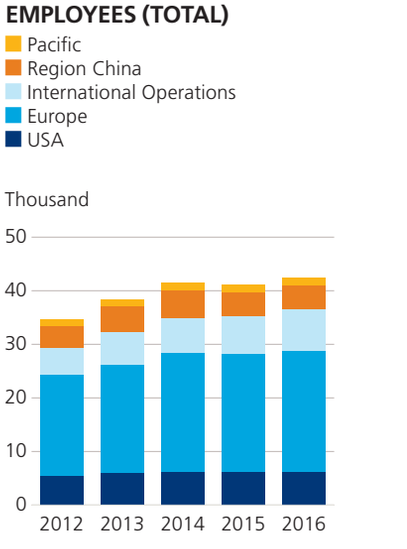
Other biopharmaceuticals
Human growth hormone
Haemophilia



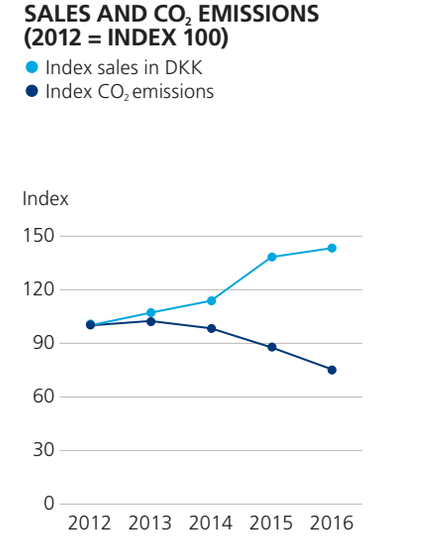
	2012	2013	2014	2015	**2016**	2015–2016
SOCIAL PERFORMANCE						Change
Least developed countries where Novo Nordisk sells insulin according to the differential pricing policy	35	35	32	23	22	(4%)
Donations (DKK million)[3]	84	83	84	105	106	1%
New patent families (first filings)	65	77	93	77	74	(4%)
Employees (total)	34,731[4]	38,436[4]	41,450[4]	41,122	42,446	3%
Employee turnover	9.1%	8.1%	9.0%	9.2%	9.7%	
Gender in Management (ratio men:women)	61:39	61:39	60:40	59:41	59:41	
Relevant employees trained in business ethics	99%	97%	98%	98%	99%	
Product recalls	6	6	2	2	6	200%
Failed inspections	1	0	0	0	0	–
LONG-TERM SOCIAL TARGETS						Targets
Patients reached with Novo Nordisk diabetes care products (estimate in millions)	22.8	24.3	24.4	26.8	28.0	40 by 2020
Working the Novo Nordisk Way (scale 1–5)	4.3	4.4	4.3	4.3	4.4	4.0
Company reputation (scale 0–100)	N/A	82.9[5]	80.8	82.4	79.2	≥80
ENVIRONMENTAL PERFORMANCE						Change
Energy consumption (1,000 GJ)	2,433	2,572	2,556	2,778	2,935	6%
Water consumption (1,000 m^3)	2,475	2,685	2,959	3,131	3,293	5%
CO_2 emissions from energy consumption (1,000 tons)	122	125	120	107	92	(14%)
Organic residues (tons)	99,209	110,228	110,095	124,049	114,805	(7%)
Waste (tons)	19,213	20,387	30,720	34,715	37,940	9%
LONG-TERM ENVIRONMENTAL TARGETS						Targets
Energy consumption (vs prior year)	11%	6%	(1%)	9%	6%	Not to exceed 4%[6]
Water consumption (vs prior year)	16%	8%	10%	6%	5%	Not to exceed 4%[6]
Share of renewable power for production	74%	74%	73%	78%	78%	100% by 2020
SHARE PERFORMANCE						Change
Basic earnings per share/ADR in DKK[1,7]	7.82	9.40	10.10	13.56	14.99	11%
Diluted earnings per share/ADR in DKK[1,7]	7.77	9.35	10.07	13.52	14.96	11%
Total number of shares (million), 31 December	2,800	2,750	2,650	2,600	2,550	(2%)
Treasury shares (million), 31 December	87	103	57	52	46	(12%)
Share capital (DKK million)	560	550	530	520	510	(2%)
Dividend per share in DKK[7]	3.60	4.50	5.00	6.40	7.60[8]	19%
Total dividend (DKK million)	9,715	11,866	12,905	16,230	19,048[8]	17%
Share repurchases (DKK million)	12,162	13,989	14,728	17,229	15,057	(13%)
Closing share price (DKK)[7]	183.30	198.80	260.30	399.90	254.70	(36%)

3. Donations to the World Diabetes Foundation and the Novo Nordisk Haemophilia Foundation, which are working to increase healthcare capacity in developing countries. **4.** Includes employees in NNIT A/S. **5.** Data for people with diabetes and employees are not included due to lack of availability. **6.** The 4% equals 50% of the business growth measured as the increase in sales in local currencies as a three-year average. For detailed target definition, please refer to p 13. **7.** Share performance-related key figures have been calculated reflecting a trading unit of DKK 0.20. **8.** Total dividend for the year including interim dividend of DKK 3.00 per share which was paid in August 2016. The remaining DKK 4.60 per share, corresponding to DKK 11,448 million, has not yet been paid.

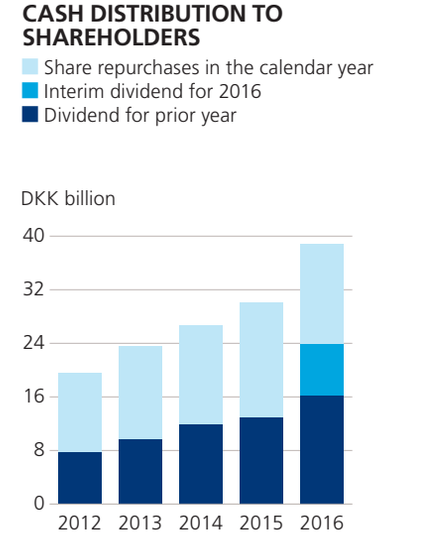
EMPLOYEES (TOTAL)



SALES AND CO_2 EMISSIONS (2012 = INDEX 100)



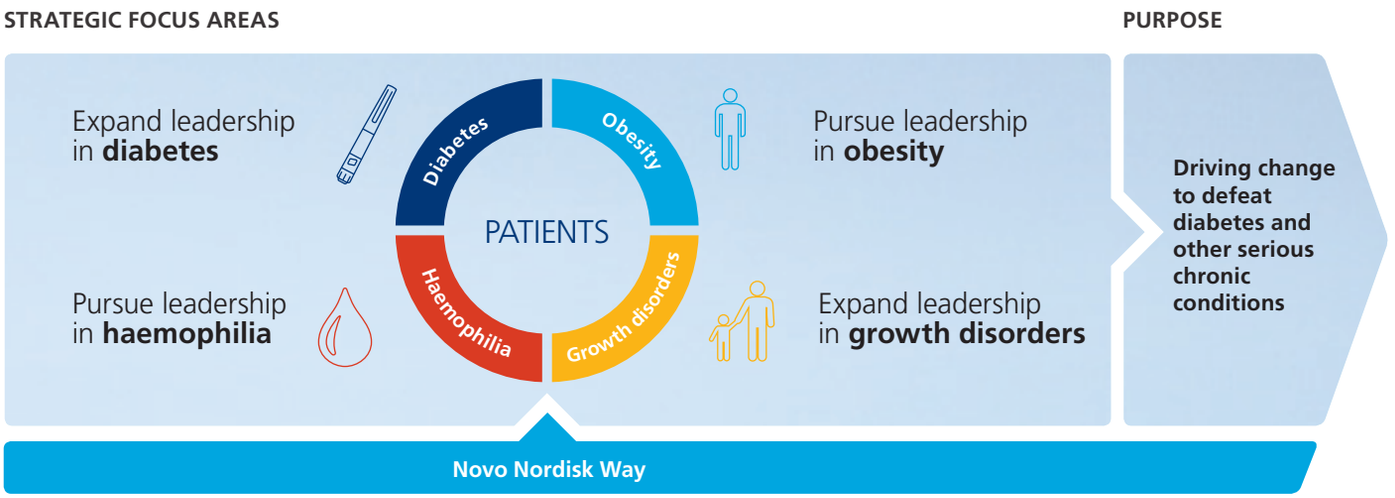
CASH DISTRIBUTION TO SHAREHOLDERS



OUR STRATEGY

With a sharp focus on four selected therapeutic areas where the company has unique expertise and capabilities and a values-based management system, Novo Nordisk's corporate strategy is framed by the company's purpose to defeat diabetes and other serious chronic conditions.

NOVO NORDISK'S STRATEGY



THE FOUR STRATEGIC PRIORITIES

1. EXPAND LEADERSHIP IN DIABETES

According to the International Diabetes Federation, 415 million people worldwide are living with diabetes today, and this number is predicted to increase to 642 million by 2040. This corresponds to more than 10% of the world's adult population.[1]

The global market for diabetes care products is estimated by IMS to amount to more than 450 billion Danish kroner, of which Novo Nordisk products account for approximately 27%.[5] Historically, there has been a strong growth trend due to the increasing number of people with diabetes and the availability of new and better treatments on the market. However, the competitive environment, especially in the important US market, has become tougher in the past year as commercial payers have consolidated and more products have entered or are due to enter the market, especially within the insulin segment.

Diabetes care is by far Novo Nordisk's largest business area, accounting for approximately 80% of the company's total sales. Since 2007, all efforts in diabetes care have been focused on protein-based products, such as insulin and GLP-1, and today Novo Nordisk is the leader in both segments, with a market share of more than 40% of the insulin market and close to 60% of the GLP-1 market, measured in value.[5]

Novo Nordisk's ambition is to expand its leadership within these two segments, with the aim of improving treatment for people with type 1 diabetes and serving the growing number of people with type 2 diabetes. Key to achieving this ambition is the new generation of insulin and insulin combination products, Tresiba®, Xultophy®, Ryzodeg®, and Fiasp® as well as the once-daily GLP-1 analogue Victoza®. All these products have very competitive clinical profiles and are delivered in convenient injection devices. Furthermore, Novo Nordisk will pursue label updates based on the positive results from the cardiovascular outcomes trials reported in 2016: the LEADER trial with Victoza® and the DEVOTE trial with Tresiba®. Read more on pp 24–25.

Novo Nordisk's research and development pipeline includes several innovative products. These include the once-weekly injectable GLP-1 analogue semaglutide which, in a clinical trial, has also demonstrated a significant reduction in major cardiovascular events in adults with type 2 diabetes at high cardiovascular risk, and a once-daily tablet version of semaglutide set to become the first orally available peptide for the treatment of type 2 diabetes. Read more on pp 20–21 and 24–25.

2. PURSUE LEADERSHIP IN OBESITY

Obesity is known to be a major risk factor for developing serious diseases such as type 2 diabetes and was therefore a natural therapeutic area for Novo Nordisk to enter. Obesity has reached pandemic-like proportions, with more than 600 million adults[2] worldwide having clinical obesity (defined as having a Body Mass Index (BMI) of 30 or above).[2] However, according to our estimate, only 10 million people currently receive pharmacological treatment[5] as there are few pharmaceutical treatment options available for obesity, and reimbursement for these medications is limited.

In 2015, Novo Nordisk entered the obesity market with Saxenda® (liraglutide 3 mg), starting in the US. Today, the product is launched in 15 countries. By the end of 2016, Saxenda® has gained market leadership, with 35% of the value market share in the US.[5] Novo Nordisk's ambition is to pursue leadership in obesity, by bringing products to market with an even better weight loss profile. The company has a strong pipeline to support this ambition and is working with stakeholders to increase recognition of obesity as a chronic disease. Read more on pp 28–29.

3. PURSUE LEADERSHIP IN HAEMOPHILIA

Haemophilia is an inherited or acquired bleeding disorder that prevents blood from clotting. An estimated 493,000 people worldwide are living with severe or moderate haemophilia.[5] The global haemophilia pharmaceutical market has a value of 64 billion kroner and is expected to grow.[5]

Novo Nordisk entered the haemophilia market in 1996 with NovoSeven® for the treatment of people with haemophilia who develop antibodies (inhibitors) against traditional treatments. In 2014, Novo Nordisk expanded into the wider haemophilia market with NovoEight® for people with haemophilia A and with NovoThirteen® for long-term prevention of bleeding in patients with congenital factor XIII A-subunit deficiency. In 2016, the company submitted its long-acting factor IX (N9-GP) for the treatment of haemophilia B, for approval in Europe and the US. Furthermore, the company has a long-acting version of factor VIII (N8-GP), in phase 3 development for haemophilia A. Building on this strong base, Novo Nordisk's ambition is to pursue leadership within haemophilia. Read more on pp 30–31.

4. EXPAND LEADERSHIP IN GROWTH DISORDERS

Novo Nordisk has been active in the treatment of growth hormone deficiency for four decades. The global market for growth disorder treatments is estimated to be 18 billion kroner.[5] Novo Nordisk's growth hormone, Norditropin®, is the global market leader, with a market share of 37%[5], measured by value. The company's ambition is to expand its leadership in the growth hormone market. A key project is Novo Nordisk's long-acting growth hormone product, which is in phase 3 development.

REVISED R&D STRATEGY FOCUSES ON PATIENTS' UNMET MEDICAL NEEDS

Since 1923, Novo Nordisk has been in business to help people with diabetes live with this condition in a way that does not prevent them from pursuing their dreams of a fulfilling life.

Today, scientific advances have brought much progress, but living well with diabetes is still only a reality for a worryingly small proportion of people, with just 6% of people with diabetes estimated to live a life free from diabetes-related complications.[6] The need for innovation remains as essential as ever before.

But innovation has a price. It often takes more than 12 years to develop a new biological medicine, and millions of work hours are spent on the diligent process of testing a drug candidate for safety and efficacy before it is available on the pharmacy shelves.

"In today's constrained economy, the threshold is higher for what payers are willing to pay for innovation. As a consequence, all R&D projects must be much more rigorously scrutinised and subjected to thorough evaluation of their commercial viability before they advance through the pipeline," explains Mads Krogsgaard Thomsen, chief science officer at Novo Nordisk. "Meanwhile, we have the opportunity to investigate whether our newest innovations – for example semaglutide – can fulfil unmet medical needs in areas that we didn't think of originally."

> "IN TODAY'S CONSTRAINED ECONOMY, THE THRESHOLD IS HIGHER FOR WHAT PAYERS ARE WILLING TO PAY FOR INNOVATION."
>
> Mads Krogsgaard Thomsen
> Executive vice president
> and chief science officer at Novo Nordisk

Based on this, Novo Nordisk announced in October 2016 that it will now apply an even higher innovation threshold for progressing R&D projects and more intensely explore how to utilise its current key products and new molecules in adjacent disease areas where there are high unmet patient needs, including NASH (non-alcoholic steatohepatitis), diabetic kidney disease and cardiovascular disease.

As a result, early-stage research projects have been re-evaluated, and some development projects within oral insulin and combinations involving oral insulin will not be progressed any further, despite encouraging clinical data.

"With insulin prices being under pressure, the sad fact is that we can't create an economically viable case for launching oral insulin; we'll never recoup that investment. By stopping these projects, we've liberated resources to focus on other projects," Mads Krogsgaard Thomsen says.

More attention is now on new drug targets, including in-licensing of early- and mid-stage projects as well as external academic collaborations. Novo Nordisk's current late-stage development portfolio is not affected by the updated strategy (see pipeline on pp 20–21).

DOING BUSINESS THE NOVO NORDISK WAY

Through times of change, it is more important than ever to stand on solid ground. The Novo Nordisk Way including the Triple Bottom Line business principle remain the foundation of the company's vision, strategy and way of doing business.

"The Novo Nordisk Way describes the values-based management principle we've established and benefited from over many years," President and Chief Executive Officer (CEO) Lars Fruergaard Jørgensen explains. "In just one page, it outlines what we wish to achieve as an organisation, as well as the behaviours that are expected of all Novo Nordisk employees.

"In a fast-growing global organisation, our people have to make the right decisions on difficult matters on a daily basis – always bearing in mind what is best for patients, employees and shareholders in the long term. We need to provide clear and simple guidance to all employees that is consistently understood anywhere in the world. This is what the Novo Nordisk Way does."

The Novo Nordisk Way includes 10 Essentials that set out specific behaviours stakeholders can expect to see from Novo Nordisk and its employees. All employees are held accountable for putting them into practice by 'living the Novo Nordisk Way', and managers at every level are responsible for ensuring that they lead their units in adherence with the Novo Nordisk Way. This is assured through a rigorous internal audit process called facilitation (see box on p 19).

"It is well known that adherence to values, consistent behaviours and good governance are vital for high performance, and the value of a strong company culture should never be underestimated," says Lars Fruergaard Jørgensen.

"When we meet with investors, they want to understand the company's risks and how we pursue our strategy. They also ask about the quality of our management, whether we have the right management composition, and how we develop skills and nurture our people's talents. A strong corporate culture and stewardship are enablers for future performance."

CREATING VALUE IN A SUSTAINABLE WAY

The Triple Bottom Line principle, anchored in the company's Articles of Association and in the Novo Nordisk Way, is a lens for decision-making to ensure that effects on people, communities and the environment are accounted for and considered. The aim is to ensure long-term profitability by reducing risks related to business activities and to enhance the positive societal contributions from Novo Nordisk's global operations.

"The Triple Bottom Line principle reminds us how we do business: we always strive to conduct our activities in a financially, environmentally and socially responsible way, because we know this is a prerequisite for a sustainable business and long-term value creation," Lars Fruergaard Jørgensen explains.

"We have an interest in maintaining sustainable growth and contributing to a prosperous society. And Novo Nordisk has a lot to offer, in particular when it comes to addressing the UN Global Goals 'health and well-being for all, of all ages' and 'responsible production and consumption'. One example of how we're tackling these challenges is our partnership platform, Cities Changing Diabetes," says Lars Fruergaard Jørgensen (see pp 26–27).

CORPORATE RESPONSIBILITY

Novo Nordisk has global policies and programmes in place to ensure that: business is conducted ethically and responsibly at all times; activities or products do not harm people, communities or the environment; health and fair employment terms are safeguarded for employees of Novo Nordisk and suppliers; and the company meets its responsibilities as a corporate citizen through tax contributions and community support. Novo Nordisk adheres to the standards set by the UN Guiding Principles on Business and Human Rights and subscribes to the UN Global Compact's 10 principles of responsible business conduct. A detailed account of the company's performance can be found at novonordisk.com/annualreport.

Novo Nordisk continuously optimises business performance to make a positive contribution to sustainable development and to create and document shared value. For example, the company has the goal of all its production sites to be 100% powered by renewable energy by 2020 and has intensified focus on reducing its CO_2 footprint throughout the value chain. See more examples of how Novo Nordisk creates shared value through its presence in growth economies, such as Algeria and Indonesia, at novonordisk.com/sustainability.

Furthermore, Novo Nordisk supports the achievement of the UN Sustainable Development Goals. These are a platform for companies to engage stakeholders at local, national and international levels in the pursuit of business goals that have an implication for global sustainable development.

"**WE NEED TO PROVIDE CLEAR AND SIMPLE GUIDANCE** TO ALL EMPLOYEES THAT IS CONSISTENTLY UNDERSTOOD ANYWHERE IN THE WORLD."

Lars Fruergaard Jørgensen
President and chief executive officer

Samira Salhi
Laboratory technician,
Global Research,
Denmark

NOVO NORDISK WAY

In 1923, our Danish founders began a journey to change diabetes. Today, we are thousands of employees across the world with the passion, the skills and the commitment to continue this journey to prevent, treat and ultimately cure diabetes.

- Our ambition is to strengthen our leadership in diabetes.
- We aspire to change possibilities in haemophilia and other serious chronic conditions where we can make a difference.
- Our key contribution is to discover and develop innovative biological medicines and make them accessible to patients throughout the world.
- Growing our business and delivering competitive financial results is what allows us to help patients live better lives, offer an attractive return to our shareholders and contribute to our communities.
- We never compromise on quality and business ethics.
- Our business philosophy is one of balancing financial, social and environmental considerations – we call it the Triple Bottom Line.
- We are open and honest, ambitious and accountable, and treat everyone with respect.
- We offer opportunities for our people to realise their potential.

Every day we must make difficult choices, always keeping in mind what is best for patients, our employees and our shareholders in the long run.

It's the Novo Nordisk Way.

ESSENTIALS

1. We create value by having a patient-centred business approach.
2. We set ambitious goals and strive for excellence.
3. We are accountable for our financial, environmental and social performance.
4. We provide innovation to the benefit of our stakeholders.
5. We build and maintain good relations with our key stakeholders.
6. We treat everyone with respect.
7. We focus on personal performance and development.
8. We have a healthy and engaging working environment.
9. We optimise the way we work and strive for simplicity.
10. We never compromise on quality and business ethics.

SAFEGUARDING ADHERENCE TO THE VALUES

Since 1997, Novo Nordisk has had a well-established process in place to ensure that the organisation adheres to the Novo Nordisk Way. Facilitations, which are a kind of values audit, measure how behaviours are conducted at unit level on an ongoing basis. Read more at **novonordisk.com/about-novo-nordisk/novo-nordisk-way.html**.

Facilitations cover more than one-third of the global organisation each year. A consolidated annual report on findings, trends and recommendations for improvement is presented to Executive Management and the Board of Directors. In 2016, the report, covering facilitations of 84 units and almost 25,000 employees, concluded that there was a consistent high level of compliance, with 60% of units rated 'high level' and 40% 'satisfactory level'. However, the report also points to areas that require attention – in particular ensuring focus on people management, simplicity and balancing available resources with a strong performance culture (see **p 103**).

PIPELINE OVERVIEW

2017 KEY MILESTONES

Tresiba®	Label extension with SWITCH data in the US and the EU
Tresiba®	Submission of DEVOTE data
Victoza®	Label extension with LEADER data in the US and the EU
Semaglutide – diabetes	Feedback from regulatory authorities
Semaglutide – diabetes	Completion of SUSTAIN 7 trial
Fast-acting insulin aspart	US resubmission
Semaglutide – obesity	Phase 2 data
N9-GP	Feedback from regulatory authorities

DIABETES AND OBESITY CARE

Compound	Indication	Description	Phase 1	Phase 2	Phase 3	Filed/ regulatory approval
DIABETES						
Fast-acting insulin aspart NN1218	Type 1 and 2 diabetes	A new formulation of insulin aspart intended to accelerate onset of action, with the potential to dose both before and after meals.				
Semaglutide NN9535	Type 2 diabetes	A once-weekly GLP-1 analogue intended to offer people with type 2 diabetes the clinical benefits of a GLP-1 analogue with less frequent injections.				
OG217SC NN9924	Type 2 diabetes	A long-acting oral GLP-1 analogue intended as a once-daily tablet treatment for people with type 2 diabetes.				
Anti-IL-21 T1D NN9828	Type 1 diabetes	A beta-cell preservation treatment intended for people newly diagnosed with type 1 diabetes.				
LAI287 NN1436	Type 1 and 2 diabetes	A long-acting basal insulin analogue intended for once-weekly dosing.				
Mealtime NN1406	Type 1 and 2 diabetes	A liver-preferential mealtime insulin analogue.				
PYY 1562 NN9748	Type 2 diabetes	An appetite-regulating hormone, peptide YY, for the treatment of diabetes.				

Phase 1

Studies in a small group (usually 10–100) of healthy volunteers, and sometimes patients, to investigate how the body handles, distributes and eliminates new medication and establish the maximum tolerated dose.

Phase 2

Studies of various dose levels in a larger group of patients (usually 100–1,000) to learn about the new medication's effect on the condition and its side effects. In phase 2, clinical trials are carried out to evaluate efficacy (and safety) in specified populations of patients. The outcome of phase 2 trials is clinical proof of concept and the selection of dose for evaluation in phase 3 trials.

Compound	Indication	Description	Phase 1	Phase 2	Phase 3	Filed/ regulatory approval
OBESITY AND OTHER AREAS						
Semaglutide NN9536	Obesity	A long-acting GLP-1 analogue intended as a once-daily treatment for obesity.				
AM833 NN9838	Obesity	A novel amylin analogue intended as a once-weekly treatment for obesity.				
G530S NN9030	Obesity	A novel glucagon analogue which, in combination with semaglutide, is intended for the treatment of obesity.				
PYY 1562 NN9747	Obesity	An appetite-regulating hormone, peptide YY, which, alone or in combination with semaglutide, is intended for the treatment of obesity.				
GG-co-agonist 1177 NN9277	Obesity	A novel glucagon and GLP-1 co-agonist intended for the treatment of obesity.				
Semaglutide NASH NN9931	NASH	A long-acting GLP-1 analogue intended as a once-daily treatment for non-alcoholic steatohepatitis (NASH).				

BIOPHARMACEUTICALS

Compound	Indication	Description	Phase 1	Phase 2	Phase 3	Filed/ regulatory approval
HAEMOPHILIA						
N9-GP NN7999	Haemophilia B	A glycopegylated long-acting recombinant coagulation factor IX intended to offer prophylaxis and treatment of bleeds.				
N8-GP NN7088	Haemophilia A	A glycopegylated long-acting recombinant coagulation factor VIII intended to offer prophylaxis and treatment of bleeds.				
Concizumab NN7415	Haemophilia A and B	A monoclonal antibody against Tissue Factor Pathway Inhibitor (TFPI) intended for bleeding prevention after subcutaneous administration.				
GROWTH DISORDERS						
Somapacitan NN8640	Growth disorders	A long-acting human growth hormone intended for once-weekly injections.				

Read more at novonordisk.com/investors and clinicaltrials.gov.

Phase 3

Studies in large groups of patients (usually 1,000–3,000) comparing a new medication with a commonly used drug or placebo for both safety and efficacy. Phase 3a covers trials conducted after efficacy is demonstrated and prior to regulatory submission. Phase 3b covers clinical trials completed during and after regulatory submission. In small therapeutic areas such as haemophilia, regulatory guidelines may allow the design of single-arm therapeutic confirmatory trials or trials that compare against historical control, for example, instead of existing treatment or placebo.

Filed/regulatory approval

The phase in which a product undergoes regulatory authority review. Products listed under this phase are currently under regulatory review in at least one of the triad markets: the US, the EU and Japan.

CHANGING DIABETES®

More than 415 million people in the world are living with diabetes,[1] but almost half of these people have not been diagnosed.[6] The longer it takes to diagnose diabetes, the more likely it is that complications will arise – including damage to the eyes, kidneys, nerves and heart. The 'Rule of Halves' highlights that very few people who receive the appropriate therapy achieve their treatment targets, putting the rest at risk of developing diabetes-related complications later in life.

Changing Diabetes® is Novo Nordisk's response to the global diabetes challenge, and goes beyond the discovery and development of medicines. Together with partners, Novo Nordisk is addressing the biggest unmet needs in diabetes through a number of initiatives worldwide.

Learn more at novonordisk.com/changingdiabetes.

415 MILLION ADULTS ARE LIVING WITH DIABETES.[1]

BY 2040, THIS IS PROJECTED TO INCREASE TO **642 MILLION**.[1]

65% OF ADULTS WITH DIABETES **LIVE IN CITIES** – THIS IS PROJECTED TO INCREASE TO **74%** BY 2040.[1]

ADDRESSING THE RISK FACTORS

- Many people who live in cities are developing type 2 diabetes, due partly to the impact of urbanisation on health.[1]
- Through the **Cities Changing Diabetes** programme, Novo Nordisk has made some striking discoveries concerning cultural and social factors that not only increase people's vulnerability to diabetes but also stand in the way of diagnosis and achieving good outcomes.
- These insights have inspired action in eight cities, representing more than 70 million inhabitants.[7] Find out which cities have joined the programme on **p 26**.

193 MILLION ADULTS WITH DIABETES **HAVE NOT BEEN DIAGNOSED**.[1]

50% OF ADULTS WITH DIABETES **ARE NOT DIAGNOSED UNTIL THE DISEASE HAS PROGRESSED** TO THE EXTENT THAT THEY HAVE AT LEAST ONE COMPLICATION AT THE TIME OF DIAGNOSIS.[8]

EARLY DIAGNOSIS

- Novo Nordisk is advocating for early diagnosis of diabetes through **risk-based screening** initiatives.
- On **World Diabetes Day** 2016, more than 180,000 people participated in blood glucose screenings or risk assessment activities.
- The company is also involved in providing free screening through mobile clinics and programmes such as the **Changing Diabetes® in Pregnancy** programme which, since 2009, have screened 48,142 women for gestational diabetes.

RULE OF HALVES[6]

The Rule of Halves illustrates the global diabetes situation. Actual rates of diagnosis, treatment, targets and outcomes vary in different countries.

50 MILLION PEOPLE WITH DIABETES **LACK ACCESS TO INSULIN.**[9]

3 IN 4 PEOPLE WITH DIABETES LIVE IN **LOW- AND MIDDLE-INCOME COUNTRIES.**[1]

ACCESS TO CARE

- Novo Nordisk's renewed **Access to Insulin Commitment** guarantees provision of low-priced human insulin to least developed countries, low-income countries and organisations working in humanitarian relief situations.
- Novo Nordisk is building health capacity for diabetes and addressing medicine distribution challenges through the **Changing Diabetes® in Children** (CDiC) and **Base of the Pyramid** programmes. Approximately 14,000 children with type 1 diabetes received care through CDiC in 2016.
- The **World Diabetes Foundation** (WDF) is an independent non-profit organisation established by Novo Nordisk to help expand access to care. Donations through the WDF amounted to 85 million kroner in 2016.

5 MILLION **DEATHS ARE CAUSED BY DIABETES** ANNUALLY.[1]

IN PEOPLE WITH TYPE 2 DIABETES, LOWERING AVERAGE BLOOD SUGAR LEVELS (HbA_{1c}) **REDUCES THE RISK OF COMPLICATIONS.**[10]

BETTER OUTCOMES

- Novo Nordisk provides **medical treatment** to an estimated 28 million people with diabetes worldwide. However, it takes more than medicine for people with diabetes to achieve good health outcomes.
- Novo Nordisk is engaged in **educating healthcare professionals and patients** in the management of diabetes, and also driving awareness of the psychosocial aspects of living with this condition. Through the Changing Diabetes® in Children (CDiC) programme, Novo Nordisk has facilitated the training of more than 7,000 healthcare professionals since 2009.
- With **Team Novo Nordisk**, a global all-diabetes sports team, spearheaded by a professional cycling team the company hopes to inspire, educate and empower people living with diabetes.

A NEW ERA OF DIABETES TREATMENT?

Cardiovascular risks associated with diabetes are a concern for patients, healthcare professionals and payers. However, following recent clinical trial results for two Novo Nordisk GLP-1 analogues, hopes for improved treatment outcomes are growing.

Major adverse cardiovascular events (MACE) – including heart attack (myocardial infarction) and stroke – have long been known to be the leading cause of death and large vessel complications in people with type 2 diabetes.[11] According to the American Heart Association, at least 68% of people aged 65 or over with diabetes die from some form of heart disease and 16% die from stroke.[12] Furthermore, adults with diabetes are 2–4 times more likely to have heart disease or a stroke than adults without diabetes.[12] Yet standard type 2 diabetes treatments have not addressed this increased risk of cardiovascular (CV) disease.

"I've been concerned about the increased risk of cardiovascular disease associated with diabetes for more than 20 years," says Dr Steven Marso, medical director for cardiology, HCA Midwest Health, US. "Current diabetes therapies are effective at lowering blood glucose levels but there is, without doubt, an unmet need for a diabetes treatment that also addresses the associated CV risk. I believe a treatment that does both would ease the burden for people with diabetes and set a new standard for clinical care."

Jesper Lau
Vice president,
responsible for protein
and peptide chemistry

TRESIBA®: CARDIOVASCULAR SAFETY AND HYPOGLYCAEMIC BENEFIT CONFIRMED IN DEVOTE TRIAL[5]

In November 2016, Novo Nordisk announced the results of DEVOTE, a cardiovascular (CV) outcomes trial to confirm the CV safety of Tresiba® (insulin degludec).

In addition to demonstrating the CV safety profile of Tresiba®, DEVOTE also showed the superiority of this basal insulin in reducing the rate of severe adverse hypoglycaemia events, when compared to insulin glargine U100.

DEVOTE FACTS:

- A long-term, randomised, double-blinded, parallel group and event-driven trial conducted to confirm the CV safety of Tresiba® compared to insulin glargine U100, when added to standard of care.
- A total of 7,637 people with type 2 diabetes at high risk of major adverse CV events participated at more than 400 sites across 20 countries for approximately two years.
- The trial achieved its primary endpoint, demonstrating non-inferiority of major adverse cardiovascular events (MACE) with Tresiba® compared to insulin glargine U100.
- The trial's primary endpoint was defined as the MACE composite outcome of the first occurrence of CV death, non-fatal myocardial infarction or non-fatal stroke and showed a hazard ratio of 0.91 in favour of Tresiba® compared to insulin glargine U100, with no statistically significant difference between the two treatments.
- In the trial, Tresiba® demonstrated superiority on the secondary endpoint of severe hypoglycaemia: 27% fewer patients in the group treated with Tresiba® experienced an episode of severe hypoglycaemia, resulting in a 40% overall reduction in total episodes of adjudicated severe hypoglycaemia, and 54% experienced a relative reduction in the rate of nocturnal severe hypoglycaemia. These differences were all statistically significant.

Meeting the needs of patients – and their doctors – is at the core of Novo Nordisk's clinical research programme into more innovative treatments that deliver additional benefits with fewer risks. Research into the long-term effects of Victoza® (liraglutide), the company's GLP-1 analogue for the treatment of type 2 diabetes, has produced some exciting results in this regard.

> "I'VE BEEN CONCERNED ABOUT THE INCREASED RISK OF CARDIOVASCULAR DISEASE ASSOCIATED WITH DIABETES FOR MORE THAN 20 YEARS."
>
> Dr Steven Marso
> Medical director for cardiology,
> HCA Midwest Health, US

"We knew from previous research that Victoza® effectively reduces blood glucose levels in people with type 2 diabetes," says Dr Alan Moses, senior vice president and chief medical officer at Novo Nordisk, "but the results of the LEADER study show that Victoza®, amongst other outcomes, also significantly reduces – by 22% – the risk of cardiovascular death in adults with type 2 diabetes who are at high risk of major cardiovascular events."[13]

LEADER compared Victoza® treatment to placebo, both in addition to standard of care comprising lifestyle modifications, glucose-lowering treatments and cardiovascular medications. The study found that Victoza® significantly reduced the risk of the combined outcome (composite primary endpoint) of CV death, heart attack or non-fatal stroke by 13%[13] compared to placebo in 9,340 adults with type 2 diabetes at high CV risk.

"The results of the study, which we reported in June 2016, are exciting on three fronts. Participants taking Victoza® experienced an early and sustained reduction in blood glucose levels, persistent weight loss, and a reduction in CV death and non-fatal myocardial infarction and stroke," Dr Moses points out, adding that the safety profile of Victoza® in a large population for a long period of time has also been affirmed. "Altogether, the results further underline that Victoza® is an important treatment option for adults with type 2 diabetes."

To date, Victoza® is the only marketed GLP-1 analogue to demonstrate a superior reduction in major CV events in a cardiovascular outcomes trial.[14] In October 2016, Novo Nordisk announced the submission of a supplemental New Drug Application (NDA) to the US Food and Drug Administration (FDA) and a Type II Variation application to the European Medicines Agency (EMA) to include data from LEADER in the product information for Victoza®.

REDUCED RISK OF CARDIOVASCULAR EVENTS

The good news from Novo Nordisk's GLP-1 analogue research continued with the results from the SUSTAIN 6 trial of once-weekly semaglutide. In the first dedicated premarketing cardiovascular outcomes trial in people with type 2 diabetes at high CV risk, semaglutide was shown to significantly reduce the risk of the composite primary endpoint of time to first occurrence of either CV death, heart attack or non-fatal stroke by 26% compared to placebo, when added to standard of care in 3,297 adults with type 2 diabetes at high CV risk.[15]

Furthermore, the trial showed that participants experienced significantly reduced blood sugar levels and superior and sustained weight loss compared to standard of care.[15]

"The results of SUSTAIN 6 were profound and exceeded our expectations," says Dr Moses. "This study was designed to demonstrate the cardiovascular safety of semaglutide, but it went beyond that and proved an actual and significant risk reduction in the composite cardiovascular events, even with the relatively small study population and short trial duration."

Novo Nordisk submitted semaglutide for regulatory approval at the end of 2016.

PAVING THE WAY FOR IMPROVED TREATMENT OUTCOMES

Mads Krogsgaard Thomsen, executive vice president and chief science officer of Novo Nordisk, has high hopes for the company's GLP-1 analogues: "The positive findings from LEADER and SUSTAIN 6 give us reason to believe we can take type 2 diabetes treatment to a new level by offering glycaemic control, weight loss and a reduction in cardiovascular events for people with diabetes at risk of cardiovascular events.

"This marks the beginning of a new era where our R&D focus in diabetes will look much further than just glucose control," he adds.

CHANGING DIABETES – ONE CITY AT A TIME

Rapid urbanisation is fuelling the rise in non-communicable diseases in a phenomenon described by the World Health Organization (WHO) as the new urban epidemic. Now in its third year, the Cities Changing Diabetes programme is working in partnerships to halt the rise in type 2 diabetes in cities by focusing on some of the most vulnerable communities.

"The main reason I studied medicine was to help people. I really feel that I've done that here – in every sense of the word." The pride in the voice of Leslie Coria, one of 3,000 healthcare professionals involved in by Mexico City's *El Médico en Tu Casa* (the doctor in your home) initiative, is unmistakable. Speaking between home visits, she provides door-to-door care to people less able to access health services. "When you go to patients' homes, you get to know their persona. You detect what's wrong and can really hit the nail on the head to treat the condition well."

> **"MY INTENTION IS TO HELP** AND TO PLAY MY PART IN EACH OF THEIR LIVES."
>
> **Leslie Coria**
> **Health care professional, *El Médico en Tu Casa***

The initiative is in high demand. One-third of Mexico City's 20 million citizens are either living with diabetes or have blood glucose levels that indicate prediabetes.[1,7] Research for Cities Changing Diabetes, undertaken by the National Institute of Public Health (INSP), has unearthed a complex set of social and cultural factors in Mexico City that increase the risk of diabetes and thwart its effective management.[16]

Explaining the rationale behind *El Médico en Tu Casa*, Minister of Health for Mexico City Dr Armando Ahued says: "The Cities Changing Diabetes research results surprised us and demonstrated that we need to continue educating our people in how to take care of their own health. They also showed that a lot of people are having difficulties going to a doctor or health centre. By initiating diabetes screening in people's homes, we increase our chances of encountering the 29% of people who are living with diabetes without knowing it."[16]

FROM MEXICO CITY TO COPENHAGEN

While the challenge faced by Mexico City is particularly acute, the world's fourth largest city is not alone in its fight against diabetes. Globally, more than two-thirds of people living with this chronic condition are urban residents – a proportion expected to rise to three-quarters by 2040.[1] Even in a city such as Copenhagen, dotted with green spaces, criss-crossed by cycle lanes and synonymous with healthy urban living, the Mayor's office recognises the need to reach people at increased risk of diabetes.

Research for the Cities Changing Diabetes initiative conducted in Copenhagen has discovered emerging health inequalities and vulnerable communities. People without work, living alone or from a non-Western background are becoming increasingly isolated and are often beyond the reach of the healthcare system and health promotion initiatives. To identify and engage people with diabetes, the city therefore launched a new Center for Diabetes in 2016 in conjunction with the Danish Diabetes Association. Furthermore, in partnership with Denmark's largest trade union, 3F, the city initiated a peer support scheme for men over the age of 45 at high risk of developing diabetes. In its first year, the scheme provided invaluable support through social interactions with several hundred men, ranging from one-off conversations to regular get-togethers.

Having overseen the new interventions in the city, Ninna Thomsen, Health Mayor of Copenhagen, is convinced of the benefits of collaborative working to improve public health. "Working with a range of partners has provided a fresh perspective on our city's diabetes challenge and has enabled us to act with absolute conviction," she says. "We're optimistic for the future and will continue to work in partnerships to deliver initiatives that benefit Copenhageners and inspire others."

TACKLING AN INTERNATIONAL HEALTH CHALLENGE

For Novo Nordisk, playing the role of key partner in an international public health movement has been rewarding, as President and Chief Executive Officer Lars Fruergaard Jørgensen reflects: "Making a contribution to society beyond our core business of discovering and developing innovative medicines is part of the fabric of Novo Nordisk. Through Cities Changing Diabetes, we've been able to expand our network beyond the traditional reach of a healthcare company and are making valuable contributions to tackle one of the most pressing public health issues of our time."

Across the globe, Cities Changing Diabetes continues to grow and evolve to address local differences. Action is underway in Tianjin, China, where approximately 300 primary care physicians are receiving training in how to manage diabetes. In Houston, US, more than 70 community partners, including faith organisations, are contributing to the movement to tackle urban diabetes. In 2016, Johannesburg, South Africa, and Vancouver, Canada, enrolled in the Cities Changing Diabetes programme and commenced their own mapping of urban diabetes. In early 2017, Rome, Italy, will follow suit.

El Médico en Tu Casa itself has grown and is now being replicated in cities across Mexico and in Asia and South America. But Leslie Coria's focus remains closer to home as she works to improve the lives of the people of Mexico City. Looking back on an afternoon during which she cared for three elderly ladies living with diabetes, she reflects: "My intention is to help and to play my part in each of their lives. It's very rewarding – and has changed my life both professionally and personally."

COPENHAGEN

Local partners pursuing four initiatives that support vulnerable citizens at high risk of developing type 2 diabetes.

HOUSTON

More than 70 organisations collaborating to change citizens' perception of their own health, while improving trust in a more navigable health system.

JOHANNESBURG

By researching the scale and nature of the city's diabetes challenge, partners are setting the scene for action.

MEXICO CITY

Partners working to improve diabetes care by establishing a specialised clinic, training doctors and including diabetes screening in the *El médico en Tu Casa* programme.

ROME

Due to join the programme officially in 2017, an extensive multi-stakeholder coalition is already in place working to map the diabetes challenge and identify actions.

SHANGHAI

Partners working to build local diabetes management capacity by training healthcare professionals in 240 community health centres.

TIANJIN

Partners working to improve diabetes care through the training of 300 primary care physicians.

VANCOUVER

Based on new research, the partners are working to map the diabetes situation further and design actions to tackle the challenges.

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cities changing diabetes

Initiated in 2014 by Novo Nordisk, University College London and the Steno Diabetes Center, Cities Changing Diabetes is a response to the dramatic rise in type 2 diabetes in cities across the world. It is a first-of-its-kind partnership platform for cross-disciplinary, cross-sector collaboration.

No one organisation and no one company can solve the challenge of urban diabetes alone, so the programme is built on public–private partnerships between businesses, city leaders, planners, architects, healthcare professionals, academics, community leaders and others with a stake in the outcome. Working together, partners are setting out to create cities which help citizens live more healthily, and where people with diabetes can live life to the full.

Mexico City, where one-third of citizens have diabetes or prediabetes, is one of the cities enrolled in the Cities Changing Diabetes programme.

LIVING WITH **THE STIGMA** OF OBESITY

WHAT IS OBESITY?

Obesity is defined as abnormal or excessive fat accumulation that may impair health in people with a body mass index (BMI) greater than or equal to 30.[2] BMI provides the most convenient population-level measure of overweight and obesity currently available. BMI itself, however, does not define health risk. BMI is a simple weight-for-height index that is commonly used to classify overweight and obesity in adults. It is calculated by dividing a person's weight in kilograms by the square of their height in metres (kg/m^2).

ACCORDING TO THE WHO, **OBESITY HAS REACHED PANDEMIC PROPORTIONS, WITH UP TO 1.9 BILLION ADULTS** (18 YEARS AND OLDER) BEING OVERWEIGHT.[2]

OF THESE, **APPROXIMATELY 600 MILLION HAVE CLINICAL OBESITY** (BMI ≥ 30).[2]

Marty Enokson has obesity and lives in Canada.

"You choose what you eat, so obesity is self-inflicted, right?" Novo Nordisk knows that battling this pre-conception will take time – but gaining recognition of obesity as a chronic disease is the first hurdle to effective treatment.

"Obesity is one of the last remaining socially acceptable forms of prejudice: it's still OK to make fun of fat people," says Marty Enokson, Chair of the Canadian Obesity Network Public Engagement Committee and a paralegal from Edmonton, Canada, who has had obesity since childhood. "I've been called every hateful name imaginable and I experience discrimination daily. Yes, I'm obese. Yes, I'm fat. But it doesn't define who I am. People need to realise that nobody chooses to be obese. Why would you? It's disabling – try moving your body when it's 505 pounds! I just want to be treated the same as other people: with dignity and respect."

A CHRONIC DISEASE

Unfortunately obesity is all too often seen as a sign of weak character or as a 'lifestyle choice'. This view, coupled with the awkwardness many doctors feel about talking to people about their weight, means that doctors rarely prescribe medication for obesity – instead relying on the 'eat less, exercise more' philosophy for weight loss.

"This simple mantra is relevant advice, but obesity is very complex as it can be caused by genetic, physiological, environmental or psychological factors. So, for some people, behavioural modifications are not enough," explains Heather Millage, vice president for the GLP-1 portfolio for Novo Nordisk in the US.

In fact, clinical studies have shown that almost 80% of people who are overweight or have obesity experience weight regain after following a regimen of diet and exercise alone.[17] But with health organisations, including the World Health Organization (WHO), American Medical Association and Canadian Medical Association, now recognising obesity as a chronic disease requiring long-term management, treatment options that help people with obesity achieve and maintain weight loss are greatly needed.

IT'S NOT ABOUT THE WAY YOU LOOK

"I hope the designation of obesity as a chronic disease will make more people aware that the medical treatment of obesity is not about the cosmetic impact of reducing a number on the scales. Obesity is associated with weight-related comorbidities such as hypertension, dyslipidaemia, type 2 diabetes and some types of cancer," says Heather Millage. "This is why it's important that we develop medical treatment options for obesity."

Historically, pharmacotherapy treatment options for obesity were limited, and so Novo Nordisk's GLP-1 receptor agonist Saxenda® (liraglutide 3 mg) has been widely welcomed, Heather Millage reports. "Clinical trials have shown that Saxenda® delivers significant weight loss in some people who are overweight or have obesity and, importantly, that this weight loss is sustained.[18] The uptake of Saxenda® in countries where it's not covered by medical insurance demonstrates the demand for this product."

In addition to Saxenda®, Novo Nordisk is committed to identifying and developing new treatment options for people with obesity. The company is currently investigating five new obesity treatments: a glucagon analogue, an amylin analogue, an appetite-regulating hormone (peptide tyrosine) and a glucagon and GLP-1 co-agonist in phase 1 trials, and a long-acting GLP-1 receptor agonist in phase 2 trials. Furthermore, dedicated researchers at Novo Nordisk's headquarters in Denmark and at its obesity research unit in Seattle, US, are working to identify new targets for treatment and increase the scientific understanding of existing drug targets.

RECOGNISING THE DISEASE

However, until there is wider recognition of obesity as a disease, effective treatment will not gain ground. Obesity has long been an issue for developed countries, but with its prevalence now also increasing rapidly in developing countries, this pandemic can no longer be ignored – particularly as treating obesity-related comorbidities is placing a significant burden on healthcare systems worldwide. Treating the cause rather than the symptoms therefore makes financial as well as ethical sense, points out Heather Millage.

"Obesity awareness and understanding is where type 2 diabetes was 20 years ago. We need to educate people and increase recognition of obesity as a disease, as it's one of the world's critical health issues. Novo Nordisk is in a strong position to do this because we have decades of experience of doing exactly that with diabetes – and also because obesity is so closely linked to type 2 diabetes," she says.

"We know that it'll take many years to get care and treatment of obesity to where we are with diabetes, but we're committed to doing so."

CHANGING HAEMOPHILIA

Novo Nordisk is working for a future where everyone with haemophilia is diagnosed, has access to care and can live a life with as few limitations as possible.

"Growing up, I heard stories of climbing big mountains from my uncle and had dreams of my own expeditions. A few years ago, I committed to climbing the Seven Summits – the highest peaks on each continent. To date, I've climbed five and will continue this quest over the next few years. It's about living a life of my choosing – a life that isn't limited by my haemophilia," explains Chris Bombardier, a mountain climber and community advocate from the US.

ADDING LIFE TO YEARS

Chris was diagnosed at birth with severe haemophilia B, which he says has played a dramatic role in his life path. "Haemophilia literally runs in my blood, and I couldn't imagine my life without it. I live with a condition that's almost impossible to describe to others; they just can't relate. I have to fight through pain, feelings of isolation and being different from my peers, and face my fear of needles – I'm terrified of them!" he admits.

"I recently heard someone say 'The goal of treatment is not simply to add years to the life of a person with haemophilia, but to add life to their years', and this really struck a chord with me. I take pride in living the life I've always dreamed when I could so easily have given in to my condition. Haemophilia can make things more complicated and difficult, but with today's treatment I really am adding so much life to my years."

REDUCING LIMITATIONS

Adding life to years is a sentiment that also resounds with Novo Nordisk, as the company has been committed to changing haemophilia for more than three decades. "We want to improve the lives of people living with haemophilia by providing treatment that will help them achieve greater independence and give them the opportunity to make even more choices," explains Paul Huggins, who heads Novo Nordisk's global marketing of biopharmaceuticals.

Novo Nordisk's clinical development programme focuses on the unmet needs in this area, including the need for even better clinical outcomes, fewer intravenous infusions, lower risk of inhibitor formation and better treatment options for less common bleeding disorders.

"Despite advances in treatment and care, bleeding in the joints remains among the most common complications of haemophilia. Being in constant pain and living with restricted movement invariably has a psychological impact too. Improving joint health and mobility is therefore essential to reduce the limitations for people living with haemophilia – and to achieve this they need more treatment choices," Paul Huggins continues.

RISING TO THE CHALLENGE

Novo Nordisk's most recent product launch for haemophilia is NovoEight®, which gives people with haemophilia A the option of a treatment based on a well-researched molecule that is stable at room temperature. "This provides an extra degree of portability which they don't have with all other products," Paul Huggins points out. "There's actually been a proliferation of products for this patient community in the last few years, and competition in the marketplace has intensified. This is great news for patients and payers – and a challenge for us! But NovoEight® has been well received; we have confidence in our product and are building momentum worldwide."

Novo Nordisk's first-ever treatment for haemophilia, NovoSeven®, is also facing tough competition as a competitor product has reached the latter stages of clinical development. "NovoSeven® treats bleeds in people with haemophilia with inhibitors when they happen. The competitor product is a weekly prophylactic, or preventive, treatment for patients with haemophilia A with inhibitors, which is obviously an option that this community of patients looks forward to," explains Paul Huggins.

"While we don't yet know if this competitor product will successfully complete clinical development and receive regulatory approval, we're already feeling its impact as the community of people with inhibitors is relatively small and a significant number are taking part in the clinical trial – some of whom would normally use NovoSeven®.

Chris Bombardier has haemophilia B.

However, I strongly believe there's space for both products on the market. And we shouldn't forget that NovoSeven® has had a truly well-established safety profile in clinical trials for more than 30 years. So we'll continue to fight for our market share, to ensure that people with haemophilia have an effective product to treat the bleeds that may occur even when they are already on a prophylactic regimen."

INCREASING TREATMENT CHOICES

Treatment choices for people with haemophilia B could also increase in the near future, as Novo Nordisk submitted its long-acting factor IX (N9-GP) for approval in Europe and the US in 2016. In clinical trials, once-weekly N9-GP was found to be efficacious in routine prophylaxis, treatment of bleeding episodes and surgery for adults, adolescents and children, and showed potential in preventing bleeds in target joints. "It's noteworthy that participants reported a significant improvement in quality of life during the trial," Paul Huggins points out.

Novo Nordisk expects to submit its long-acting version of factor VIII (N8-GP) for regulatory approval in 2018, providing even more treatment options for people with haemophilia A. In addition, concizumab (a monoclonal antibody against Tissue Factor Pathway Inhibitor) is in phase 1 development for haemophilia A and B (see R&D pipeline on **pp 20–21**).

BEYOND MEDICINE

While treatment choices in developed countries are increasing, many people with haemophilia in developing countries are still not being diagnosed or do not receive proper care and treatment. That is why Novo Nordisk's commitment to haemophilia goes beyond products. In 2005, the company founded the Novo Nordisk Haemophilia Foundation (NNHF), which is driven by the vision that all people with haemophilia or allied bleeding disorders should receive care and treatment wherever they live (see box).

"Our commitment to changing haemophilia goes beyond the discovery and development of medicines," explains Paul Huggins. "The NNHF, along with the HERO study, our advocacy work and partnerships, are just a few examples of what we're doing to help enable people with haemophilia to live the life they want, with as few limitations as possible."

NOVO NORDISK HAEMOPHILIA FOUNDATION

Founded in 2005, the Novo Nordisk Haemophilia Foundation (NNHF) is a non-profit organisation dedicated to defining and funding sustainable programmes which improve access to quality care benefitting people with haemophilia and allied bleeding disorders in the developing world.

In collaboration with local partners and internationally renowned experts, the NNHF addresses three focus areas: capacity building, diagnosis and registry, and education and empowerment.

To date,* the NNHF has supported more than 200 programmes in 68 countries, trained more than 28,000 healthcare professionals, diagnosed or retested almost 20,000 patients and reached more than 32,000 patients and family members with educational and empowering activities. Read more at **nnhf.org**.

HAEMOPHILIA EXPERIENCES, RESULTS AND OPPORTUNITIES

The Haemophilia Experiences, Results and Opportunities (HERO) study provides a deeper understanding of the psychosocial impact of living with haemophilia and the unmet needs of the haemophilia community.

ACCORDING TO THE HERO STUDY, **50% OF PEOPLE** WITH HAEMOPHILIA ARE IN **CONSTANT PAIN AND 59% HAVE LIMITED MOBILITY.**[19]

* Status on 31 December 2016.

"I especially love the challenges that climbing provides. It's not only the physical struggle to push my body farther than I can imagine but also the mental challenge. You get up crazy early, it might be snowing or raining, and your mind wants to tell you it's stupid to be outside but somehow you push through. The reward: spectacular sunrises, epic views, the simplicity and peacefulness of the wilderness, and the satisfaction that you achieved your goal."

CHRIS BOMBARDIER, WHO HAS HAEMOPHILIA B

WHAT IS HAEMOPHILIA?

Haemophilia is an inherited or acquired bleeding disorder that prevents the blood from clotting. People with haemophilia either partially or completely lack an essential clotting factor needed to form stable blood clots. Without treatment, uncontrolled internal bleeding can cause stiffness, pain, severe joint damage and even death. Treatment with replacement clotting factors may be administered when bleeding occurs or, increasingly, on a preventive basis (prophylactic treatment). People with haemophilia A, an estimated 350,000[3] have absent, decreased or defective production of the blood clotting factor VIII. People with haemophilia B, of whom there are some 70,000[20] have deficiencies in producing clotting factor IX. Both types are inherited.

DEFINING TIMES FOR THE US BUSINESS

The US is by far Novo Nordisk's largest market, accounting for approximately half of the company's total sales. It is a hugely complex healthcare market that is changing rapidly. For Novo Nordisk, this means challenges and opportunities ahead.

Novo Nordisk's US organisation is a leader in diabetes, a pioneer in obesity treatment and a trusted partner in haemophilia and growth hormone disorders. It has around 6,000 employees in the US. With the rising prevalence of both diabetes and obesity, the company's mission to drive change to improve patients' lives has never been more important.

"WE'VE NEEDED TO TAKE A FRESH LOOK ACROSS THE BOARD TO MAKE SURE THAT WE OPERATE EFFECTIVELY AND THAT OUR MEDICINES ARE ACCESSIBLE TO THE PATIENTS WHO CAN BENEFIT FROM THEM."

Jakob Riis
Executive vice president,
North America Operations

Today, Novo Nordisk is at a crossroads of challenges and opportunities in the US. On the one hand, the company has a solid portfolio and pipeline of innovative medicines, and there is tremendous unmet need among the patient populations it serves, yet on the other hand it is becoming increasingly tough for patients to access medicines and for the business to achieve the desired sales growth. After year upon year of double-digit growth, market conditions have changed, and volume growth does not always translate into sales growth. As the US healthcare system has transformed over the last few years, so tightening competition and pricing pressure have become flashpoints for the pharmaceutical industry. Novo Nordisk is tackling the situation head on.

In September 2016, Jakob Riis, who has been with the company for more than 20 years and has a proven track record of leading businesses through adverse times, was appointed head of North America Operations. He is no stranger to the US business and brings with him a new vision for the future.

"This is a defining time for our business," explains Jakob Riis. "We've needed to take a fresh look across the board to make sure that we operate effectively and that our medicines are accessible to the patients who can benefit from them. This requires courage and openness to new approaches, as well as deep understanding of this evolving market and our customers' needs."

UNDERSTANDING THE COMPLEX US OPERATING ENVIRONMENT

This fresh look starts with embracing the realities of the market environment. The US healthcare system is recognised as one of the most, if not *the* most, complex – from delivery of care to the cost of care. Navigating a pharmaceutical business through this environment is equally complex.

Manufacturers, wholesalers, payers, pharmacy benefit managers (PBMs), healthcare professionals (HCPs) and patients are some of the many stakeholders in what is referred to as the value chain. These different stakeholders bring different perspectives and, with these, various levels of change. Healthcare reform has put everyone on notice that quality and efficiency are paramount, and the pressure to deliver cost savings for a nation with limited healthcare dollars is intense.

According to Senior Vice President, Market Access in the US, Doug Langa, "We continue to see consolidation, especially at the payer level. There used to be over a dozen major payers; today that number has been cut in half. Transversely, more competitors are developing more medicines, including biosimilars, today, especially in the diabetes area. This translates to greater bargaining power for payers and pricing pressure on pharmaceutical companies. We're also seeing more exclusive contracts, which potentially means less choice for patients and prescribers. There's a higher bar on innovation and payers taking on a 'good enough' mentality when deciding on formulary access. It's no longer enough to have superior data from clinical trials. There's a heightened demand for 'real-world' data, and that's why innovative contracting is so important."

In some cases, innovative contracting means negotiating the price of a pharmaceutical product based on the actual improved health outcome it delivers for the patient, rather than on an up-front assessment of its clinical value.

"What many may not appreciate is that creating such outcomes-based contracts is not easy. Requirements regarding regulatory compliance, data collection, product labelling as well as new operational and administrative processes that need to be in place are just some of the factors that add to the complexity, not just for us, but for the payers who want these contracts. But we continue to try new approaches and test new models because we know it can and must be done," Doug Langa stresses.

CHALLENGES WITH ACCESS AND AFFORDABILITY

The complexity of the US market is also reflected in the price of medicines – a topic of heated debate. As the graphic on **p 33** illustrates, numerous entities are involved in the process, and that means that different people pay different prices for medicines, depending on insurance coverage and other factors. So how does it work?

Manufacturers set the 'list price' and have full accountability for those prices. However, after the list price is set, drug manufacturers negotiate with payers in order for medicines to stay on their preferred drug list, or formulary. The revenue that companies receive after rebates, fees and other price concessions given to the payer is the 'net price'. The net price more closely reflects actual company sales. Across Novo Nordisk insulin products, net price increases year over year have been mid-single digit. This brings the net price development closer to the *Consumer Price Index – Urban*, a common measure of the average price of goods.

Yet the access and affordability issue is real. "We're hearing from more and more people living with diabetes about the

Jakob Riis
Executive vice president,
North America Operations

challenges they face affording healthcare, including the medicines we make. We take this issue seriously and are working to do more to better support patients. This is a responsibility that needs to be shared among all those involved in healthcare, and we're going to do our part," affirms Jakob Riis. The company recently took a position on pricing, outlining the three areas it intends to focus on to better address the issue:

- Transforming the complex pricing system
- Creating more pricing predictability, including a commitment to limit any possible future list price increases to no more than single-digit percentages annually
- Reducing the burden of out-of-pocket costs.

"We're serious about doing more, but we can't do it alone," Jakob Riis continues. "That's why we welcome and will actively seek collaborations leading to sustainable solutions based on these three tenets, which we believe are key to making a positive impact on affordability for patients.

CONTINUED ▶

THE EQUATION: FROM LIST PRICE TO NET PRICE IN THE US

LIST PRICE
(set by the manufacturer)

Those exposed to the list price include:

- patients without insurance
- patients who have insurance with a high deductible or are exposed to the Medicare coverage gap.

DEDUCT

REBATES/DISCOUNTS

- Payments made to pharmacy benefit managers (PBMs) and/or insurance companies to ensure placement on drug formularies.
- Significant discounts mandated for government programmes (eg Medicaid).
- Additional discounts negotiated.

DEDUCT

WHOLESALER FEES

- Payments made to wholesalers to support stocking and distributing medicines through their supply chain networks (eg pharmacy, hospital).

DEDUCT

ADDITIONAL PRICE CONCESSIONS

- Coupon, co-pay assistance programmes (especially for patients with deductibles).
- Administrative fees to group purchasing organisations and PBMs.

EQUAL

NET PRICE
(manufacturer's realised price)

Implications of the net price:

- Insured patients, on average, have a co-pay of approximately 1–1.40 dollars per day for our insulin.[5]
- Required for coverage of our medicines through government programmes (Medicaid, Veterans Affairs, Department of Defense, Medicare etc).
- Support broad patient access to medicines.

"The pricing system needs to be simplified, which includes making it more transparent. We also see value in creating more pricing predictability, so customers like pharmacy benefit managers and payers can effectively anticipate and budget for any possible price increases. With patients, we know that there's a growing number of people with high-deductible health plans – health coverage with lower premiums – who face higher costs at the pharmacy counter, and we continue to see more cost sharing being pushed to patients.

"The other challenge we're facing in the market is around uptake of new medicines. Traditionally, you launched innovative medicines aggressively in terms of timing and investment, and within six months you knew the growth trajectory. That's not necessarily the case in today's market. Uptake is slower and we need to adjust our launch strategies and spending accordingly.

"All of these dynamics are forcing us to change how we approach the market and how we operationalise the US business. That means keeping our finger on the pulse of the market, building new capabilities and refining our internal infrastructure to achieve efficiency and agility."

SIMPLIFY AND PRIORITISE

While many pharmaceutical companies have been experiencing layoffs for a number of years, this has not been the case at Novo Nordisk. However, the market conditions and business realities in 2016 meant that the company needed to align its costs with expected future revenues and ensure it could invest in future opportunities. As part of this process, a decision was taken to reduce the US workforce. In October 2016, approximately 480 employees were notified that their positions had been eliminated.

"This was a difficult decision, but a necessary one," explains Jakob Riis. "We can be proud of the professionalism of our employees and their dedication to patients throughout the process. We were also fortunate that some of those employees found new roles in the company." When approaching the organisational changes, key considerations for Novo Nordisk were aligning resources around the most significant commercial priorities, simplifying the structure and reducing complexity.

For example, the company reassessed how it would approach its payer customers in future. "We used to have market access work being conducted across several different areas of the company, so we saw an opportunity to optimise and simplify by centralising that expertise under one market access function," notes Doug Langa. "The new market access structure is in place and is responsible for leading our strategy by identifying customer value, securing profitable access and establishing innovative approaches with customers. We're already seeing the benefits. This unified team is much more powerful and helps us stay ahead of emerging business trends and customer payment models."

IMPORTANT REGULATORY AND COMMERCIAL MILESTONES ACHIEVED IN 2016

Novo Nordisk made significant strides in 2016 with regard to regulatory and commercial opportunities in the US. It launched Tresiba® (insulin degludec), the new-generation, once-daily, long-acting basal insulin, and later also received a paediatric indication. The US Food & Drug Administration (FDA) also approved Xultophy® 100/3.6 (insulin degludec 100 units/ml and liraglutide 3.6 mg/ml), a once-daily combination of Tresiba® and Victoza® for the treatment of type 2 diabetes.

"We feel good about the scientific advancements we're bringing forward and the progress we continue to make in meeting the medical needs of patients," states Anne Phillips, MD, SVP Clinical Development, Medical & Regulatory Affairs in the US. "We have some additional work to do with our fast-acting insulin aspart filing as we received a Complete Response Letter from the FDA in October. However, we're working with the agency to address its questions, as we believe fast-acting insulin aspart is an important option for patients who need improved blood glucose control around meals."

Within haemophilia, Novo Nordisk submitted a biologics licence application (BLA) for the approval of the long-acting factor IX N9-GP (nonacog beta pegol) for people with haemophilia B.

2016 was equally eventful on the data front. At the annual American Diabetes Association (ADA) Scientific Sessions, the company presented 53 data abstracts, including the highly anticipated LEADER study, which demonstrated that Victoza® significantly reduces the risk of major cardiovascular events and death in adults with type 2 diabetes. The results were also published in *The New England Journal of Medicine* and have been submitted to the FDA for label consideration.

The results of the SWITCH studies demonstrating favourable outcomes in terms of reduction in hypoglycaemic occurrences with Tresiba® in people with type 1 and type 2 diabetes were also presented at ADA and submitted to the FDA for label consideration.

The headline results of the DEVOTE trial with Tresiba® involving more than 7,500 people with type 2 diabetes demonstrated a safe cardiovascular profile and a reduced risk of severe hypoglycaemia with Tresiba® compared to insulin glargine U100.

The results of the SUSTAIN 6 study showing that semaglutide, an investigational

PRESCRIPTION MEDICINES ACCOUNT FOR 10% OF TOTAL US HEALTHCARE SPENDING[24]

- 10% Prescription drugs
- 32% Hospital care
- 20% Physician & clinical services
- 8% Home health & nursing home care
- 8% Govt admin & net cost of private health insurance
- 22% Other

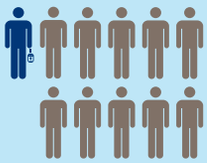
US HEALTHCARE SPENDING & INSURANCE TRENDS

HEALTHCARE SPENDING IN THE US ACCOUNTS FOR **3.2 TRILLION DOLLARS – 9,990 DOLLARS PER PERSON.**[21]

89.1% OF PEOPLE LIVING IN THE US HAD HEALTH INSURANCE IN Q3 2016, REPRESENTING A HISTORICAL HIGH. MORE PEOPLE LIVING IN THE US ARE ENROLLING IN HIGH-DEDUCTIBLE PLANS – PLANS DESIGNED TO HAVE LOWER PREMIUMS, BUT HIGHER OUT-OF-POCKET COSTS FOR PATIENTS.[22]

HIGH-DEDUCTIBLE PLANS ARE LEADING TO INCREASED PATIENT HEALTHCARE COSTS. BETWEEN 2006 AND 2015, OUT-OF-POCKET COSTS INCREASED BY NEARLY 230% FOR PEOPLE WITH HIGH-DEDUCTIBLE HEALTH PLANS.[23]

DIABETES IN THE US

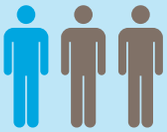


ABOUT 1 IN 11 US ADULTS (9.3%), OR MORE THAN **29 MILLION PEOPLE, HAVE DIABETES.**[25]

THE ESTIMATED TOTAL COST OF DIAGNOSED DIABETES WAS **245 BILLION DOLLARS IN 2012.**[26]

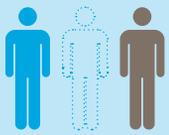
WITHOUT MAJOR CHANGES, AS MANY AS **1 IN 3 US ADULTS COULD HAVE DIABETES** BY 2050.[25]

OBESITY IN THE US



OBESITY IS A CHRONIC PROGRESSIVE DISEASE. MORE THAN **1 IN 3 US ADULTS (36.5%), OR NEARLY 79 MILLION** ADULTS, LIVE WITH OBESITY.[27]

THE ESTIMATED ANNUAL MEDICAL COST OF OBESITY IN THE US WAS **190 BILLION DOLLARS IN 2012.**[28]



RESEARCH SUGGESTS A **33% INCREASE IN OBESITY PREVALENCE** OVER THE NEXT TWO DECADES.[29]

glucagon-like peptide-1 (GLP-1) analogue administered once weekly, significantly reduces the risk of major adverse cardiovascular events in adults with type 2 diabetes at high cardiovascular risk, were published in *The New England Journal of Medicine*. In December, the company submitted a New Drug Application (NDA) for semaglutide to the FDA.

THE WAY FORWARD

"In 2016, we took decisions about where we need our business to go in 2017. We'll continue to strengthen and simplify our organisation and focus on the products that will drive growth, such as Tresiba®, Victoza® and Saxenda®. We have some exciting innovations and new data that we believe will make a difference for patients," says Jakob Riis, who notes that Novo Nordisk will also be launching Xultophy® 100/3.6 on the US market in the first half of 2017. "The FDA's review of the supplemental NDAs for the LEADER and SWITCH studies is expected to conclude in 2017 and may support the value propositions for Victoza® and Tresiba® respectively. We also have FDA action dates for both the semaglutide and N9-GP applications," adds Anne Phillips.

"We'll build on the strong progress we've made with outcomes-based contracting and look forward to new partnerships with customers that demonstrate the value of our medicines and make a meaningful difference for patients. This includes ongoing efforts and new collaborations to address the pricing and affordability issue in the US with sustainable solutions," continues Jakob Riis. He also highlights the new opportunities emerging in 'digital health', where Novo Nordisk is partnering with technology companies including IBM Watson Health and Glooko to develop digital solutions for people with diabetes. "We're excited about the opportunities coming from combining Novo Nordisk's deep knowledge of diabetes with our partners' digital platforms and data analytics expertise. Despite the current challenges and changes in the US healthcare system, I'm optimistic about our future. We have the products, the people and the passion to be a successful business and realise our mission to drive change to improve patients' lives," Jakob Riis concludes.

R&D AND PRODUCTION IN THE US

Novo Nordisk continues to expand its research, development and production footprint in the US. The company's clinical, medical and regulatory activities are based at the headquarters in Plainsboro, New Jersey. In addition, Novo Nordisk has research centres in Indianapolis, Indiana, and Seattle, Washington, and two production sites in Clayton, North Carolina, and West Lebanon, New Hampshire.

Novo Nordisk is currently investing nearly 2 billion dollars in a new production facility in Clayton, which will produce active pharmaceutical ingredients for the company's diabetes care products. This facility will play a vital role in enabling Novo Nordisk to meet the needs of people living with diabetes in the US for years to come and create 700 new jobs. The facility is expected to be operational by 2020.

Today, Novo Nordisk employs around 6,000 people in the US.

Novo Nordisk's production facility in Clayton, North Carolina.

THE ONLY CONSTANT IN INTERNATIONAL OPERATIONS IS CHANGE

International Operations – Novo Nordisk's newly established commercial unit – covers five geographical regions and more than 190 countries. This immensely diverse unit is united by a common goal: to deliver innovative solutions to fight the global diabetes epidemic.

"IT GOES WITHOUT SAYING THAT INTERNATIONAL OPERATIONS IS A **DIVERSE UNIT WITH DIFFERENT CHALLENGES AND OPPORTUNITIES** ACROSS ITS FIVE REGIONS."

Maziar Mike Doustdar
Executive vice president, International Operations

On 1 January 2017, Novo Nordisk consolidated its sales regions into two commercial units covering the entire world: International Operations (IO) and North America. The company previously had five sales regions, as reflected in the 2016 financial statements on pp 68–69.

IO is responsible for around half of Novo Nordisk's total revenue. Covering 95% of the world's population, it is clustered into five regions: Europe, Latin America, AAMEO (Africa, Asia, Middle East & Oceania), Japan & Korea and Region China.[7] This new organisational structure, which was implemented in September 2016, is a recognition that success in international markets will be a key factor for Novo Nordisk's long-term growth.

"It goes without saying that IO is a diverse unit, with different challenges and opportunities across its five regions," says Maziar Mike Doustdar, executive vice president and head of International Operations. "In Region Europe and Region Japan & Korea, economic growth and government budgets are under pressure, in particular from the higher costs associated with increased life expectancy.[31] Region China and Region Latin America have transitioned from low- to middle-income economies and are now seeking to

THE NEW INTERNATIONAL OPERATIONS

enhance economic development in the face of global competition.[31] And with its more than 100 countries,[5] Region AAMEO has large economic and cultural variations and holds many opportunities.

"Solid local relationships will therefore be imperative to the success of International Operations, as we need to be a strong part of each community where we operate," he continues. "Ultimately, we need to be agile, flexible and attuned to change, whether we're talking about currency fluctuations, political risks or healthcare reforms. After all, the only constant in IO is change."

However, Maziar Mike Doustdar also recognises common themes across IO: "What we're seeing across the world is a desire from governments to optimise healthcare systems and control expenditures. Our new commercial structure will allow us to share best practices and processes – something that's increasingly important as global pharmaceutical pricing becomes more transparent and subject to international referencing. Above all though, there are two issues all our regions have in common: the fact that more and more people are getting diabetes and the need for innovative solutions to address this challenge."

IMPROVING AWARENESS AND ACCESS

The International Diabetes Federation (IDF) estimates that around 384 million adults with diabetes live in countries covered by IO, and this figure is expected to rise to close to 600 million people by 2040.[1] Maziar Mike Doustdar sees a clear role for IO in providing treatment for those people who need it so that they can live their lives to the full. "Only around half of the people living with diabetes around the world are diagnosed, and only half of these people receive treatment. We therefore have an obligation and an opportunity to increase awareness and access to care across the globe."

Increasing sales volumes will be a major growth driver in IO, and improving access to Novo Nordisk's portfolio of novel diabetes products will be a key focus area. Modern insulin, Victoza® and new-generation insulin already account for 60% of sales, and the trend away from human insulin is set to continue.[5]

"With one of the broadest product portfolios in the industry, we're well positioned to accommodate all market needs in IO," points out Maziar Mike Doustdar. "We can supply high-quality human insulin at very affordable prices in low-income markets, and modern and new-generation insulin and GLP-1 in markets with an ability and willingness to pay for innovative products with improved patient outcomes. It's crucial that we have a clear strategy to find the balance between volume increases and value upgrades."

Novo Nordisk is currently market leader in diabetes in IO, supplying half of all insulin and holding a 23% share of the total diabetes value market.[5] However, Maziar Mike Doustdar wants to do even better: "With our strong product pipeline, dedicated colleagues and commercial capabilities, I have no doubt that we'll continue to expand Novo Nordisk's diabetes leadership in IO."

With 20 different time zones and employees of 125 different nationalities, IO literally never sleeps – which Maziar Mike Doustdar says makes it an exciting unit in which to work. "What gets me up in the morning is the great potential we have as a company to deliver better treatment for millions of people around the world," he says. "We have a great opportunity to launch innovative products across IO, whether for people with diabetes, obesity, haemophilia or growth disorders. What matters is that we get it right each time and improve access to care for patients."

CONTINUED ▶

Selected events from around IO.

REGION AAMEO

Africa, Asia, Middle East & Oceania

- Total population: 4,255m[7]
- GDP per capita: USD 3,340[32]
- Healthcare cost per capita: USD 181[33]
- Adults with diabetes: 184m[1]
- Adult diabetes prevalence: ~7.5%[1]
- Diagnosis rate: 48.4%[1]
- Employees*: ~4,600

AAMEO is a geographically and culturally diverse region across four continents and more than 100 countries. Markets in AAMEO cover a broad range of economic development and healthcare systems and, as such, provide a wide array of challenges and opportunities. In 2016, countries in AAMEO were particularly susceptible to commodity price decreases and currency fluctuations. Furthermore, continued macroeconomic issues could place pressure on government expenditure in countries that are net exporters of energy and other commodities.[34] AAMEO is also home to numerous countries with heightened political and security risks,[35] and these risks are likely to continue in 2017. There are, however, distinct and diverse opportunities across the region in spite of economic and market access risks. One priority will be to upgrade more patients from human to modern insulin, particularly in Least Developed Countries (LDCs), in order to ensure better treatment for people with diabetes. There will continue to be a focus on launching novel products, including Victoza®, private market launches of Saxenda® and the introduction of new-generation insulin such as Tresiba®, Xultophy® and Ryzodeg® across multiple markets. There will also be ongoing investments in manufacturing facilities in Iran, Algeria and Russia as part of Novo Nordisk's strategy to ensure product supply and deepen stakeholder ties in strategic markets in AAMEO.

REGION EUROPE

- Total population: 540m[7]
- GDP per capita: USD 32,450[32]
- Healthcare cost per capita: USD 3,613[33]
- Adults with diabetes: 28m[1]
- Adult diabetes prevalence: ~7.0%[1]
- Diagnosis rate: 60.7%[1]
- Employees*: ~3,000

Constituting around 40% of total sales within the new IO commercial unit, Europe will continue to be a key market for Novo Nordisk. The region is typified by developed healthcare systems in which strong competitive and price pressures persist.[36] The market access environment has been challenging over the last decade, with governments seeking to optimise health-care expenditures in response to slower economic growth and ageing populations.[30] Novo Nordisk expects these trends to continue, in particular ongoing pricing negotiations in markets across the region and challenges from biosimilar products. Despite these challenges, 2017 will offer numerous opportunities to continue providing patients across Europe with innovative products for both diabetes and haemophilia. There is potential for an expanded label for Victoza® following strong cardiovascular data from the LEADER study (see pp 24–25 for details), further strengthening Novo Nordisk's leading position in the GLP-1 market. Further launches of Tresiba® and Xultophy® are planned, which will serve to cement uptake of new-generation insulin in the region and strengthen the company's presence in the basal segment. There will also be opportunities to broaden the biopharmaceuticals business through further launches of the recombinant factor VIII, NovoEight®.

REGION CHINA

- Total population: 1,384m[7]
- GDP per capita: USD 8,580[32]
- Healthcare cost per capita: USD 420[33]
- Adults with diabetes: 112m[1]
- Adult diabetes prevalence: ~10.6%[1]
- Diagnosis rate: 47.3%[1]
- Employees*: ~3,000

China has been impacted by lower-than-previous rates of economic growth.[37] The primary consequence for Novo Nordisk's business has been increased price pressure as the government seeks to rationalise health expenditure at national and provincial levels.[37] There has also been stiffer competition, in particular from local producers of both human and modern insulin. Competitors will continue to seek additional market share and share of voice through launches of new products and investment in provincial markets. Novo Nordisk has thus far been able to successfully navigate this challenging environment by focusing on defending its insulin market share. In 2017, there will be opportunities to further develop the GLP-1 market in which Victoza® has established its leadership, potentially through enhanced reimbursement coverage. There is also potential to capture the positive trend of upgrading from human to modern insulin, improving treatment outcomes for thousands of patients. This will occur within the broader context of continued strong growth in an insulin market where Novo Nordisk holds a leadership position. Novo Nordisk will seek to improve access to care through further reimbursement negotiations and other programmes intended to improve access to care and optimise use of modern insulin.

* Employee numbers only cover regional sales organisations.

Selected events from around IO.

REGION JAPAN & KOREA

- Total population: 177m[7]
- GDP per capita: USD 30,980[32]
- Healthcare cost per capita: USD 3,238[33]
- Adults with diabetes: 11m[1]
- Adult diabetes prevalence: ~7.9%[1]
- Diagnosis rate: 50.5%[1]
- Employees*: ~1,100

Japan and Korea are mature markets with the associated challenges of slow economic growth, ageing populations and increased competition. One particular challenge in this region is a growing preference for oral antidiabetics, leading to negative insulin volume development.[5] Similarly, wider competitive pressure within the GLP-1 and insulin segments is set to intensify, with further competitor launches and biosimilar entries over the next two years. Despite these competitive challenges, Novo Nordisk maintains a promising outlook in the region across its portfolio, in particular in relation to its novel products. Tresiba® has already established basal leadership in Japan and been successfully launched in Korea, helping strengthen leadership in the broader insulin market. Opportunities will arise from launches of Ryzodeg® in both markets as well as longer-term strategic concentration on increased use of insulin. Due to high growth in the GLP-1 segment, Novo Nordisk is in a strong position to maximise Victoza® in advance of preparations for the launch of semaglutide in Japan and to target reimbursement of Victoza® in Korea. There will also be opportunities to strengthen leadership in biopharmaceuticals, with continued focus on growth disorders and further uptake of NovoEight® among people with haemophilia A following its launch in Japan in 2014.

REGION LATIN AMERICA

- Total population: 634m[7]
- GDP per capita: USD 8,430[32]
- Healthcare cost per capita: USD 714[33]
- Adults with diabetes: 49m[1]
- Adult diabetes prevalence: ~12.0%[1]
- Diagnosis rate: 62.5%[1]
- Employees*: ~900

Latin America was the fastest-growing business area under the company's 2016 commercial structure. Strong performance has been underpinned by market share gains across the diabetes portfolio, in particular in the basal segment. The primary opportunity in 2017 will be to harness demand across the region for Novo Nordisk's novel portfolio, including Victoza® and new-generation insulin such as Tresiba® and Ryzodeg®. There will also be scope to broaden access to Saxenda®, which was launched in 2016 in both Mexico and Brazil, paving the way for further entries into the obesity market. While Latin America will provide business opportunities across the portfolio, the region will operate under macroeconomic challenges similar to those faced in 2016. A significant proportion of government revenues across the region are derived from exports of commodities,[39] and any deterioration in commodity prices could create cost pressures in the healthcare sector. Continuing inflationary issues are also likely to have an impact on planning and pricing discussions. Despite these challenges, Latin America will continue to provide growth opportunities through increases in market share and a market access environment that remains conducive to further penetration with Novo Nordisk's novel portfolio.

* Employee numbers only cover regional sales organisations.

"THERE ARE TWO ISSUES ALL OUR REGIONS HAVE IN COMMON: **THE FACT THAT MORE AND MORE PEOPLE ARE GETTING DIABETES AND THE NEED FOR INNOVATIVE SOLUTIONS TO ADDRESS THIS CHALLENGE.**"

Maziar Mike Doustdar
Executive vice president,
International Operations

IO IN SHORT

OF THE WORLD'S POPULATION IS COVERED BY IO

IO COVERS **FIVE CONTINENTS**

MORE THAN **190** COUNTRIES

20 TIME ZONES

EMPLOYEES OF **125 NATIONALITIES**

RISK MANAGEMENT – PROTECTING LONG-TERM VALUE CREATION

2016 was a year of significant changes for Novo Nordisk, including from a risk management perspective. Some risks emerged faster and with a higher impact than expected, while others all but disappeared from Novo Nordisk's risk 'heat map'.

Jesper Brandgaard, Novo Nordisk's chief financial officer and chair of the company's Risk Management Board, rarely fails to remind investors and analysts that there are risks associated with investing in Novo Nordisk. 2016 was a case in point.

The most prominent market risk materialising in 2016 was a more challenging business environment in the US. This was caused by a combination of several factors: through a wave of mergers and acquisitions, the main purchasers of medicines – pharmaceutical benefit managers (PBMs) – had strengthened their negotiating power, forcing pharmaceutical companies to either increase their rebates to get their products onto the PBMs' lists of approved, reimbursed products – or lose the contract. Novo Nordisk experienced both in 2016, during which other factors also put the US business under pressure. One such factor was the imminent launch of biosimilar basal insulin, which further strengthened the payers' negotiating position. Another was the loss of market shares in the haemophilia business due to patients switching from NovoSeven® to enter clinical trials with a potential new competing product.

As a result, Novo Nordisk's financial performance in 2016 ended in the lower end of the range than guided at the beginning of the year, and the company's long-term targets had to be lowered.

Reflecting on the market risks Novo Nordisk faced in 2016, Jesper Brandgaard acknowledges that while contract losses and higher rebate levels in the US had been identified as risks in the company's risk management process, the impact and speed at which they had materialised had come as a surprise.

In some other markets, the opposite happened, with the business developing more favourably than expected, for example in China, where market growth was higher and price pressure more modest than expected.

"It just shows that while the pharma industry is considered a safe haven in times of change, there is no such thing as a safe haven," comments Jesper Brandgaard. "All industries have their individual risks."

RESEARCH & DEVELOPMENT RISKS

A set of risks specific to the pharmaceutical industry are those associated with the testing of new medicines for safety and efficacy during a rigorous process that can last more than 10 years. At any point in time in the process, there is the risk of studies showing that the potential new product is not sufficiently efficacious or that it has unacceptable side effects.

In terms of Novo Nordisk's R&D risks, 2016 was unique on account of an extraordinarily high number of data releases and regulatory milestones.

LONG-TERM RISKS

Novo Nordisk aspires to be a sustainable business and takes an active role in dealing with risks related to global development and long-term prosperity, such as global health, climate change, water scarcity and inequality. This includes setting science-based targets aligned with international agreements and thorough due diligence to ensure adherence to universally accepted standards for responsible business practices. Actions are reported to investor-led indices, such as CDP on climate risks, ATMI on access to medicines and DJSI on economic, environmental and social performance.

Find elaborate descriptions of Novo Nordisk's climate action initiatives, water stewardship, respect for human rights, access to health, diversity and inclusion, business ethics and responsible tax in the Communication on Progress report and read more about sustainability management at **novonordisk.com/sustainability**.

NOVO NORDISK'S RISK MANAGEMENT POLICY

At Novo Nordisk, we will proactively manage risk to ensure continued growth of our business and to protect our people, assets and reputation. This means that we will:

- utilise an effective and integrated risk management system while maintaining business flexibility
- identify and assess material risks associated with our business
- monitor, manage and mitigate risks.

Read more about Novo Nordisk's risk management governance at **novonordisk.com/about-novo-nordisk/corporate-governance/risk-management.html**.

"THERE IS NO SUCH THING AS A **SAFE HAVEN**."

Jesper Brandgaard
Chief financial officer
and chair of Novo Nordisk's Risk Management Board

"From an R&D perspective, the most significant potential risks, which would be disappointing results from the LEADER, DEVOTE and SUSTAIN key trials with Victoza®, Tresiba® and semaglutide respectively, did not materialise. In fact, results were even better than we'd hoped for," says Jesper Brandgaard. He also notes two risks that did materialise in 2016: delays in the US approvals of fast-acting insulin aspart and Xultophy®. "However, this can in no way change the picture that our overall R&D risk profile improved considerably during 2016."

SUPPLY, QUALITY AND PRODUCT SAFETY RISKS

In terms of the company's ability to ensure a steady supply of high-quality products to its customers, no significant risks materialised in 2016. "As always, we had many inspections from regulatory authorities during the year, but we've passed all the inpections that have been reported back to us at this point, and the findings that inspectors have made are some we know how to deal with and which we don't expect will limit our ability to supply," he continues.

Product recalls due to potential safety issues are not uncommon in the pharmaceutical industry, and in 2016 Novo Nordisk had to make one critical recall from the market. It concerned one of the company's smallest products, an emergency kit used by people with diabetes when experiencing an episode of dangerously low blood sugar (severe hypoglycaemia). In September, certain batches of the product, GlucaGen® Hypokit, were recalled in 31 countries because it was found that a small percentage of needles (0.006%) were detached from the syringe. "It may seem like a small risk given the small percentage of faulty products, but when it comes to patient safety, we can't compromise," says Jesper Brandgaard.

LEGAL RISKS

At any given point in time, a pharmaceutical company of Novo Nordisk's size is likely to be facing legal risks, for example related to lawsuits filed by competitors or customers, or investigations by authorities into certain business practices. A summary of Novo Nordisk's ongoing cases can be found on **p 80** of this Annual Report.

Jesper Brandgaard urges investors to pay attention to such cases, as they can have significant financial or market impacts. As an example, he mentions a patent dispute between Novo Nordisk and Baxalta (now Shire) regarding the haemophilia product NovoEight®. Had Novo Nordisk lost the case, it could have been forced to withdraw the product from the US market, which would not only have affected the people using the product, but also led to a loss of reputation and future business for Novo Nordisk within haemophilia.

The two companies settled the case out of court in September, and NovoEight® can thus remain on the US market.

CONTINUED ▶

RISK PROFILE AND MITIGATING ACTIONS

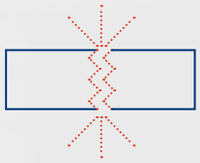
As a global business, Novo Nordisk is exposed to risks throughout its value chain, which stretches from early discovery of new medicines to patients taking their daily dose of life-saving medicine at home. Some risks can be foreseen well in advance so that actions can be taken, for example ensuring back-up facilities and inventories. Some can be calculated, such as the risk of not achieving superior clinical results and a promising product candidate having to be abandoned. Others may come from unseen angles, such as intruders into data systems, and may cause business disruptions.

See an overview of Novo Nordisk's key risks in the table on **pp 42–43**.

ENTERPRISE RISK MANAGEMENT

Risk management is an enterprise-wide effort, and risks are assessed both in terms of potential financial loss and potential reputational damage. The goal is to increase transparency and communication to senior management on key risks, so that risks can be anticipated early and responded to proactively in order to protect and enhance assets, people, performance and reputation. Management teams in all organisational areas are responsible for continuous identification, assessment, mitigation and reporting of current and emerging risks. The most significant risks are presented to the Board of Directors on a quarterly basis. Read more at **novonordisk.com/about-novo-nordisk/corporate-governance/risk-management.html**.

NOVO NORDISK'S KEY RISKS



DELAYS OR FAILURE OF PRODUCTS IN PIPELINE

WHAT IS THE RISK?

The development of a product candidate can take more than 10 years and may be delayed, or even abandoned, at substantial expense. The process involves non-clinical tests and clinical trials, commercial product planning and regulatory approval, including approval of the production facilities.

WHAT IS THE IMPACT?

Patients would not benefit from innovative treatments and Novo Nordisk's future position as a leader could be jeopardised if the company is unable to bring innovative products to market. Any delays or failures of new products could have an adverse impact on sales, profits and market position.

WHAT ACTIONS ARE TAKEN?

Insights into patients' unmet needs inform the selection of new product candidates. Clinical trials are run to demonstrate safety and efficacy. Assessments of commercial viability determine progress through stage gates. Consultations are held with regulators to review clinical findings and obtain guidance on clinical programmes.

See more on pp 20–21 and 24–25.

SUPPLY DISRUPTIONS

WHAT IS THE RISK?

Failures or delays may occur at production sites or throughout the extensive global supply chain, relating to procurement of ingredients and components as well as distribution of products.

WHAT IS THE IMPACT?

Pharmacies and hospitals could face product shortages, with potential implications for patients' daily treatment needs, if Novo Nordisk is prevented from supplying products to markets. This could be due to breakdowns or quality failures at company sites or at key suppliers' production facilities.

WHAT ACTIONS ARE TAKEN?

Annual inspections by regulatory authorities document GMP compliance, and alternative supply sites for critical raw materials and back-up facilities are in place for key production plants and safety inventories, to prevent and respond to accidents or other disruptions to supplies. Global production reduces supply risks.

See more on p 103.

COMPETITION AND MARKET DEVELOPMENTS

WHAT IS THE RISK?

Governments and private payers take measures to limit spending on medicines by driving down prices, demanding higher rebates and restricting access to and reimbursement of new products. In some markets, political instability, conflict or weak enforcement of the rule of law may affect sales. At any time, established or new competitors may bring new products to market, leading to increased competition.

WHAT IS THE IMPACT?

Patients would not have access to the clinical benefits of new products if Novo Nordisk is prevented from launching new products due to reimbursement restrictions. Lower average prices are expected in the US. In other markets, prices could also come under pressure, while newer products could be niched for use in narrow sub-populations.

WHAT ACTIONS ARE TAKEN?

Clinical trial data demonstrate the added value of new products. Real-world evidence is introduced to show health economic benefits. Negotiations with payers aim to ensure patients' access to the clinical benefits of new products.

See more on pp 32–35 and 36–39.

COMPROMISES TO PRODUCT QUALITY AND SAFETY

WHAT IS THE RISK?

Product quality and safety may be compromised if, for example, a production facility is found to be in non-compliance, a product is not within specifications or if side effects that were not detected in clinical trials become apparent when a product is used for a longer period of time.

WHAT IS THE IMPACT?

Patients' health and lives could be put at risk and Novo Nordisk's reputation and licence to operate could be damaged if regulatory compliance is not ensured.

WHAT ACTIONS ARE TAKEN?

A robust quality management system, improvement plans and systematic senior management reviews are in place. Authority inspections and internal quality audits are conducted at sites. When issues are found with production processes or marketed products, root causes are identified and corrected and, if necessary, products are recalled.

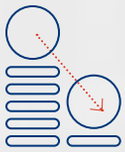
See more on pp 46–49 and 103.

INFORMATION TECHNOLOGY SECURITY BREACHES

Disruption to IT systems, such as breaches of data security or failure to integrate new systems, may happen across the global value chain, where well-functioning IT systems and infrastructure are critical for the company's ability to operate effectively.

Patients' or other individuals' privacy could be compromised if confidential information is disclosed, and breaches of IT security could have a severe impact on Novo Nordisk's ability to maintain operations and hence on its financial situation. In production environments, for example, breaches of IT security could impact Novo Nordisk's ability to produce and safeguard product quality.

An information security strategy is in place to prevent intruders from causing damage to systems and gaining access to critical data and systems. Awareness campaigns, access controls and intrusion detection and prevention systems have been implemented. Internal audits of IT security are conducted to detect and mitigate any breaches.



CURRENCY IMPACT AND TAX DISPUTES

Exchange rate fluctuations and transfer pricing disputes with tax authorities are external factors that may occur at any time. Novo Nordisk's foreign exchange risk is most significant in USD, CNY and JPY, while the EUR exchange rate risk is regarded as low due to Denmark's fixed-rate policy vis-à-vis the euro.

Novo Nordisk's cash flow and income statement would be negatively impacted if the local currency value in key sales regions depreciated against the Danish krone. Loss of major tax cases could result in significant tax adjustments and fines and could lead to a higher-than-expected tax level for the company.

Expected future cash flows for selected currencies are hedged to mitigate exposures. An integrated Treasury Management System is in place. Applicable taxes are paid in jurisdictions where business activity generates profits. Multi-year transfer pricing agreements with tax authorities have been negotiated in key markets. Hedging activities and calculation of transfer pricing are subject to internal audit.

See more on pp 72–73 and 83.

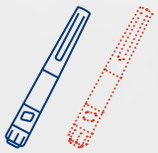
BREACH OF LEGISLATION OR ETHICAL STANDARDS

In a tightly regulated industry, breach of legislation, industry codes or company policies may occur in connection with business interactions, such as with healthcare professionals, business partners or other stakeholders. This could lead to lawsuits against Novo Nordisk or investigations by the authorities.

Breaches of legislation or ethical standards could compromise the integrity of the individuals involved and could cause damage to Novo Nordisk's reputation and financial situation.

Due diligence, standard procedures and training are in place to ensure compliance with laws and regulations and prevent breaches of standards, with legal defence where relevant. Compliance with business ethics standards is subject to internal audit.

See more on pp 18–19 and 102–103.



LOSS OF INTELLECTUAL PROPERTY RIGHTS

The validity of patents that are critical for protecting Novo Nordisk's commercial products and candidates in the R&D pipeline may be challenged by competitors.

Loss of exclusivity for existing and pipeline products could impact Novo Nordisk's market position and valuation.

Throughout the process of drafting, filing and prosecuting a patent application, internal controls are in place to minimise vulnerability to invalidity actions. Patents at high risk of invalidity challenge are proactively identified to prepare to defend Novo Nordisk's intellectual property rights.

See more on pp 74 and 101.

SHARES AND CAPITAL STRUCTURE

Through open and proactive communication, the company aims to provide the basis for fair and efficient pricing of its shares.

SHARE CAPITAL AND OWNERSHIP

Novo Nordisk's total share capital of DKK 510,000,000 is divided into an A share capital of nominally DKK 107,487,200 and a B share capital of nominally DKK 402,512,800. The company's A shares are not listed and are held by Novo A/S, a Danish public limited liability company wholly owned by the Novo Nordisk Foundation. The Foundation has a dual objective: to provide a stable basis for the commercial and research activities conducted by the companies within the Novo Group (of which Novo Nordisk is the largest), and to support scientific and humanitarian purposes. According to the Articles of Association of the Foundation, the A shares cannot be divested. As of 31 December 2016, Novo A/S also held nominal value of DKK 32,762,800 of B share capital. Novo Nordisk's B shares are listed on Nasdaq Copenhagen and on the New York Stock Exchange as American Depository Receipts (ADRs). Novo Nordisk's A and B shares are calculated in units of DKK 0.20. Each A share carries 200 votes and each B share carries 20 votes. No complete record of all shareholders exists; however, based on available sources of information about the company's shareholders, as of 31 December 2016 it is estimated that shares were geographically distributed as shown in the chart on the opposite page. As of 31 December 2016, the free float of listed B shares was 89.6% (of which approximately 11.5% are listed as ADRs), excluding the Novo A/S holding and Novo Nordisk's holding of treasury shares which, as of 31 December 2016, was DKK 9,133,450 nominally. For details about the share capital, see note 4.1 on pp 81–82.

CAPITAL STRUCTURE AND DIVIDEND POLICY

Novo Nordisk's Board of Directors and Executive Management consider that the current capital and share structure of Novo Nordisk serves the interests of the shareholders and the company well, providing strategic flexibility to pursue Novo Nordisk's vision. Novo Nordisk's capital structure strategy offers a good balance between long-term shareholder value creation and competitive shareholder return in the short term. Novo Nordisk's guiding principle is that any excess capital, after the funding of organic growth opportunities, investments and acquisitions, should be returned to investors. The company's dividend policy applies a pharmaceutical industry benchmark to ensure a competitive payout ratio for dividend payments, which are complemented by share repurchase programmes. As illustrated on the opposite page, Novo Nordisk has continuously increased both the payout ratio and the dividend paid over the last five years. The dividend for 2015 paid in March 2016 was equal to DKK 6.40 per A and B share of DKK 0.20 as well as for ADRs. This corresponds to a payout ratio of 46.6%, which is slightly below the 2015 pharma peer group average of 56%. In August 2016, an interim dividend was introduced and a DKK 3.00 dividend per A and B share of DKK 0.20 as well as for ADRs was paid. For 2016, the Board of Directors will propose a final dividend of DKK 4.60 to be paid in March 2017, equivalent to a total dividend for 2016 of DKK 7.60 and a payout ratio of 50.2%. The company expects to distribute an interim dividend in August 2017 and further information regarding such interim dividend will be announced in connection with the financial report for the first six months of 2017. Novo Nordisk does not pay a dividend on its holding of treasury shares. Shareholders' enquiries concerning dividend payments and shareholder accounts should be addressed to Investor Service. Read more on the back cover.

During the 12-month period beginning 30 January 2016, Novo Nordisk repurchased shares worth DKK 15 billion. The share repurchase programme has primarily been conducted in accordance with Article 5 of Regulation No 596/2014 of the European Parliament and Council of 16 April 2014 (MAR). In such a programme, financial institutions are appointed as lead managers to execute the repurchases independently and without influence from Novo Nordisk.

SHARE REPURCHASE PROGRAMME FOR 2017/2018

For the next 12 months, Novo Nordisk has decided to implement a new share repurchase programme. The expected total repurchase value of B shares amounts to a cash value of up to DKK 16 billion. Novo Nordisk expects to conduct the majority of the new share repurchase programme according to the Safe Harbour Rules in MAR. In March 2017, at the Annual General Meeting, the Board of Directors will propose a further reduction in the company's B share capital, corresponding to approximately 2% of the total share capital, by cancelling 50,000,000 treasury shares. After the implementation of the share capital reduction, Novo Nordisk's share capital will amount to DKK 500,000,000, divided into A share capital of DKK 107,487,200 and B share capital of DKK 392,512,800.

SHARE PRICE DEVELOPMENT

Novo Nordisk's share price decreased by 36.3% between its 2015 close of DKK 399.9 and the 30 December 2016 close of DKK 254.7. For comparison, the Danish OMXC20 CAP stock index decreased by 1.9% and the pharma peer group increased by 6.4% during 2016. The decrease in Novo Nordisk's share price during 2016 reflects Novo Nordisk's competitive challenges in the US during 2016 as well as the significant changes in the US pricing environment leading to a revision of the long-term financial targets in October 2016. Throughout 2016 several positive results from Novo Nordisk's late-stage development portfolio were reported, including results from the SWITCH, LEADER and DEVOTE studies. The total market value of Novo Nordisk's B shares, excluding treasury shares, was DKK 513 billion as of 30 December 2016.

COMMUNICATION WITH SHAREHOLDERS

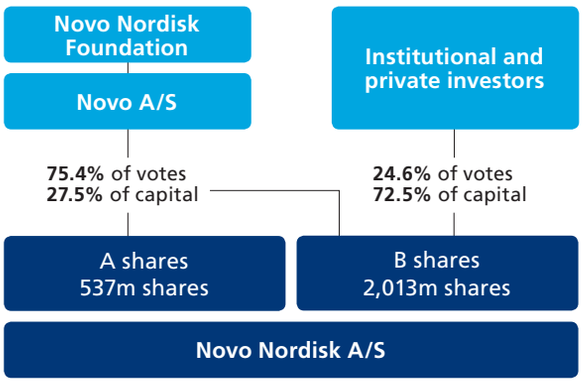
To keep investors updated about performance and the progress of clinical development programmes, Novo Nordisk hosts conference calls with Executive Management following key events and the release of financial results. Executive Management and Investor Relations also travel extensively to ensure that all investors with a major holding of Novo Nordisk shares can meet with the company on a regular basis and that a number of other investors and potential investors also have access to the company's Management and Investor Relations.

ANALYST COVERAGE

Novo Nordisk is currently covered by 37 sell-side analysts, including the major global investment banks that regularly produce research reports on Novo Nordisk. A list of analysts covering Novo Nordisk can be found at novonordisk.com under 'Investors'. Other information which can be accessed via this website includes company announcements from 1995 onwards, financial, social and environmental results, a calendar of investor-relevant events, investor presentations and background information.

SHARE AND OWNERSHIP STRUCTURE

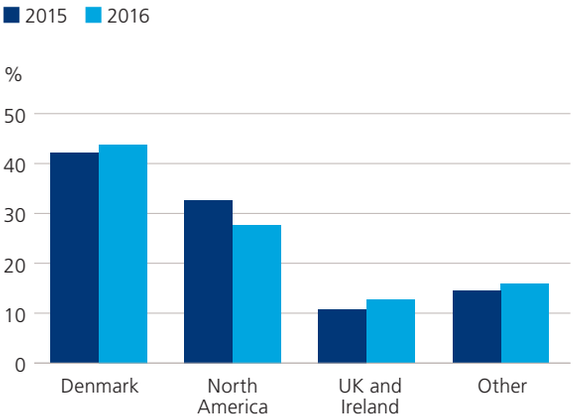
OWNERSHIP STRUCTURE



Note: Treasury shares are included in share capital but have no voting right.

GEOGRAPHIC DISTRIBUTION OF SHAREHOLDERS*

% of share capital

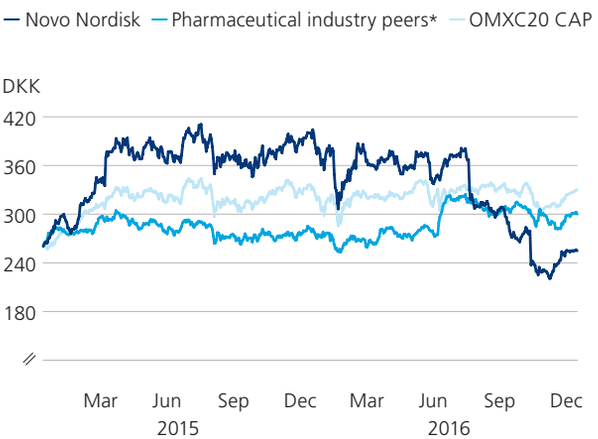


* Calculated using shareholders' registered home countries.

SHARE PRICE PERFORMANCE

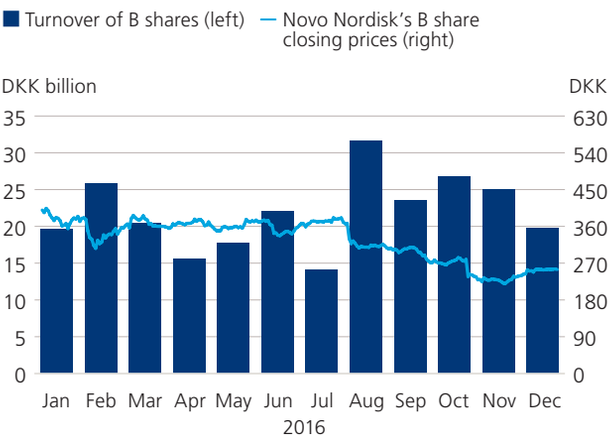
SHARE PRICE PERFORMANCE

Novo Nordisk share price and indexed peers



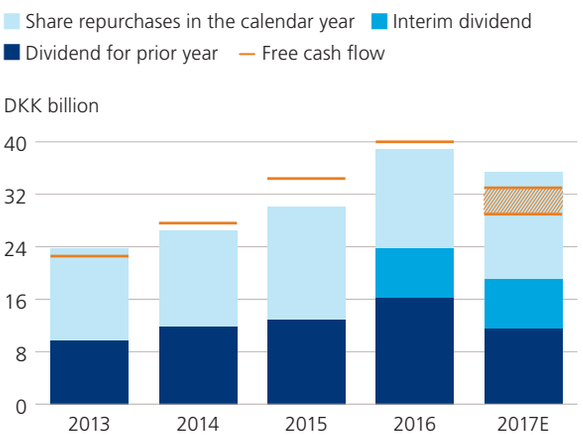
* Pharma peers comprise: AstraZeneca, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, J&J, Merck & Co, Novartis, Pfizer, Roche, Sanofi and Teva.

PRICE DEVELOPMENT AND MONTHLY TURNOVER OF NOVO NORDISK B SHARES



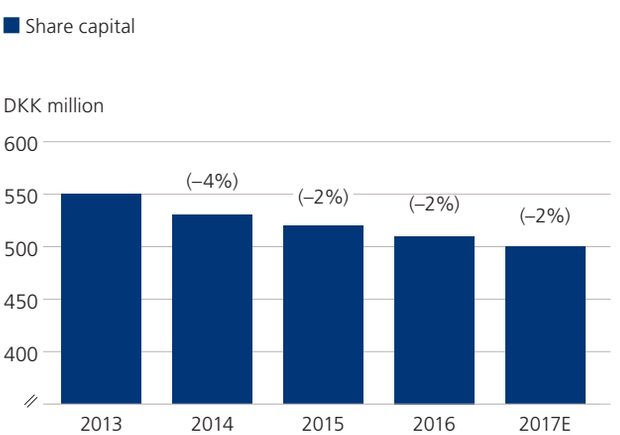
CASH DISTRIBUTION TO SHAREHOLDERS

CASH DISTRIBUTION TO SHAREHOLDERS



Note: Dividends are allocated to the year of dividend pay. Interim 2017 dividend is estimated based on financial outlook.

DEVELOPMENT IN SHARE CAPITAL



CORPORATE GOVERNANCE

GOVERNANCE STRUCTURE

SHAREHOLDERS

Shareholders have ultimate authority over the company and exercise their rights to make decisions at general meetings. At the annual general meeting, shareholders approve the annual report and any amendments to the company's Articles of Association. Shareholders also 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 other adoption requirements are imposed by the Danish Companies Act.

Novo Nordisk's share capital is divided into A shares, which are not listed, and B shares, which are listed.* The A shares constitute 21% of the share capital and each A share carries 200 votes. The B shares constitute the rest of the capital and each B share carries 20 votes. The Danish company Novo A/S, which is wholly owned by the Novo Nordisk Foundation, holds all the A shares and, as of 31 December 2016, Novo A/S also holds approximately 8.1% of the B share capital, meaning that Novo A/S holds approximately 27.5% of the total share capital and 75% of the votes. The remaining B shares are held by a wide group of shareholders and, consequently, Novo A/S has the voting majority at the annual general meeting. However, all strategic and operational matters are solely decided by the Board of Directors and Executive Management of Novo Nordisk A/S. Read more about shares and capital structure on pp 44–45 and on novonordisk.com.

BOARD OF DIRECTORS

Novo Nordisk has a two-tier management structure consisting of the Board of Directors and Executive Management. The two bodies are separate, and no one serves as a member of both.

The Board of Directors determines the company's overall strategy and follows up on its implementation, supervises the performance, ensures adequate management and organisation and, as such, actively contributes to developing the company as a focused, sustainable, global pharmaceutical company. The Board of Directors supervises Executive Management in its decisions and operations. The Board of Directors may also distribute extraordinary dividends, issue new shares or buy back shares in accordance with authorisations granted by the annual general meeting and recorded in the meeting minutes. For the minutes of annual general meetings, see novonordisk.com/about_us. The Board of Directors has 11 members, seven of whom are elected by shareholders and four by employees in Denmark. Novo Nordisk's Board of Directors met eight times during 2016.

Shareholder-elected board members serve a one-year term and may be re-elected. Members must retire at the first annual general meeting after reaching the age of 70. Two board members are members of the Board of Directors of Novo A/S and may be regarded as representing the interests of the controlling shareholder, while five of the seven shareholder-elected board members are independent as defined by the Danish Corporate Governance Recommendations. Read more on pp 54–55.

A proposal for nomination of board members is presented by the Nomination Committee to the Board of Directors, taking into account required competences as defined by the Board of Directors' competence profile and reflecting the results of a self-assessment process facilitated by internal or external consultants. The assessment process is based on written questionnaires and evaluates the Board of Directors' composition and the skills of its members, including whether each board member and executive participates actively in board discussions and contributes with independent judgement.

The self-assessment conducted in 2016 was facilitated internally and revealed good collaboration between the Board of Directors and Executive Management. The process also resulted in increased focus by the Board on the research strategy and sales in the US as well as on strengthening the processes in relation to board nomination and executive succession. In order to support continued fulfilment of the Novo Nordisk Way, criteria for board members include integrity, accountability, fairness, financial literacy, commitment and desire for innovation. Members are also expected to have experience of managing major companies that develop, manufacture and market products and services globally. The competence profile, which includes the nomination criteria, is available at novonordisk.com/about_us.

* Special rights attached to A shares include pre-emptive subscription rights in the event of an increase in the A share capital and pre-emptive purchase rights in the event of a sale of A shares, while B shares take priority for liquidation proceedings. A shares take priority for dividends below 0.5% and B shares take priority for dividends between 0.5 and 5%.

Shareholder Meeting 2016

To ensure that discussions include multiple perspectives representing the complex, global pharmaceutical environment, the Board of Directors aspires to be diverse in gender and nationality. Currently, three shareholder-elected board members are female and five of the seven shareholder-elected board members are non-Nordic. In 2016, the Board of Directors adjusted its diversity ambition and set out new targets with the aim that by 2020 it will consist of at least two shareholder-elected board members with Nordic nationality and at least two shareholder-elected board members with a nationality other than Nordic – and at least three shareholder-elected board members of each gender. In accordance with section 99b of the Danish Financial Statements Act, Novo Nordisk discloses its diversity policy, targets and current performance in the UN Global Compact Communication on Progress, which is available at novonordisk.com/annualreport.

Under Danish law, Novo Nordisk's employees in Denmark are entitled to be represented by half of the total number of board members elected at the annual general meeting. In 2014, employees elected four board members from among themselves – two male and two female, all Danes. Board members elected by employees serve a four-year term and have the same rights, duties and responsibilities as shareholder-elected board members.

CHAIRMANSHIP

The annual general meeting directly elects the chairman and the vice chairman of the Board of Directors. The Chairmanship carries out administrative tasks, such as planning board meetings to ensure a balance between overall strategy-setting and financial and managerial supervision of the company. Other tasks include reviewing the fixed asset investment portfolio. In March 2016, the Annual General Meeting re-elected the Chairman, Göran Ando, and the Vice Chairman, Jeppe Christiansen. In 2016, the Chairmanship particularly discussed the succession of the CEO and the reorganisation of the Executive Management as well as the company's research strategy and performance in the US. See novonordisk.com/about_us for a report on the Chairmanship's activities.

AUDIT COMMITTEE

The four members of the Audit Committee are elected by the Board of Directors from among its members. One member is an employee representative. Pursuant to the US Securities Exchange Act, two members qualify as independent while two members rely on an exemption from the independence requirements. In addition, two members have been designated as financial experts as defined by the US Securities and Exchange Commission (SEC). Under Danish law, two members qualify as independent – of whom one also qualifies as a financial expert. The Audit Committee assists the Board of Directors with oversight of the external auditors, the internal audit function, the procedure for handling complaints, financial, social and environmental reporting, business ethics compliance, significant investment projects (post-completion review), long-term incentive programmes, information security and other tasks. In 2016, the Board of Directors elected Liz Hewitt as Chairman and Jeppe Christiansen, Sylvie Grégoire and Stig Strøbæk as members. In 2016, the Audit Committee particularly discussed accounting policies and estimates, including tax, as well as internal controls and management of key

CONTINUED ▶

Shareholder Meeting 2016

risks, such as information security. See novonordisk.com/about_us for a report on the Audit Committee's activities.

NOMINATION COMMITTEE

The Nomination Committee consists of four members. Two members qualify as independent, while one member is an employee representative. The Nomination Committee assists the Board with oversight of the competence profile and composition of the Board, nomination of members and committees, and other tasks on an ad hoc basis as specifically decided by the Board. In 2016, the Board of Directors elected Göran Ando as Chairman and Bruno Angelici, Liz Hewitt and Liselotte Hyveled as members. In 2016, the Nomination Committee particularly discussed long-term succession and profiles of potential candidates in addition to interviewing candidates. See novonordisk.com/about_us for a report on the Nomination Committee's activities.

REMUNERATION COMMITTEE

The Remuneration Committee consists of four members. One member qualifies as independent, while one member is an employee representative. The Remuneration Committee assists the Board with oversight of the remuneration policy as well as the actual remuneration of board members, board committees and Executive Management. In 2016, the Board of Directors elected Göran Ando as Chairman and Jeppe Christiansen, Søren Thuesen Pedersen and Mary Szela as members. In 2016, the Remuneration Committee particularly discussed remuneration levels for the executives following the reorganisation of Executive Management. See novonordisk.com/about_us for a report on the Remuneration Committee's activities.

EXECUTIVE MANAGEMENT

Executive Management is responsible for the day-to-day management of the company. In 2016, the Board of Directors decided to reorganise Executive Management, following which the president & CEO, Lars Rebien Sørensen, retired from the company at the end of 2016 and was succeeded by Lars Fruergaard Jørgensen, previously executive vice president of Corporate Development. In addition, two executives left the company. The executives Jakob Riis and Maziar Mike Doustdar, who are based outside Denmark with responsibility for North America Operations and International Operations respectively, are not registered with the Danish Business Authority. Executive Management now consists of the president & CEO plus five executives. They are responsible for the overall conduct of the business and all operational matters, the organisation of the company, allocation of resources, determination and implementation of strategies and policies, direction-setting, and ensuring timely reporting and provision of information to the Board of Directors and Novo Nordisk's stakeholders. Executive Management meets at least once a month and often more frequently. The Board of Directors appoints members of Executive Management and determines their remuneration. The Chairmanship reviews the performance of the executives. To ensure the organisational implementation of the strategy, Executive Management has established a Senior Management Board consisting of the chief executive officer, executive vice presidents and senior vice presidents.

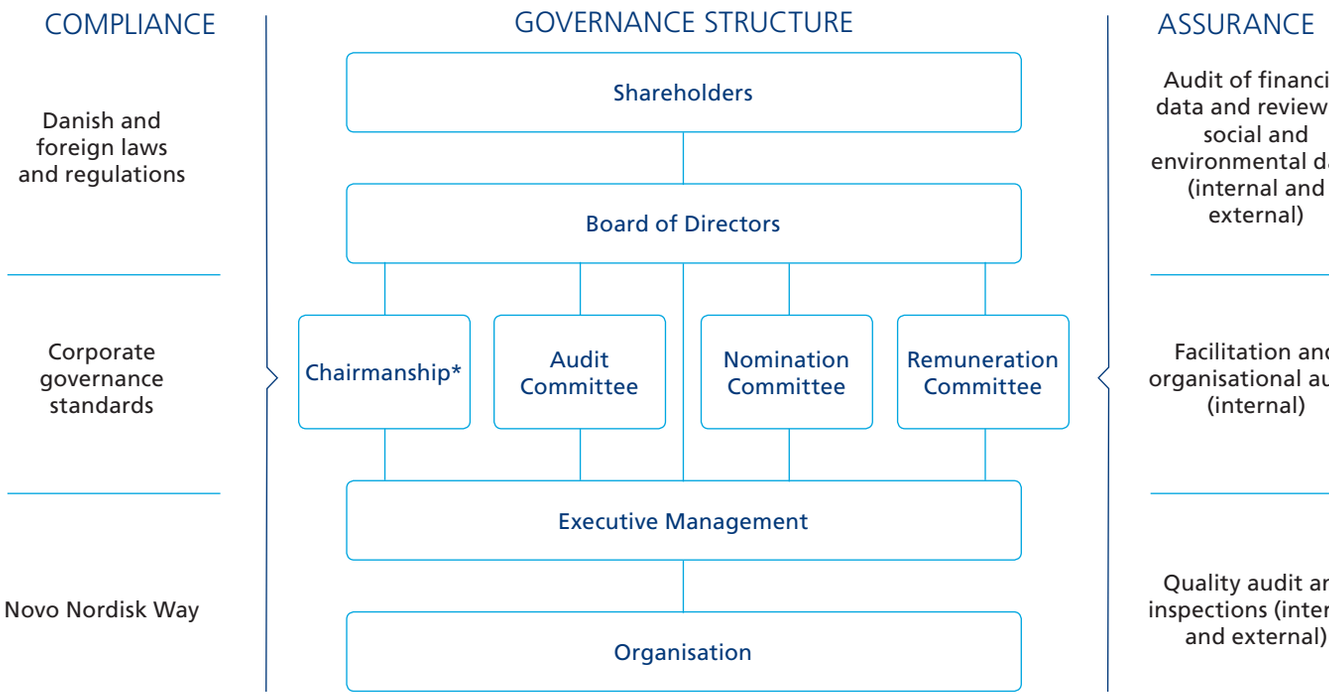
ASSURANCE

The company's financial reporting and the internal controls of financial reporting processes are audited by an independent audit firm elected at the annual general meeting. As part of Novo Nordisk's commitment to its social and environmental responsibility, the company voluntarily includes an assurance report for social and environmental reporting in the annual report. The assurance provider reviews whether the social and environmental performance information covers aspects deemed to be material, and verifies the internal control processes for the information reported.

Novo Nordisk's internal audit function provides independent and objective assurance, primarily within internal control of financial processes, IT and business ethics. To ensure that the internal financial audit function operates independently of Executive Management, its charter, audit plan and



CORPORATE GOVERNANCE CODES AND PRACTICES



* The Chairmanship is directly elected by the annual general meeting.

budget are approved by the Audit Committee. The Audit Committee must approve the appointment, remuneration and dismissal of the head of the internal audit function.

Three other types of assurance activity – quality audits, organisational audits and values audits, called facilitations – help ensure that the company adheres to high quality standards and operates in accordance with the Novo Nordisk Way.

COMPLIANCE WITH CORPORATE GOVERNANCE CODES

Novo Nordisk's B shares are listed on Nasdaq Copenhagen and on the New York Stock Exchange (NYSE) as American Depository Receipts (ADRs). The applicable corporate governance codes for each stock exchange and a review of Novo Nordisk's compliance are available at novonordisk.com/about_us. In accordance with section 107b of the Danish Financial Statements Act, Novo Nordisk discloses its mandatory corporate governance report at novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html. Today, Novo Nordisk adheres to all but the following recommendations:

- The responsibility for the remuneration policy applicable to the employees in general lies with Executive Management and not with the Remuneration Committee.
- Two executive employment contracts entered into before 2008 allow for severance payments of more than 24 months' fixed base salary plus pension contribution.
- The majority of the members of the Audit Committee, the Nomination Committee and the Remuneration Committee respectively are not independent.

Novo Nordisk complies with the corporate governance standards of NYSE applicable to foreign listed private issuers. As a controlled company, Novo Nordisk is not obliged to comply with all the standards established by NYSE. Furthermore, Novo Nordisk, as a foreign private issuer, is permitted to follow home country practice, which is the case in relation to independence requirements, audit committee, equity compensation plans, code of business conduct and ethics, and CEO certification. A summary of the significant ways in which Novo Nordisk's corporate governance practices differ from the NYSE corporate governance listing standards can be found in the corporate governance report at novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html.

Novo Nordisk is part of the Novo Group and adheres to the Charter for Companies in the Novo Group, which is available at novo.dk.



REMUNERATION: BOARD OF DIRECTORS

At the Annual General Meeting in March 2016 an update of the remuneration composition for the Board of Directors for 2016/2017 was approved. The fixed base fee was left unchanged whereas the fees for the Nomination Committee and the Remuneration Committee were aligned, the travel allowance level and use for board members were increased and the remuneration of the Chairman of the Board would include separate compensation for board committee work. In consequence, the total increase in the remuneration level for 2016/2017 for the board members was an average of approximately 31% compared to the actual total remuneration for 2015/2016.

REMUNERATION COMPOSITION

The remuneration of Novo Nordisk's Board of Directors comprises a fixed base fee, a multiplier of the fixed base fee for the Chairmanship and members of the board committees, fees for ad hoc tasks and a travel allowance. The fee for ad hoc tasks depends on the nature of the task. Further information on the remuneration of the Board of Directors is available at novonordisk.com/about_us.

TRAVEL AND EXPENSES

All board members are paid a fixed travel allowance for each board meeting and per board committee meeting: 5,000 euros per meeting in the member's home country with 5 hours or more travel, 5,000 euros per meeting outside the member's home country but on home country continent and 10,000 euros per meeting in another continent than the home country of the member.

Expenses such as travel and accommodation in relation to board meetings as well as those associated with continuing education are reimbursed and paid in addition to the travel allowance. Novo Nordisk also pays social security taxes imposed by foreign authorities. Further information on travel and expenses is available at novonordisk.com/about_us.

The company's remuneration principles provide guidance for the remuneration of the Board of Directors and Executive Management. These principles are available at novonordisk.com/about-novo-nordisk/corporate-governance/remuneration.html.

BOARD AND COMMITTEE FEE LEVELS 2016

	BOARD		AUDIT COMMITTEE		NOMINATION COMMITTEE		REMUNERATION COMMITTEE	
	Multiplier	DKK	Multiplier	DKK	Multiplier	DKK	Multiplier	DKK
Chair	3.00	1,800,000	1.00	600,000	0.50	300,000	0.50	300,000
Vice chair	2.00	1,200,000	N/A	N/A	N/A	N/A	N/A	N/A
Member	1.00	600,000	0.50	300,000	0.25	150,000	0.25	150,000

ACTUAL BOARD REMUNERATION 2016

	2016				2015			
DKK million	Fixed base fee	Fee for ad hoc tasks and committee work	Travel allowance	Total	Fixed base fee	Fee for ad hoc tasks and committee work	Travel allowance	Total
Göran Ando[3] (BC, NC and RC)	1.8	0.5	0.5	2.8	1.7	–	0.1	1.8
Jeppe Christiansen (BV, AM and RM)	1.2	0.4	0.2	1.8	1.2	0.3	–	1.5
Bruno Angelici (NM)	0.6	0.2	0.3	1.1	0.6	0.1	0.1	0.8
Brian Daniels[1]	0.5	–	0.3	0.8	–	–	–	–
Sylvie Grégoire[1] (AM)	0.6	0.3	0.4	1.3	0.5	0.2	0.2	0.9
Liz Hewitt (AC and NM)	0.6	0.7	0.4	1.7	0.6	0.7	0.1	1.4
Liselotte Hyveled[1] (NM)	0.6	0.2	0.1	0.9	0.6	0.1	–	0.7
Anne Marie Kverneland	0.6	–	0.1	0.7	0.6	–	–	0.6
Søren Thuesen Pedersen (RM)	0.6	0.1	0.1	0.8	0.6	0.1	–	0.7
Stig Strøbæk (AM)	0.6	0.3	0.1	1.0	0.6	0.3	–	0.9
Mary Szela[1] (RM)	0.6	0.2	0.4	1.2	0.5	0.2	0.2	0.9
Thomas Paul Koestler[2]	0.1	–	0.1	0.2	0.6	0.1	0.2	0.9
Eivind Kolding[1,2]	0.1	–	–	0.1	0.5	–	–	0.5
Former members[2]	–	–	–	–	0.2	0.2	0.2	0.6
Total	8.5	2.9	3.0	**14.4**[4]	8.8	2.3	1.1	12.2[4]

BC = Board chairman, BV = Board vice chairman, AC = Audit Committee chairman, AM = Audit Committee member, NC = Nomination Committee chairman, NM = Nomination Committee member, RC = Remuneration Committee chairman, RM = Remuneration Committee member.

1. Sylvie Grégoire, Eivind Kolding and Mary Szela were first elected in March 2015. Brian Daniels was first elected in March 2016. **2.** Thomas Paul Koestler and Eivind Kolding resigned as of March 2016. Former members includes fees to Helge Lund and Hannu Ryöppönen, who resigned as of March 2015. **3.** Novo Nordisk provides secretarial assistance to the chairman in Denmark and the UK. **4.** Excluding social security taxes paid by Novo Nordisk amounting to less than DKK 1 million (less than DKK 1 million in 2015).

REMUNERATION: EXECUTIVE MANAGEMENT

In 2016, the cash bonus for the chief executive officer under the short-term cash-based incentive programme was 50% of the maximum cash bonus, while the average cash bonus for the other members of Executive Management was 55% of their maximum cash bonus. The cash bonuses for Executive Management have been discretionarily adjusted based on business performance in 2016. The members of Executive Management received 27% of the maximum share allocation under the long-term share-based incentive programme. The deduction in the share allocation was a result of the company not meeting the targets for sales performance but also reflecting that some of the non-financial targets have not been met.

2016 PERFORMANCE

In February 2016, the Board of Directors decided to have the same structure for the 2016 long-term share-based incentive programme as for the 2015 programme and established the specific targets for 2016. The targets and structure of the programme have not been changed since February 2016.

In 2016, Novo Nordisk marginally exceeded the planned incentive target for economic value creation by 1.8%, primarily due to a favourable net impact from currencies and a lower than planned level of average invested capital. Sales were 1.3% below the target level in local currencies. Some of the non-financial targets were not met; among others the complete response letter received for fast-acting insulin aspart in the US, slower progress of the early-stage research portfolio than planned, the critical product recall of GlucaGen® Hypokit across 31 countries and a lower than targeted reputation amongst key stakeholders. On this basis, 27% of the maximum share allocation will be granted to the participants in the long-term share-based incentive programme. Thus, the chief executive officer will receive shares equalling 3.2 months' fixed base salary plus pension contribution, while the other members of Executive Management will receive shares equalling 2.4 months' fixed base salary plus pension contribution.

In 2016, the predefined functional and individual business targets for the short-term cash-based incentive programme were to a large extent achieved by each executive. However, all executive cash bonuses have been discretionarily adjusted by the Board of Directors based on business performance in 2016. Consequently, the cash bonus for the chief executive officer for 2016 was 50% of the maximum cash bonus equalling 6 months' fixed base salary plus pension contribution, while the average cash bonus for the other members of Executive Management was 55% of their maximum cash bonus equalling 4.5 months' fixed base salary plus pension contribution.

REMUNERATION COMPOSITION

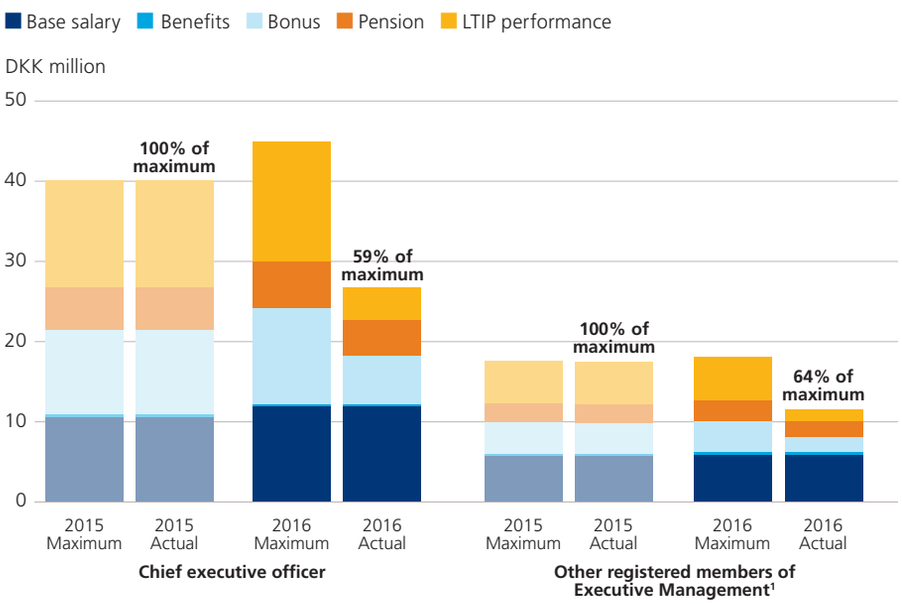
Novo Nordisk's Remuneration Principles provide the frame for the remuneration of the Executive Management. Remuneration has

LONG-TERM INCENTIVE – PERFORMANCE 2016

	Performance	Incentive impact	Months of base salary equivalent CEO	EVPs
Long-term incentive target basis (index 100)			6.0	4.5
Economic value creation[1]	101.8%	18%	1.1	0.8
Incentive performance based on economic value creation			**7.1**	**5.3**
Sales adjustment[2]	98.7%	(13%)	(0.9)	(0.7)
Total incentive based on financial targets			**6.1**	**4.6**
Non-financial targets achievement[3]	52.5%	(47.5%)	(2.9)	(2.2)
Total incentive performance			**3.2**	**2.4**
Maximum performance			12	9
Performance as percentage of maximum			*27%*	*27%*
Performance as percentage of target			*53%*	*53%*

1. ±10% incentive impact for each percentage point performance above/below 100% until max 110% and min 90%.
2. ±10% incentive impact for each percentage point performance above/below 100% until max 103% and min 97%.
3. Reduction, if performance is below 85%, is deducted from incentive performance based on financial targets.

TOTAL REMUNERATION COMPOSITION AND PERFORMANCE OVERVIEW FOR CEO AND EVPs



1. Includes executives who have been registered with the Danish Business Authority in both 2015 and 2016 full year.

CONTINUED ▶

been designed to align the interests of the executives with those of the shareholders.

Based on benchmark data, the Board of Directors decided to maintain the structure and level of the remuneration packages for Executive Management in 2016. Remuneration packages for executives comprise a fixed base salary, a cash-based incentive, a long-term share-based incentive, a pension contribution and other benefits. For executives on international assignments, the remuneration package is generally based on an equalised host country net salary during the length of the assignment and relocation benefits including accommodation and school arrangements. The split between fixed and variable remuneration is intended to result in a reasonable part of the salary being linked to performance, while promoting sound, business decisions to meet the company's objectives. All incentives are subject to claw-back if it is subsequently determined that payment was based on information that was manifestly misstated. The remuneration principles are available at novonordisk.com/about-novo-nordisk/corporate-governance/remuneration.html.

FIXED BASE SALARY

The fixed base salary is intended to attract and retain executives with the professional and personal competences required to drive the company's performance.

CASH-BASED INCENTIVE

The short-term cash-based incentive is designed to incentivise individual performance. The incentive is dependent on the achievement of predefined short-term financial, process, people and customer targets relating to the executive's functional area and linked to the company's Balanced Scorecard and the achievement of personal targets relating to the individual executive. The Chairmanship evaluates the degree of achievement for each member of Executive Management, based on input from the chief executive officer.

In February 2016, the Board of Directors determined that the 2016 maximum bonus would be a maximum of 12 months' fixed base salary plus pension contribution for the chief executive officer, a maximum of 8.5 months' fixed base salary plus pension contribution for executives on international assignments and a maximum of 8 months' fixed base salary plus pension contribution for the remaining members of Executive Management based in Denmark.

SHARE-BASED INCENTIVE

The long-term share-based incentive programme is designed to promote the collective performance of Executive Management and align the interests of executives and shareholders. Share-based incentives are linked to both financial and non-financial targets. The long-term incentive programme is based on a calculation of economic value creation compared with planned performance. In line with Novo Nordisk's long-term financial targets, the calculation of economic value creation is based on reported operating profit after tax, reduced by a weighted average cost of capital-based return requirement on average invested capital.

To a large extent, the sales growth drives the financial development of the company and hence economic value creation. The payout derived from the economic value created can thus be adjusted in a negative or positive direction if the sales performance is lower or higher than the target level. The calculated economic value creation is further adjusted if certain non-financial targets are not met. Non-financial targets are determined on the basis of an assessment of the objectives regarded as particularly important for the fulfilment of the company's long-term performance. The non-financial targets are linked to the company's Balanced Scorecard within the categories of research and development, reputation and patients, quality, people and environment. Targets within research and development were related to specific milestones, such as submission of product files to the regulatory authorities in the US and Europe within a certain time frame, achievement of marketing authorisations, execution of trials and a defined number of product candidates to enter development from discovery. Targets within quality related to recalls and warning letters, and targets within environment related to the emissions of CO_2 from energy consumption for production. Based on these principles, a proportion of the calculated economic value creation is allocated to a joint pool for the participants, who include Executive Management and other members of the Senior Management Board.

If the targets for economic value creation and sales growth are met, and at least 85% performance is reached for non-financial targets, the allocation to the joint pool will correspond to 6 months' base salary plus pension contribution for the chief executive officer and 4.5 months' base salary plus pension contribution for the other members of Executive Management. In February 2016, the Board of Directors determined that the 2016 maximum share allocation would be up to 12 months' fixed base salary plus pension contribution for the chief executive officer and up to 9 months' fixed base salary plus pension contribution for the other members of Executive Management. Further information on Novo Nordisk's share-based incentives is available at novonordisk.com/about_us.

PENSION

The pension contribution is up to 25% of the fixed base salary including bonus.

OTHER BENEFITS

Other benefits are added to ensure that overall remuneration is competitive and aligned with local practices.

SEVERANCE PAYMENT

Novo Nordisk may terminate employment by giving executives 12 months' notice. Executives may terminate their employment by giving Novo Nordisk 6 months' notice. In addition to the notice period, executives are entitled to a severance payment as described in the overview of the executive remuneration package components. Further information on Novo Nordisk's severance payments is available at novonordisk.com/about_us.

REMUNERATION PACKAGE COMPONENTS

Remuneration	Board of Directors	Executive Management	Comments relating to Executive Management
Fixed fee/base salary	✓	✓	Accounts for approximately 25–50% of the total value of the remuneration package.*
Fee for committee work	✓	×	
Fee for ad hoc tasks	✓	×	
Cash-based incentive	×	✓	Up to 12 months' fixed base salary + pension contribution per year.
Share-based incentive	×	✓	Up to 12 months' fixed base salary + pension contribution per year.
Pension	×	✓	25% of fixed base salary and cash-based incentive.
Travel allowance and other expenses	✓	(✓)	Executive Management receives a minor tax-based travel allowance equal to that of all other employees.
Other benefits	×	✓	Executive Management receives non-monetary benefits such as company cars, phones etc. Executives on international assignments may receive relocation benefits.
Severance payment	×	✓	Up to 24 months' fixed base salary + pension contribution. Executive Management contracts entered into before 2008 exceed the 24-month limit, though will not exceed 36 months' fixed base salary plus pension contribution.

* The interval 25–50% states the span between 'maximum performance' and 'on-target performance'.

REMUNERATION OF EXECUTIVE MANAGEMENT AND OTHER MEMBERS OF THE SENIOR MANAGEMENT BOARD

DKK million	2016 Fixed base salary[8]	Cash bonus	Pension	Benefits	Share-based incentive[9]	2016 Total	2015 Fixed base salary[8]	Cash bonus	Pension	Benefits	Share-based incentive[9]	2015 Total
Executive Management												
Lars Rebien Sørensen[1,5]	11.9	6.0	4.5	0.3	–	22.7	10.6	10.6	5.3	0.3	–	26.8
Lars Fruergaard Jørgensen[1]	5.5	1.8	1.8	0.3	–	9.4	5.2	3.5	2.2	0.3	–	11.2
Jesper Brandgaard	6.1	2.0	2.0	0.3	–	10.4	6.0	4.0	2.5	0.3	–	12.8
Jakob Riis[2]	3.6	1.8	1.4	0.2	–	7.0	5.2	2.8	2.0	0.3	–	10.3
Mads Krogsgaard Thomsen	6.2	2.0	2.0	0.3	–	10.5	6.0	4.0	2.5	0.3	–	12.8
Henrik Wulff[3]	4.9	1.7	1.6	0.3	–	8.5	3.2	2.6	1.3	0.2	–	7.3
Non-registered members of Executive Management[4]	6.2	2.8	2.9	0.4	–	12.3	10.6	9.4	4.9	0.6	–	25.5
Former members of Executive Management:												
Kåre Schultz[5]	–	–	–	–	–	–	2.5	1.3	1.0	0.1	–	4.9
Former non-registered members of Executive Management[6]	8.3	4.1	3.4	0.4	–	16.2	–	–	–	–	–	–
Share-based incentive	–	–	–	–	11.4	11.4	–	–	–	–	44.0	44.0
Executive Management in total	52.7[8]	22.2	19.6	2.5	11.4	108.4	49.3[8]	38.2	21.7	2.4	44.0	155.6
Other members of the Senior Management Board in total[6,7]	77.7[8]	22.5	25.2	20.1	15.0	160.5	73.1[8]	20.6	22.2	18.3	47.8	182.0

1. Lars Rebien Sørensen, president and chief executive officer, retired from Novo Nordisk at the end of 2016. He was succeeded by Lars Fruergaard Jørgensen, previously executive vice president and head of Corporate Development, effective 1 January 2017. **2.** Effective 1 September 2016, Jakob Riis was appointed executive vice president and head of North America Operations. In light of his new role, Jakob Riis is no longer registered with the Danish Business Authority as an executive in Novo Nordisk A/S. Amounts in the table for 2016 include remuneration from January to August 2016. Remuneration from September to December 2016 is included within Non-registered members of Executive Management. **3.** Effective 1 September 2016, Henrik Wulff was registered with the Danish Business Authority as an executive in Novo Nordisk A/S. Respective amounts in the table include remuneration for the full year. **4.** Includes remuneration for Jakob Riis (September to December 2016) and Maziar Mike Doustdar. Amounts include taxes paid by Novo Nordisk due to the members' international employment terms. In addition, Jakob Riis and Maziar Mike Doustdar received benefits in accordance with Novo Nordisk's International Assignment Guidelines, such as accommodation, children's school fees, international health insurance and other types of insurance, spouse allowance and tax-filing support, all offered net of tax to the assignees. Including tax paid by Novo Nordisk, the benefits received in 2016 not included in the above table amount to DKK 3.3 million (DKK 1.8 million in 2015). **5.** As of 31 December 2016, President and CEO Lars Rebien Sørensen retired from Novo Nordisk. The remuneration of Lars Rebien Sørensen for 2016 is included in the table above, whereas the severance payment of DKK 65.7 million, including participation in the share-based incentive programme for 2017, is not included. The remuneration of Kåre Schultz up to April 2015 is included in the table above, whereas the severance payment of DKK 72.7 million, including participation in the share-based incentive programme for 2015 and part of 2016, is not included. **6.** Effective 1 September 2016, Jerzy Gruhn and Jesper Høiland stepped down from the Executive Management of Novo Nordisk A/S. Respective amounts in the table include remuneration for January to August 2016. Remuneration for September to December 2016 is included as part of Other members of the Senior Management Board. In addition, Jerzy Gruhn and Jesper Høiland received benefits in accordance with Novo Nordisk's International Assignment Guidelines, such as accommodation, children's school fees, international health insurance and other types of insurance, spouse allowance and tax-filing support, all offered net of tax to the assignees. Including tax paid by Novo Nordisk, the benefits received in 2016 not included in the above table amount to DKK 4.3 million (DKK 3.6 million in 2015). **7.** The total remuneration for 2016 includes remuneration of 33 Senior Vice Presidents (34 in 2015), four of whom have retired or left the company (three in 2015). The 2016 remuneration for the retired Senior Vice Presidents is included in the table above, whereas severance payments of DKK 69.0 million (DKK 25.8 million in 2015) are not included. **8.** Excluding social security taxes paid amounting to DKK 1.9 million (DKK 1.3 million in 2015) for Executive Management and DKK 2.2 million (DKK 1.4 million in 2015) for other members of the Senior Management Board. **9.** The joint pool of shares is locked up for three years before it is transferred to the participants employed at the end of the three-year period. The value is the cash amount of the share bonus granted in the year using the grant-date market value of Novo Nordisk B shares. During the lock-up period, the joint pool may potentially be reduced in the event of lower-than-planned value creation in subsequent years. The split between Executive Management and other members is based on the split of participants at the time of establishment of the pool.

MANAGEMENT'S LONG-TERM INCENTIVE PROGRAMME

The shares allocated to the joint pool for 2013 (254,513 shares) were released to the individual participants subsequent to approval of the Annual Report 2016 by the Board of Directors and the announcement of the full-year financial result for 2016 on 2 February 2017. Based on the share price at the end of 2016, the value of the released shares is as follows:

Value as of 31 December 2016 of shares released on 2 February 2017	Number of shares	Market value[1] (DKK million)
Executive Management		
Lars Rebien Sørensen	25,578	6.5
Lars Fruergaard Jørgensen	10,637	2.7
Jesper Brandgaard	14,392	3.7
Mads Krogsgaard Thomsen	14,392	3.7
Henrik Wulff	5,708	1.4
Non-registered members of Executive Management[3]	10,637	2.7
Executive Management in total[2]	81,344	20.7
Other members of the Senior Management Board in total[2]	86,009	21.9

1. The market value of the shares released in 2017 is based on the Novo Nordisk B share price of DKK 254.70 at the end of 2016. **2.** In addition, 87,160 shares (market value: DKK 22.2 million) were released to retired Executive Management and Senior Management Board members. **3.** Not registered with the Danish Business Authority as members of the Executive Management of Novo Nordisk A/S. In addition, 1,785 shares were released to a non-registered member of Executive Management who was not included in the joint pool for 2013 for the Senior Management Board.

Lars Rebien Sørensen serves as a board member of Carlsberg A/S, from which he received remuneration of DKK 1,050,000 in 2016 (DKK 838,306 as of March 2015); and as a board member of Thermo Fisher Scientific Inc, from which he received remuneration of USD 67,376 in 2016 (USD 223,865 in 2015). Jesper Brandgaard serves as chairman of the Board of Directors of SimCorp A/S, from which he received remuneration of DKK 1,035,257 in 2016 (DKK 730,488 in 2015); and as chairman of the board of NNIT A/S, from which he received remuneration of DKK 750,000 in 2016 (DKK 562,500 in 2015). The NNIT remuneration is included in the remuneration of Executive Management presented above. Mads Krogsgaard Thomsen serves as a board member of the University of Copenhagen, from which he received remuneration of DKK 82,215 in 2016 (DKK 81,606 in 2015). Jakob Riis serves as a board member of ALK-Abelló A/S, from which he received remuneration of DKK 415,000 in 2016 (DKK 415,000 in 2015). Henrik Wulff serves as a board member of AMBU A/S, from which he received remuneration of DKK 300,000 in 2016 (DKK 0 in 2015).

BOARD OF **DIRECTORS**

GÖRAN ANDO

Chairman

Formerly chief executive officer of Celltech Group plc, UK (retired). Member of the Board of Novo Nordisk A/S since 2005, vice chair since 2006, chair since 2013, chair of the Nomination Committee since 2013 and chair of the Remuneration Committee since 2015.

Management duties: Symphogen A/S, Denmark (chair), member of the boards of Novo A/S, Denmark, Molecular Partners AG, Switzerland, EUSA Pharma Ltd., UK, and ICMEC, US. Senior advisor to Essex Woodlands Health Ventures Ltd., UK.

Special competences: Medical qualifications and extensive executive background within the international pharmaceutical industry.

Education: Specialism in general medicine (1978) and degree in medicine (1973), both from Linköping Medical University, Sweden.

JEPPE CHRISTIANSEN

Vice chairman

Chief executive officer of Fondsmæglerselskabet Maj Invest A/S, Maj Invest Holding A/S and Emlika ApS, all in Denmark. Member of the executive management of Maj Invest Equity A/S, Denmark. Member and vice chair of the Board of Novo Nordisk A/S since 2013. Member of the Remuneration Committee and Audit Committee since 2015.

Management duties: Haldor Topsøe A/S (chair), Maj Bank A/S (vice chair), and member of the boards of Novo A/S, KIRKBI A/S and Symphogen A/S and member of the board of governors of Det Kgl. Vajsenhus, all in Denmark.

Special competences: Executive background and extensive experience within the financial sector, in particular in relation to financial and capital market issues, as well as insight into the investor perspective.

Education: MSc in Economics (1985) from the University of Copenhagen, Denmark.

BRUNO ANGELICI

Formerly executive vice president of AstraZeneca, UK (retired). Member of the Board of Novo Nordisk A/S since 2011 and member of the Nomination Committee since 2013.

Management duties: Vectura Group plc, UK (chair), member of the board of Smiths Group plc, UK, member of the Supervisory Board of Wolters Kluwer, Netherlands, and member of the Global Advisory Board of Takeda Pharmaceutical Company Limited, Japan.

Special competences: Extensive global experience with two companies in the fields of pharmaceuticals and medical devices, and in-depth knowledge of strategy, sales, marketing and governance of major companies.

Education: AMP (1993) from Harvard Business School and MBA (1978) from Kellogg School of Management at Northwestern University, both in the US.

BRIAN DANIELS

Senior advisor with the Boston Consulting Group and venture partner with 5AM Venture Management, LLC, both in the US. Member of the Board of Novo Nordisk A/S since 2016.

Special competences: Extensive experience in clinical development, medical affairs and corporate strategy across a broad range of therapeutics areas within the pharmaceutical industry, especially in the US.

Education: MD (1987) from Washington University, St. Louis, US, BSc in Life Sciences (1981) and MA in Metabolism and Nutritional Biochemistry (1981), both from Massachusetts Institute of Technology, Cambridge, US.

SYLVIE GRÉGOIRE

Formerly president of Human Genetic Therapies, Shire plc, US and Switzerland (retired). Member of the Board of Novo Nordisk A/S and the Audit Committee since 2015.

Management duties: Corvidia Therapeutics Inc., US (chair), Metriopharm, Switzerland (executive chair) and member of the boards of Galenica AG, Switzerland, and Perkin Elmer Inc., US.

Special competences: In-depth knowledge of the regulatory environment in both the US and the EU, having experience of all phases of the product life cycle, including discovery, registration, pre-launch and managing the life cycle while on the market. In addition, she has financial insight into P&L responsibility.

Education: Pharmacy Doctorate degree (1986) from the State University of NY at Buffalo, US, BA in Pharmacy (1984) from Laval University, Canada, and Science College degree (1980) from Séminaire de Sherbrooke, Canada.

LIZ HEWITT

Formerly Group Director Corporate Affairs of Smith & Nephew plc, UK (retired). Member of the Board of Novo Nordisk A/S since 2012, chair of the Audit Committee since 2015 (member since 2012) and member of the Nomination Committee since 2013.

Management duties: Member of the board and chair of the audit committee of Savills plc, and member of the board and chair of the nomination committee of Melrose Industries plc, both in the UK. External member of and chair of the audit committee of the House of Lords Commission, UK.

Special competences: Extensive experience within the field of medical devices, significant financial knowledge and knowledge of how large international companies operate.

Education: BSc (Econ) (Hons) (1977) from University College London, UK, and FCA (UK Institute of Chartered Accountants) (1982).

Name (male/female)	First elected	Term	Nationality	Born	Independence[1]
Göran Ando (m)	2005	2017	Swedish	March 1949	Not independent[2]
Jeppe Christiansen (m)	2013	2017	Danish	November 1959	Not independent[2,4]
Bruno Angelici (m)	2011	2017	French	April 1947	Independent
Brian Daniels (m)	2016	2017	American	February 1959	Independent
Sylvie Grégoire (f)	2015	2017	Canadian/American	November 1961	Independent[4,5]
Liz Hewitt (f)	2012	2017	British	November 1956	Independent[4,5]

1. As designated by Nasdaq Copenhagen in accordance with section 3.2.1 of Recommendations on Corporate Governance (updated 2014). **2.** Member of the Board of Novo A/S.
3. Elected by employees of Novo Nordisk.

Project vice president of Novo Nordisk's mealtime insulin projects fast-acting insulin aspart and liver-preferential mealtime insulin in Global Development. Member of the Board of Novo Nordisk A/S since 2014 and member of the Nomination Committee since 2015.

Education: MSc in pharmaceutical science (1992) from Copenhagen University and Master of Medical Business Strategies (2011) from Copenhagen Business School, both in Denmark.

Laboratory technician and full-time union representative. Member of the Board of Novo Nordisk A/S since 2000.

Management duties: Member of the board of the Novo Nordisk Foundation since 2014.

Education: Degree in Medical Laboratory Technology (1980) from Copenhagen University Hospital, Denmark.

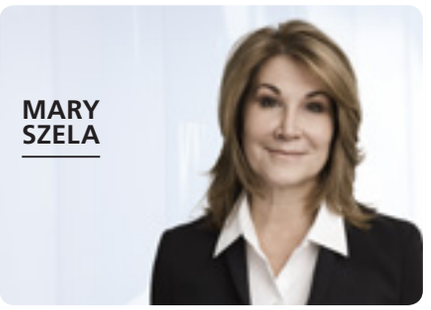
External Affairs director in Quality Intelligence. Member of the Board of Novo Nordisk A/S since 2006 and member of the Remuneration Committee since 2015.

Management duties: Member of the boards of HOFOR A/S, HOFOR Forsyning Holding PS, HOFOR Forsyning Komplementar A/S and HOFOR Forsyning A/S (Copenhagen Utilities), all in Denmark.

Education: BSc in Chemical Engineering (1988) from the Engineering Academy of Denmark.

Electrician and full-time union representative. Member of the Board of Novo Nordisk A/S since 1998 and member of the Audit Committee since 2013.

Education: Qualified electrician. Diploma in further training for board members (2003) from the Danish Employees' Capital Pension Fund (LD).



Chief executive officer of Novelion Therapeutics Inc., US. Member of the Board of Novo Nordisk A/S and the Remuneration Committee since 2015.

Management duties: Member of the boards of Coherus Biosciences, Inc., Novelion Therapeutics Inc. and Suneva Medical Inc., all in the US.

Special competences: In-depth understanding of the clinical, regulatory and marketing aspects of the pharmaceutical industry in North America, having both operational and strategic experience.

Education: MBA (1991) from the University of Illinois at Chicago, US, and BSc nursing degree (1985) from the University of Illinois at Chicago, US.

Name (male/female)	First elected	Term	Nationality	Born	Independence[1]
Liselotte Hyveled (f)	2014	2018	Danish	January 1966	Not independent[3]
Anne Marie Kverneland (f)	2000	2018	Danish	July 1956	Not independent[3]
Søren Thuesen Pedersen (m)	2006	2018	Danish	December 1964	Not independent[3]
Stig Strøbæk (m)	1998	2018	Danish	January 1964	Not independent[3,4]
Mary Szela (f)	2015	2017	American	May 1963	Independent

4. Pursuant to the US Securities Exchange Act, Ms Hewitt and Ms Grégoire qualify as independent Audit Committee members while Mr Christiansen and Mr Strøbæk rely on an exemption from the independence requirements. **5.** Ms Hewitt and Ms Grégoire qualify as independent Audit Committee members as defined under part 8 of the Danish Act on Approved Auditors and Audit firms.

EXECUTIVE MANAGEMENT

Lars Rebien Sørensen joined Novo Nordisk's Enzymes Marketing in 1982. He was appointed president and chief executive officer in November 2000.

Other management duties: Vice chair of the board of Carlsberg A/S, Denmark, and member of the board of Thermo Fisher Scientific Inc., US.

Born: October 1954.

Lars Fruergaard Jørgensen joined Novo Nordisk in 1991 as an economist. He was appointed executive vice president of IT, Quality & Corporate Development in January 2013, and in November 2014 he took over responsibility for Corporate People & Organisation and Business Assurance and became chief of staff. In January 2017, he was appointed president and chief executive officer (CEO).

Other management duties: Chair of the board of NNE A/S, Denmark.

Born: November 1966.

Jesper Brandgaard joined Novo Nordisk in 1999 as senior vice president of Corporate Finance. He was appointed executive vice president and chief financial officer in November 2000.

Other management duties: Chair of the boards of SimCorp A/S and NNIT A/S, both in Denmark.

Born: October 1963.

Maziar Mike Doustdar joined Novo Nordisk in 1992 as an office clerk in Vienna, Austria. He was appointed senior vice president of Novo Nordisk's International Operations in 2013 and executive vice president with responsibility for International Operations in April 2015. In September 2016, he assumed additional geographical responsibility and was promoted to executive vice president of an expanded International Operations.

Born: August 1970.

Jakob Riis joined Novo Nordisk in 1996 as a health economist. He was appointed senior vice president of International Marketing in 2005. In January 2013, he was appointed executive vice president and in 2015 he took over responsibility for sales in the China and Pacific regions. In September 2016, he was appointed executive vice president of North America Operations.

Other management duties: Chair of the board of Copenhagen Institute of Interaction Design, and member of the board and chair of the audit committee of ALK-Abelló A/S, both in Denmark.

Born: April 1966.

Mads Krogsgaard Thomsen joined Novo Nordisk in 1991 as head of Growth Hormone Research. He was appointed senior vice president of Diabetes R&D in 1994 and executive vice president and chief science officer in November 2000.

Other management duties: Vice chair of the board of the University of Copenhagen, Denmark, and member of the editorial boards of international, peer-reviewed journals.

Born: December 1960.

Henrik Wulff joined Novo Nordisk in 1998 in the logistic and planning function. He was appointed senior vice president of Product Supply in 2013 and executive vice president of Product Supply in April 2015.

Other management duties: Chair of the board of Novo Nordisk Pharmatech A/S, and member of the boards of NNE A/S and Ambu A/S, all in Denmark.

Born: November 1970.

* Not registered with the Danish Business Authority as a member of Executive Management of Novo Nordisk A/S.

CONSOLIDATED FINANCIAL, SOCIAL AND ENVIRONMENTAL STATEMENTS 2016

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED SOCIAL STATEMENT
(SUPPLEMENTARY INFORMATION)

CONSOLIDATED ENVIRONMENTAL STATEMENT
(SUPPLEMENTARY INFORMATION)

Novo Nordisk remains committed to reporting its performance through its integrated reporting. In line with the Novo Nordisk Triple Bottom Line principle, the Consolidated financial, social and environmental statements are presented along with the related notes.

Within each of the financial, social and environmental statements, the notes are grouped into sections based on how Novo Nordisk views its business. Each of the sections has an introduction explaining the link between long-term targets and business priorities, and how this is reflected in Novo Nordisk's financial, social and environmental statements. To provide transparency in the disclosed amounts, each note includes the relevant accounting policy, key accounting estimates and numerical disclosure.

INCOME STATEMENT

AND STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER

DKK million	Note	2016	2015	2014
INCOME STATEMENT				
Net sales	2.1, 2.2	111,780	107,927	88,806
Cost of goods sold	2.2	17,183	16,188	14,562
Gross profit		94,597	91,739	74,244
Sales and distribution costs	2.2	28,377	28,312	23,223
Research and development costs	2.2, 2.3	14,563	13,608	13,762
Administrative costs	2.2	3,962	3,857	3,537
Other operating income, net	2.2, 2.5	737	3,482	770
– Non-recurring income from the partial divestment of NNIT A/S	*2.5*	–	*2,376*	–
Operating profit		48,432	49,444	34,492
Financial income	4.8	92	85	167
Financial expenses	4.8	726	6,046	563
Profit before income taxes		47,798	43,483	34,096
Income taxes	2.6	9,873	8,623	7,615
Net profit for the year		**37,925**	34,860	26,481
EARNINGS PER SHARE				
Basic earnings per share (DKK)	4.1	14.99	13.56	10.10
Diluted earnings per share (DKK)	4.1	14.96	13.52	10.07

DKK million	Note	2016	2015	2014
STATEMENT OF COMPREHENSIVE INCOME				
Net profit for the year		37,925	34,860	26,481
Other comprehensive income:				
Items that will not be reclassified subsequently to the Income statement:				
Remeasurements of defined benefit plans	3.5	(205)	(37)	(247)
Items that will be reclassified subsequently to the Income statement:				
Exchange rate adjustments of investments in subsidiaries		(7)	(669)	(39)
Cash flow hedges, realisation of previously deferred (gains)/losses	4.3	682	2,216	(1,229)
Cash flow hedges, deferred gains/(losses) incurred during the period	4.3	(1,911)	(681)	(2,225)
Other items		(74)	366	111
Tax on other comprehensive income, income/(expense)	2.6	324	(87)	977
Other comprehensive income for the year, net of tax		**(1,191)**	1,108	(2,652)
Total comprehensive income for the year		**36,734**	35,968	23,829

BALANCE SHEET
AT 31 DECEMBER

DKK million	Note	2016	2015
ASSETS			
Intangible assets	3.1	2,714	2,158
Property, plant and equipment	3.2	30,179	25,545
Investment in associated company	5.7	809	811
Deferred income tax assets	2.6	2,683	6,806
Other financial assets	4.7	1,388	1,339
Total non-current assets		**37,773**	36,659
Inventories	3.3	14,341	12,758
Trade receivables	3.4, 4.7	20,234	15,485
Tax receivables		1,552	3,871
Other receivables and prepayments	4.7	2,411	2,257
Marketable securities	4.2, 4.4, 4.7	2,009	3,542
Derivative financial instruments	4.2, 4.3, 4.7	529	304
Cash at bank	4.2, 4.4, 4.7	18,690	16,923
Total current assets		**59,766**	55,140
Total assets		**97,539**	91,799
EQUITY AND LIABILITIES			
Share capital	4.1	510	520
Treasury shares	4.1	(9)	(10)
Retained earnings		46,111	46,816
Other reserves		(1,343)	(357)
Total equity		**45,269**	46,969
Deferred income tax liabilities	2.6	13	6
Retirement benefit obligations	3.5	1,451	1,186
Provisions	3.6	3,370	2,765
Total non-current liabilities		**4,834**	3,957
Current debt	4.4, 4.7	229	1,073
Trade payables	4.7	6,011	4,927
Tax payables		3,976	3,777
Other liabilities	3.7, 4.7	14,181	12,655
Derivative financial instruments	4.3, 4.7	2,578	1,382
Provisions	3.6	20,461	17,059
Total current liabilities		**47,436**	40,873
Total liabilities		**52,270**	44,830
Total equity and liabilities		**97,539**	91,799

STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 DECEMBER

DKK million	Note	2016	2015	2014
Net profit for the year		**37,925**	34,860	26,481
Reversal of non-cash items:				
Income taxes in Income statement	2.6	9,873	8,623	7,615
Depreciation, amortisation and impairment losses	3.1, 3.2	3,193	2,959	3,435
Non-recurring income from the partial divestment of NNIT A/S included in Other operating income	2.5	–	(2,526)	–
Other non-cash items	4.6	3,882	5,908	4,163
Change in working capital	4.5	(3,708)	(2,157)	(2,148)
Interest received		114	55	131
Interest paid		(66)	(61)	(78)
Income taxes paid	2.6	(2,899)	(9,374)	(7,907)
Net cash generated from operating activities		**48,314**	38,287	31,692
Proceeds from the partial divestment of NNIT A/S	2.5	–	2,303	–
Purchase of intangible assets	3.1	(1,199)	(1,182)	(321)
Proceeds from sale of property, plant and equipment		7	15	4
Purchase of property, plant and equipment	3.2	(7,068)	(5,224)	(3,990)
Proceeds from sale of other financial assets		23	32	35
Purchase of other financial assets		(112)	(9)	(24)
Sale of marketable securities		2,064	1,500	2,232
Purchase of marketable securities		(531)	(3,533)	–
Dividend received from associated company	5.4	26	–	–
Net cash used in investing activities		**(6,790)**	(6,098)	(2,064)
Purchase of treasury shares, net	4.1	(15,057)	(17,196)	(14,667)
Dividends paid	4.1	(23,830)	(12,905)	(11,866)
Net cash used in financing activities		**(38,887)**	(30,101)	(26,533)
Net cash generated from activities		**2,637**	2,088	3,095
Cash and cash equivalents at the beginning of the year	4.4	15,850	13,676	10,513
Exchange gains/(losses) on cash and cash equivalents		(26)	86	68
Cash and cash equivalents at the end of the year	4.4	**18,461**	15,850	13,676

STATEMENT OF CHANGES IN EQUITY
AT 31 DECEMBER

DKK million	Share capital	Treasury shares	Retained earnings	Other reserves: Exchange rate adjustments	Other reserves: Cash flow hedges	Other reserves: Tax and other items	Other reserves: Total other reserves	**Total**
2014								
Balance at the beginning of the year	550	(21)	41,137	(209)	1,233	(121)	903	42,569
Net profit for the year			26,481					26,481
Other comprehensive income for the year			(247)	(39)	(3,454)	1,088	(2,405)	(2,652)
Total comprehensive income for the year			26,234	(39)	(3,454)	1,088	(2,405)	23,829
Transactions with owners:								
Dividends (note 4.1)			(11,866)					(11,866)
Share-based payments (note 5.1)			371					371
Tax related to restricted stock units (note 2.6)			58					58
Purchase of treasury shares (note 4.1)		(11)	(14,717)					(14,728)
Sale of treasury shares (note 4.1)		1	60					61
Reduction of the B share capital (note 4.1)	(20)	20						–
Balance at the end of the year	530	(11)	41,277	(248)	(2,221)	967	(1,502)	40,294
2015								
Net profit for the year			34,860					34,860
Other comprehensive income for the year			(37)	(669)	1,535	279	1,145	1,108
Total comprehensive income for the year			34,823	(669)	1,535	279	1,145	35,968
Transactions with owners:								
Dividends (note 4.1)			(12,905)					(12,905)
Share-based payments (note 5.1)			442					442
Tax related to restricted stock units (note 2.6)			366					366
Purchase of treasury shares (note 4.1)		(10)	(17,219)					(17,229)
Sale of treasury shares (note 4.1)		1	32					33
Reduction of the B share capital (note 4.1)	(10)	10						–
Balance at the end of the year	520	(10)	46,816	(917)	(686)	1,246	(357)	46,969
2016								
Net profit for the year			37,925					37,925
Other comprehensive income for the year			(205)	(7)	(1,229)	250	(986)	(1,191)
Total comprehensive income for the year			37,720	(7)	(1,229)	250	(986)	36,734
Transactions with owners:								
Dividends (note 4.1)			(23,830)					(23,830)
Share-based payments (note 5.1)			368					368
Tax related to restricted stock units (note 2.6)			85					85
Purchase of treasury shares (note 4.1)		(9)	(15,048)					(15,057)
Reduction of the B share capital (note 4.1)	(10)	10						–
Balance at the end of the year	510	(9)	46,111	(924)	(1,915)	1,496	(1,343)	**45,269**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Basis of preparation | Results for the year | Operating assets and liabilities | Capital structure and financing items | Other disclosures

SECTION 1 BASIS OF PREPARATION

SECTION 2 RESULTS FOR THE YEAR

SECTION 3 OPERATING ASSETS AND LIABILITIES

SECTION 4 CAPITAL STRUCTURE AND FINANCING ITEMS

SECTION 5 OTHER DISCLOSURES

SECTION 1 BASIS OF PREPARATION

All entities in the Novo Nordisk Group follow the same Group accounting policies. This section gives a summary of the significant accounting policies, Management's key accounting estimates, new International Financial Reporting Standards (IFRS) requirements and other accounting policies in general. A detailed description of accounting policies and key accounting estimates related to specific reported amounts is presented in each note to the relevant financial items.

1.1 PRINCIPAL ACCOUNTING POLICIES AND KEY ACCOUNTING ESTIMATES

The Consolidated financial statements included in this Annual Report have been prepared in accordance with International Financial Reporting Standards as endorsed by the EU and further Danish disclosure requirements for annual reports of listed companies.

Measurement basis

The Consolidated financial statements have been prepared on the historical cost basis except for derivative financial instruments, equity investments and marketable securities which are measured at fair value.

The principal accounting policies set out below have been applied consistently in the preparation of the Consolidated financial statements for all the years presented.

Principal accounting policies

Novo Nordisk's accounting policies are described in each of the individual notes to the Consolidated financial statements. Considering all the accounting policies applied, Management regards the ones listed in the table below as the most significant accounting policies for the recognition and measurement of reported amounts.

Key accounting estimates and judgements

The use of reasonable estimates and judgements is an essential part of the preparation of the Consolidated financial statements. Given the uncertainties inherent in Novo Nordisk's business activities, Management must make certain estimates regarding valuation and judgements that affect the application of accounting policies and reported amounts of assets, liabilities, sales, costs, cash flows and related disclosures at the date(s) of the Consolidated financial statements.

The key accounting estimates identified are those that have a significant risk of resulting in a material adjustment. Management bases its estimates on historical experience and various other assumptions that are held to be reasonable under the circumstances. The estimates and underlying assumptions are reviewed on an ongoing basis and, if necessary, changes are recognised in the period in which the estimate is revised. Management considers the carrying amounts recognised in relation to the key accounting estimates mentioned below to be reasonable and appropriate based on currently available information. However, the actual amounts may differ from the amounts estimated as more detailed information becomes available.

In addition, Management makes judgements in the process of applying the entity's accounting policies, for example regarding recognition of deferred income tax assets or the classification of transactions.

Management regards those listed below to be the key accounting estimates and judgements used in the preparation of the Consolidated financial statements.

Please refer to the specific notes for further information on the key accounting estimates and judgements as well as assumptions applied.

Principal accounting policies	Key accounting estimates and judgements	Note
Net sales and rebates	Estimate of sales deductions and provisions for sales rebates	2.1
Research and development	–	2.3, 3.1 and 3.2
Derivative financial instruments	–	4.3
Income taxes and deferred income taxes	Judgement regarding deferred income tax assets and provision for uncertain tax positions	2.6
Property, plant and equipment including impairment	–	3.2
Inventories	Estimate of indirect production costs capitalised	3.3
Trade receivables	Estimate of allowance for doubtful trade receivables	3.4
Provisions and contingent liabilities	Estimate of ongoing legal disputes, litigations and investigations	3.6

Applying 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.

1.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

Adoption of new or amended IFRSs

Based on an assessment of new or amended and revised accounting standards and interpretations ('IFRSs') issued by the International Accounting Standards Board (IASB), and IFRSs endorsed by the European Union effective on or after 1 January 2016, it has been assessed that the application of these new IFRSs has not had a material impact on the Consolidated financial statements in 2016, and Management does not anticipate any significant impact on future periods from the adoption of these new IFRSs.

New or amended IFRSs that have been issued but have not yet come into effect and have not been early adopted
In addition to the above, IASB has issued a number of new or amended and revised accounting standards and interpretations that have not yet come into effect. In general, the following standards are expected to have the most significant impact on current accounting regulation:

- IASB has issued IFRS 9 'Financial Instruments', with effective date 1 January 2018. This was endorsed by the EU in 2016, and Novo Nordisk plans to adopt it on the effective date. IFRS 9 is part of IASB's project to replace IAS 39, and the new standard will substantially change the classification and measurement of financial instruments and hedging requirements. Novo Nordisk has assessed the impact of the standard and determined that it will not have any significant impact on the Consolidated financial statements.

- IASB has issued IFRS 15 'Revenue from contracts with customers', with effective date 1 January 2018. The standard was endorsed by the EU in 2016, and Novo Nordisk plans to adopt it on the effective date. IFRS 15 is part of the convergence project with FASB to replace IAS 18 and other standards, and the new standard will establish a single, comprehensive framework for revenue recognition. Novo Nordisk has performed an analysis of the impact, including areas such as variable considerations, right of return, licences and agent relationships. Based on the analysis, it is assessed that the standard will not have any significant impact on the revenue recognition or measurement. However, implementation is expected to result in extended disclosures regarding types of revenue and related risks.

- IASB has issued IFRS 16 'Leases' with effective date 1 January 2019. It currently awaits EU endorsement. Novo Nordisk plans to adopt it on the effective date. The changes in lease accounting requires capitalisation of the majority of the Group's operating lease contracts representing approximately 4–6% of the total assets. This will have an impact on the Group's assets and an equivalent impact on liabilities. Hence, it will affect the financial ratios related to the balance sheet. IFRS 16 requires the lease payments to be split between a depreciation charge included in operating costs and an interest expense on lease liabilities included in finance costs. However, the impact on net profit will be immaterial.

1.3 GENERAL ACCOUNTING POLICIES

Principles of consolidation

The Consolidated financial statements incorporate the financial statements of the parent company Novo Nordisk A/S and entities controlled by Novo Nordisk A/S. Control exists when Novo Nordisk has effective power over the entity and has the right to variable returns from the entity.

Where necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with Novo Nordisk Group policies. All intra-Group transactions, balances, income and expenses are eliminated in full when consolidated.

The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition and up to the effective date of disposal, as appropriate. Comparative figures are not restated for disposed or acquired companies.

Translation of foreign currencies

Functional and presentation currency
Items included in the financial statements of each of Novo Nordisk's entities are measured using the currency of the primary economic environment in which the entity operates (functional currency). The Consolidated financial statements are presented in Danish kroner (DKK), which is also the functional and presentation currency of the parent company.

Translation of transactions and balances
Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the transaction dates. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the Income statement.

Translation differences on non-monetary items, such as equity investments classified as financial assets available for sale, are recognised in Other comprehensive income.

Translation of Group companies
Financial statements of foreign subsidiaries are translated into Danish kroner at the exchange rates prevailing at the end of the reporting period for balance sheet items, and at average exchange rates for income statement items.

All effects of exchange rate adjustments are recognised in the Income statement, with the exception of exchange rate adjustments of investments in subsidiaries arising from:

- the translation of foreign subsidiaries' net assets at the beginning of the year to the exchange rates at the end of the reporting period
- the translation of foreign subsidiaries' statements of comprehensive income from average exchange rates to the exchange rates at the end of the reporting period.

These specific exchange rate adjustments are recognised in Other comprehensive income.

SECTION 2 RESULTS FOR THE YEAR

This section comprises notes related to the results for the year and hence provides information related to Novo Nordisk's long-term financial target for growth in operating profit. Operating profit decreased by 2% in 2016 (increase of 43% in 2015).

Sales increased by 4% driven by market share gain in selected markets, underlying market volume growth and changes in product mix, for example upgrade to next-generation products such as new-generation insulin and GLP-1. The global net impact of pricing has been moderately negative across the portfolio in 2016. Hence, the overall growth in local currency net sales is related to volume growth and changes in product mix rather than changes in price.

Operating profit in 2015 was positively affected by the divestment of NNIT A/S, explaining the decrease from 2015 to 2016. Further, the development reflects a modest increase in sales countered by a negative currency impact and increased research and development costs related to pipeline activities and build-up of research sites in the USA.

The article '2016 performance and 2017 outlook' on p 6 includes Management's review of the results for the year, which is not part of the audited financial statements.

Pricing mechanisms in the US market

In the USA, significant sales rebates are paid in connection with public healthcare insurance programmes, namely Medicare and Medicaid, as well as rebates to pharmacy benefits managers (PBMs) and managed healthcare plans.

Key customers in the USA include private payers, PBMs and government payers. Increasingly, PBMs and managed healthcare plans play a key role in negotiating price concessions with drug manufacturers on behalf of private payers for both the commercial and government channels, and determining the list of drugs covered by the health plans' formularies. Specifically, there are two primary drivers:

- Payer pressure to reduce the overall drug costs has resulted in greater focus on negotiating higher rebates from drug manufacturers. Private payers are increasingly keen to adopt narrow formularies that exclude certain drugs, while securing higher rebates from the preferred brand.
- Recent industry consolidation among payers has led to increasing pricing pressure for pharmaceutical companies.

In 2016, payers have continued to leverage their size and influence to demand higher rebates. Moreover, actions by companies in the diabetes care market to increase list prices have been limited, and the introduction of new products by competitors has further increased the downward pressure on prices.

US HEALTH INSURANCE 2016

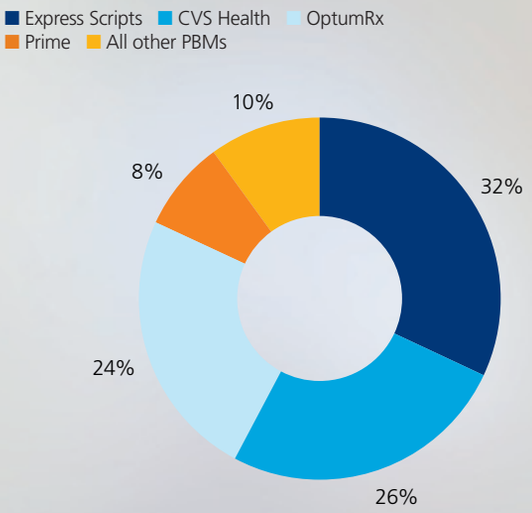


Chart represents percentage of insured lives
PBM: Pharmacy Benefit Manager
Source: Health Strategies Group (www.healthstrategies.com)

2.1 NET SALES AND REBATES

Accounting policies

Revenue from goods sold is recognised when Novo Nordisk has transferred the significant risks and rewards to the buyer, the Group no longer has managerial involvement, and the amount of revenue can be measured reliably.

Sales are measured at the fair value of the consideration received or receivable. When sales are recognised, Novo Nordisk also records estimates for a variety of sales deductions, including product returns as well as rebates and discounts to government agencies, wholesalers, health insurance companies, managed healthcare organisations and retail customers. Sales deductions are recognised as a reduction of gross sales to arrive at net sales. Where contracts contain customer acceptance provisions, Novo Nordisk recognises sales when the acceptance criteria are satisfied.

Revenue recognition for new product launches is based on specific facts and circumstances relating to those products, including estimated demand and acceptance rates for well-established products with similar market characteristics. Where shipments of new products are made on a sale-or-return basis, without sufficient historical experience for estimating sales returns, revenue is only recorded when there is evidence of consumption or when the right of return has expired.

Key accounting estimate of sales deductions and provisions for sales rebates

Sales deductions are estimated and provided for at the time the related sales are recorded. These estimates of unsettled obligations require use of judgement, as not all conditions are known at the time of sale, for example total sales volume to a given customer.

The estimates are based on analyses of existing contractual obligations and historical experience. Provisions are calculated on the basis of a percentage of sales for each product as defined by the contracts with the various customer groups. Provisions for sales rebates are adjusted to actual amounts as rebates, discounts and returns are processed.

Novo Nordisk considers the provisions established for sales rebates to be reasonable and appropriate based on currently available information. However, the actual amount of rebates and discounts may differ from the amounts estimated by Management as more detailed information becomes available.

2.1 NET SALES AND REBATES (CONTINUED)

GROSS-TO-NET SALES RECONCILIATION

DKK million	2016	2015	2014
Gross sales	198,924	182,779	131,841
US Managed Care and Medicare	(40,874)	(33,235)	(17,522)
US wholesaler charge-backs	(25,416)	(22,030)	(12,858)
US Medicaid rebates	(10,862)	(9,838)	(5,578)
Other US discounts and sales returns	(5,147)	(4,685)	(2,972)
Non-US rebates, discounts and sales returns	(4,845)	(5,064)	(4,105)
Total gross-to-net sales adjustments	(87,144)	(74,852)	(43,035)
Net sales	**111,780**	107,927	88,806

Sales discounts and sales rebates are predominantly issued in Region USA. As such, rebates amount to 59% of gross sales in Region USA (56% in 2015 and 48% in 2014).

In addition, political pressure to contain healthcare costs has led several other countries to impose significant price reductions on pharmaceutical products. As such, governments in countries in Region Europe have implemented concerted austerity measures, while government-mandated price cuts have been introduced in Region China, Pacific and major countries in Region International Operations.

US Managed Care and Medicare
For Managed Care and Medicare, rebates are offered to a number of PBMs and managed healthcare plans. These rebate programmes allow the customer to receive a rebate after attaining certain performance parameters relating to formulary status or pre-established market shares relative to competitors. Rebates are estimated according to the specific terms in each agreement, historical experience, anticipated channel mix, growth rates and market share information. Novo Nordisk adjusts the provision periodically to reflect actual sales performance.

US wholesaler charge-backs
Wholesaler charge-backs relate to contractual arrangements between Novo Nordisk and indirect customers in the US whereby products are sold at contract prices lower than the list price originally charged to wholesalers. A wholesaler charge-back represents the difference between the invoice price to the wholesaler and the indirect customer's contract price. Accruals are calculated for estimated charge-backs using a combination of factors such as historical experience, current wholesaler inventory levels, contract terms and the value of claims received but not yet processed. Wholesaler charge-backs are generally settled within 30 days of the liability being incurred.

US Medicaid
Medicaid is a government insurance programme, and Medicaid rebates have been calculated using a combination of historical experience, product and population growth, price increases, and the impact of contracting strategies. Further, the calculation involves interpretation of relevant regulations that are subject to changes in interpretative guidance from government authorities. Although provisions are made for Medicaid rebates at the time sales are recorded, the actual rebates related to the specific sale will typically be invoiced to Novo Nordisk 6–9 months later. Due to the time lag, the rebate adjustments to sales in any particular period may incorporate adjustments of provisions from prior periods.

Other US discounts and sales returns
Other discounts are provided to wholesalers, hospitals, pharmacies etc, and are usually linked to sales volume or provided as cash discounts. Accruals are calculated based on historical data and recorded as a reduction in gross sales at the time the related sales are recorded. Sales returns are related to damaged or expired products.

Arrangements with certain healthcare providers may require Novo Nordisk to make refunds to the healthcare providers if anticipated treatment outcomes do not meet predefined targets.

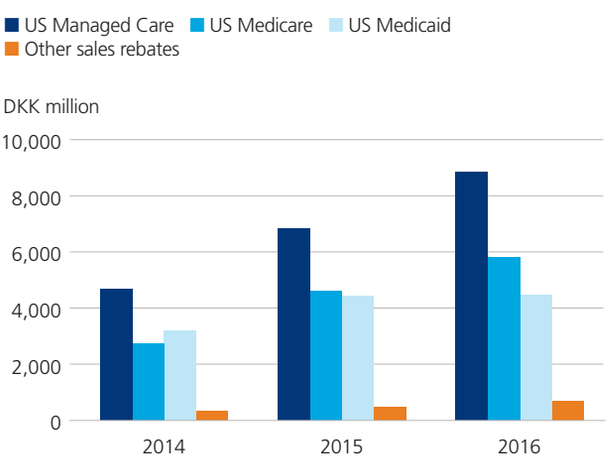
PROVISIONS FOR SALES REBATES

DKK million	2016	2015	2014
At the beginning of the year	16,508	11,002	7,950
Additional provisions, including increases to existing provisions	56,954	45,190	26,107
Amount used during the year	(53,217)	(40,958)	(23,876)
Adjustments, including unused amounts reversed during the year	(822)	–	(220)
Effect of exchange rate adjustment	548	1,274	1,041
At the end of the year	**19,971**	16,508	11,002

Unsettled rebates are recognised as Provisions when the timing or amount is uncertain. Where absolute amounts are known, the rebates are recognised as Other liabilities. Wholesaler charge-backs are netted against trade receivable balances. Hence, provisions for sales rebates include US Managed Care, Medicare, Medicaid and other minor rebate types, as well as rebates in Canada.

In 2016 the Centers for Medicare & Medicaid Services (CMS) in the USA published its final rule implementing Affordable Care Act including changes to reimbursement under the Medicaid programme impacting the adjustment for prior years provision.

PROVISIONS FOR SALES REBATES



2.2 SEGMENT INFORMATION

Accounting policies

Operating segments are reported in a manner consistent with the internal reporting provided to Executive Management and the Board of Directors.

We consider Executive Management to be the operating decision-making body, as all significant decisions regarding business development and direction are taken in that forum.

Business segments

Novo Nordisk operates in two business segments based on therapies: Diabetes and obesity care and Biopharmaceuticals.

The Diabetes and obesity care business segment includes research, development, manufacturing and marketing of products within the areas of insulin, GLP-1 and related delivery systems, oral antidiabetic products (OAD) and obesity.

The Biopharmaceuticals business segment includes research, development, manufacturing and marketing of products within the areas of haemophilia, growth hormone therapy and hormone replacement therapy.

Segment performance is evaluated on the basis of operating profit consistent with the Consolidated financial statements. Financial income and expenses and income taxes are managed at Group level and are not allocated to business segments. Further, non-recurring income from the partial divestment of NNIT A/S in 2015 was not allocated to segments.

There are no sales or other transactions between the business segments. Costs have been split between business segments according to a specific allocation with the addition of a minor number of corporate overhead costs allocated systematically between the segments. Other operating income has been allocated to the two segments based on the same principle. Segment assets comprise the assets that are applied directly to the activities of the segment, including intangible assets, property, plant and equipment, other financial assets, inventories, trade receivables, and other receivables and prepayments.

No operating segments have been aggregated to form the reported business segments.

BUSINESS SEGMENTS

DKK million	**2016**	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Segment sales	Diabetes and obesity care			Biopharmaceuticals			**Total**		
New-generation insulin	4,459	1,438	658						
NovoRapid® / NovoLog®	19,945	20,720	17,449						
NovoMix® / NovoLog® Mix	10,482	11,144	9,871						
Levemir®	17,083	18,300	14,217						
Total modern insulin	47,510	50,164	41,537						
Human insulin	11,090	11,231	10,298						
Victoza®	20,046	18,027	13,426						
Other diabetes and obesity care	5,844	4,730	4,061						
– of which Saxenda®	*1,577*	*460*	–						
Diabetes and obesity care total sales	**88,949**	85,590	69,980						
Haemophilia				10,472	10,647	9,304			
Norditropin® (human growth hormone)				8,770	7,820	6,506			
Other biopharmaceuticals				3,589	3,870	3,016			
Biopharmaceuticals total sales				**22,831**	22,337	18,826			
Segment key figures									
Total net sales	88,949	85,590	69,980	22,831	22,337	18,826	111,780	107,927	88,806
Change in DKK (%)	3.9%	22.3%	6.9%	2.2%	18.6%	3.9%	3.6%	21.5%	6.3%
Change in local currencies (%)	6.0%	8.9%	8.8%	3.6%	6.3%	6.2%	5.5%	8.4%	8.3%
Cost of goods sold	14,337	13,725	12,482	2,846	2,463	2,080	17,183	16,188	14,562
Sales and distribution costs	24,387	24,926	20,373	3,990	3,386	2,850	28,377	28,312	23,223
Research and development costs	11,481	10,475	9,318	3,082	3,133	4,444	14,563	13,608	13,762
Administrative costs	3,128	3,051	2,790	834	806	747	3,962	3,857	3,537
Other operating income, net	486	488	516	251	618	254	737	1,106	770
Income from partial divestment of NNIT A/S (not allocated to segments)	–	–	–	–	–	–	–	2,376	–
Operating profit	**36,102**	33,901	25,533	**12,330**	13,167	8,959	**48,432**	49,444	34,492
Operating margin	40.6%	39.6%	36.5%	54.0%	58.9%	47.6%	43.3%	45.8%	38.8%
Depreciation, amortisation and impairment losses expensed	2,674	2,514	2,438	519	445	997	3,193	2,959	3,435
Additions to Intangible assets and Property, plant and equipment	6,144	4,991	3,245	2,123	1,415	1,066	8,267	6,406	4,311
Assets allocated to business segments	55,081	46,444	40,748	14,798	11,759	10,914	69,879	58,203	51,662
Non-allocated assets[1]							27,660	33,596	25,400
Total assets							**97,539**	91,799	77,062

1. The part of total assets that remains unallocated to either of the two business segments includes Investment in associated company, Deferred income tax assets, Other financial assets, Tax receivables, Marketable securities, Derivative financial instruments and Cash at bank and on hand.

2.2 SEGMENT INFORMATION (CONTINUED)

Geographical areas

In 2016, Novo Nordisk operated in five geographical regions:

- USA
- Europe: the EU, EFTA, Albania, Bosnia-Hercegovina, Macedonia, Serbia, Montenegro and Kosovo
- Region China: China, Hong Kong and Taiwan
- Pacific: Japan, South Korea, Canada, Australia and New Zealand
- International Operations: all other countries.

As of 1 January 2016, the geographical regions were changed to align with management structure. As such, the USA became a separate region, and Canada joined Japan and South Korea to form Region Pacific, together with Australia and New Zealand (previously included in International Operations). Comparative figures have been updated to reflect the new regional structure.

As of 1 January 2017, International Operations has been expanded to cover all territories except for the USA and Canada. It is organised in the following five regions: Europe; Latin America; Africa, Asia, Middle East & Oceania; Japan & Korea; and Region China.

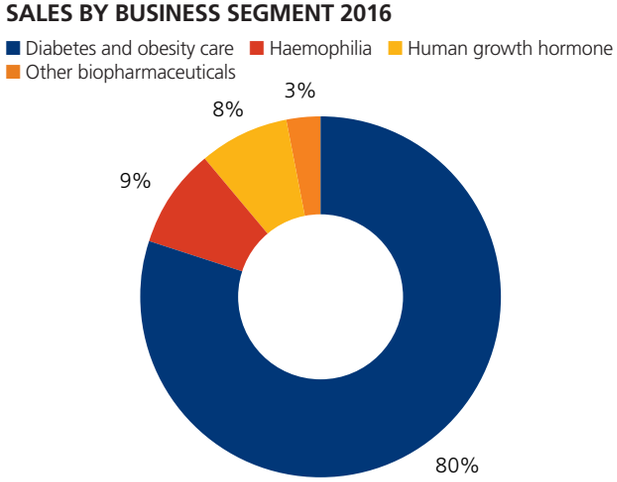
Sales are attributed to geographical regions according to the location of the customer. Allocation of property, plant and equipment, trade receivables, allowance for trade receivables and total assets is based on the location of the assets.

GEOGRAPHICAL AREAS

DKK million	**2016**	2015	2014	**2016**	2015	2014
	USA			Europe		
Sales by business segment:						
New-generation insulin	2,246	33	–	886	545	223
NovoRapid®/ NovoLog®	11,058	12,184	9,822	4,200	4,239	3,999
NovoMix®/ NovoLog® Mix	2,032	2,779	2,421	2,025	2,181	2,317
Levemir®	12,247	12,982	9,088	2,503	2,929	2,939
Total modern insulin	25,337	27,945	21,331	8,728	9,349	9,255
Human insulin	1,827	1,884	1,772	2,103	2,014	2,222
Victoza®	14,146	12,570	8,674	3,391	3,394	3,130
Other diabetes and obesity care	2,142	1,237	680	677	680	786
– of which Saxenda®	*1,366*	*452*	–	*28*	*1*	–
Diabetes and obesity care total	45,698	43,669	32,457	15,785	15,982	15,616
Haemophilia	4,710	5,086	4,348	2,520	2,405	2,189
Norditropin® (human growth hormone)	4,495	3,625	2,750	1,661	1,675	1,654
Other biopharmaceuticals	2,291	2,559	1,794	716	736	691
Biopharmaceuticals total	11,496	11,270	8,892	4,897	4,816	4,534
Total sales by business and geographical segment	**57,194**	54,939	41,349	**20,682**	20,798	20,150
Sales growth in local currencies[1]	4.0%	11.0%	11.5%	1.5%	1.6%	0.2%
Currency effect (local currency impact)	0.1%	21.9%	(0.0%)	(2.1%)	1.6%	0.2%
Total sales growth as reported	**4.1%**	32.9%	11.5%	**(0.6%)**	3.2%	0.4%
Property, plant and equipment	4,599	3,047	2,211	22,040	19,097	17,411
Trade receivables	10,426	6,456	4,175	3,304	3,203	3,314
Allowance for doubtful trade receivables	(41)	(25)	(20)	(166)	(139)	(194)
Total assets	18,349	12,594	8,842	63,407	64,590	53,974

1. Additional non-IFRS measure; please refer to p 96 for definition.

SALES BY BUSINESS SEGMENT 2016



GROWTH ANALYSIS

Local currencies	Growth	Share of growth
New-generation insulin	212%	51%
Modern insulin	(3%)	(25%)
Human insulin	2%	4%
Victoza®	12%	36%
Other diabetes and obesity care	26%	21%
Diabetes and obesity care	6%	87%
Haemophilia	0%	(1%)
Norditropin® (human growth hormone)	14%	18%
Other biopharmaceuticals	(6%)	(4%)
Biopharmaceuticals	4%	13%
Total sales	**6%**	**100%**

The country of domicile is Denmark, which is part of Region Europe. Denmark is immaterial to Novo Nordisk's activities in terms of geographical size and the operational business segments. 99.7% of total sales are realised outside Denmark.

Sales to external customers attributed to the USA are collectively the most material to the Group. The USA is the only country where sales contribute more than 10% of total sales.

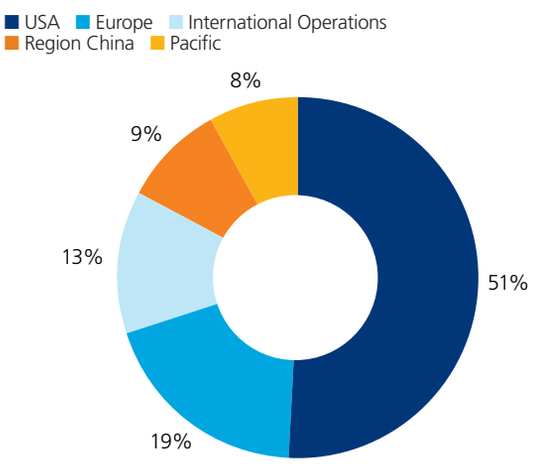
In 2016, Novo Nordisk had three major wholesalers distributing products, representing 21%, 13% and 12% respectively of total net sales (21%, 12% and 11% in 2015 and 18%, 10% and 11% in 2014). Net sales to the first two wholesalers are within both diabetes and biopharmaceuticals, whereas the third is only within diabetes.

Net sales will be impacted by exchange rate fluctuations, whereas Financial income and Financial expenses will be impacted by the corresponding results of hedging activities. Please refer to notes 4.2, 4.3 and 4.8 for more details on hedging.

For patent expiry in key markets by product, please refer to note 2.5 to the Consolidated social statement.

	International Operations			Region China			Pacific		
	2016	2015	2014	**2016**	2015	2014	**2016**	2015	2014
	558	365	118	–	–	–	769	495	317
	1,971	1,852	1,519	1,059	866	618	1,657	1,579	1,491
	2,183	2,227	1,858	3,363	3,036	2,338	879	921	937
	1,258	1,391	1,265	547	410	334	528	588	591
	5,412	5,470	4,642	4,969	4,312	3,290	3,064	3,088	3,019
	3,240	3,172	2,564	3,361	3,537	3,051	559	624	689
	1,141	926	790	255	213	171	1,113	924	661
	546	620	628	1,697	1,594	1,388	782	599	579
	70	–	–	–	–	–	*113*	*7*	–
	10,897	10,553	8,742	10,282	9,656	7,900	6,287	5,730	5,265
	1,936	1,998	1,694	158	195	171	1,148	963	902
	1,079	1,107	843	15	15	13	1,520	1,398	1,246
	138	153	128	3	5	4	441	417	399
	3,153	3,258	2,665	176	215	188	3,109	2,778	2,547
	14,050	13,811	11,407	**10,458**	9,871	8,088	**9,396**	8,508	7,812
	13.8%	16.7%	15.3%	11.5%	4.1%	13.3%	4.6%	4.6%	(0.3%)
	(12.1%)	4.4%	(10.3%)	(5.6%)	17.9%	(0.4%)	5.8%	4.3%	(6.8%)
	1.7%	21.1%	5.0%	**5.9%**	22.0%	12.9%	**10.4%**	8.9%	(7.1%)
	1,283	953	1,144	2,095	2,291	2,230	162	157	140
	4,126	3,539	3,390	1,773	1,541	1,538	605	746	624
	(1,011)	(997)	(776)	0	0	0	(5)	(5)	(5)
	8,343	7,251	7,199	5,697	5,603	5,629	1,743	1,761	1,418

SALES BY GEOGRAPHICAL AREA 2016



GROWTH ANALYSIS

Local currencies	Growth	Share of growth
USA	4%	37%
Europe	2%	5%
International Operations	14%	32%
Region China	12%	19%
Pacific	5%	7%
Total sales	**6%**	**100%**

2.3 RESEARCH AND DEVELOPMENT COSTS

Accounting policies

Novo Nordisk's research and development is focused on therapeutic proteins within the class of insulins and GLP-1s for diabetes treatment, blood-clotting factors for haemophilia and human growth hormone for growth deficiency disorders, as well as proteins for weight management. The research activities utilise biotechnological methods based on genetic engineering, advanced protein chemistry and protein engineering. These methods have played a key role in the development of the production technology used to manufacture insulin, GLP-1, recombinant blood-clotting factors, human growth hormone and glucagon.

In line with industry practice, Novo Nordisk expenses all internal research costs. Internal development costs are also expensed as incurred, as these do not qualify for capitalisation as intangible assets until marketing approval by a regulatory authority is obtained or highly probable, due to regulatory and other uncertainties inherent in the development of new products.

Research and development activities are carried out by Novo Nordisk's research and development centres, mainly in Denmark, USA and China, while research and development trials are carried out all over the world. Novo Nordisk also enters into partnerships and licence agreements.

Research and development costs primarily comprise employee costs, internal and external costs related to execution of studies, including manufacturing costs, facility costs of the research centres, and amortisation, depreciation and impairment losses related to intangible assets and property, plant and equipment used in the research and development activities.

A very limited part of the research and development activities is recognised outside Research and development costs:

- Up-front payments and milestones paid to partnerships prior to or upon regulatory approval are capitalised as intangible assets and amortised as Cost of goods sold over the useful life
- Royalty expenses paid to partnerships after regulatory approval are expensed as Cost of goods sold
- Royalty income received from partnerships is recognised as part of Other operating income, net
- Contractual research and development obligations to be paid in the future are disclosed separately as Commitments in note 5.3.

RESEARCH AND DEVELOPMENT COST BY BUSINESS SEGMENT (NOTE 2.2)

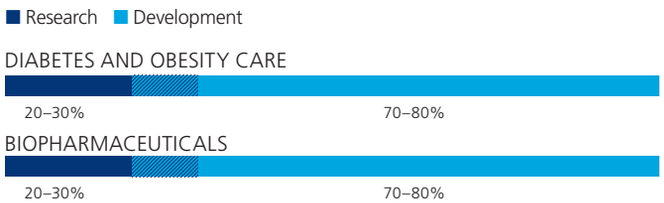
DKK million	2016	2015	2014
Diabetes and obesity care	11,481	10,475	9,318
Biopharmaceuticals	3,082	3,133	4,444
Total	**14,563**	13,608	13,762

RESEARCH AND DEVELOPMENT COSTS

DKK million	2016	2015	2014
Internal and external research and development costs	7,494	7,352	7,646
Employee costs (note 2.4)	6,149	5,584	5,200
Amortisation and impairment losses, intangible assets (note 3.1)	427	247	425
Depreciation and impairment losses, property, plant and equipment (note 3.2)	493	425	491
Total research and development costs	**14,563**	13,608	13,762
As percentage of sales	13.0%	12.6%	15.5%

For a review of the development in research and development costs, refer to p 7 and p 10, '2016 performance and 2017 outlook', which is not part of the audited financial statements.

RESEARCH AND DEVELOPMENT COSTS RATIO



In general, research comprises 20–30% and development 70–80% of research and development costs. The split between research and development will fluctuate in individual years depending on the composition of the clinical development portfolio.

In 2016, development within Diabetes and obesity care comprises approximately 72% (75% in 2015 and 81% in 2014), and development within Biopharmaceuticals comprises approximately 74% (69% in 2015 and 67% in 2014).

Research costs include the costs of the very early stages of the drug development cycle from the initial drug discovery until the drug is ready for administration to humans. The activities initially focus on identifying a single drug candidate with a profile that will support a decision to initiate development activities. Before selection of the final drug candidate, it is tested in animals to gather efficacy, toxicity and pharmacokinetic information.

Development costs are incurred from the start of phase 1, when the drug is administered to humans for the first time; these are the projects captured in the pipeline overview on p 20. The final product is being developed, and subsequent clinical trials (phase 2 and 3) are conducted to further test the drug in humans, using the results from these trials to attempt to obtain marketing authorisation, permitting Novo Nordisk to market and sell the developed products.

2.4 EMPLOYEE COSTS

Accounting policies

Wages, salaries, social security contributions, annual leave and sick leave, bonuses and non-monetary benefits are recognised in the year in which the associated companyd services are rendered by employees of Novo Nordisk. Where Novo Nordisk provides long-term employee benefits, the costs are accrued to match the rendering of the services by the employees concerned.

EMPLOYEE COSTS

DKK million	2016	2015	2014
Wages and salaries	24,651	23,289	21,306
Share-based payment costs (note 5.1)	368	442	371
Pensions – defined contribution plans	1,829	1,715	1,607
Pensions – defined benefit plans	145	154	142
Other social security contributions	1,853	1,783	1,617
Other employee costs	2,110	2,117	1,944
Total employee costs for the year	30,956	29,500	26,987
Employee costs capitalised as intangible assets and property, plant and equipment[1]	(1,258)	(957)	(866)
Change in employee costs capitalised as inventories	(127)	(191)	(206)
Total employee costs in the Income statement	**29,571**	28,352	25,915
Included in the Income statement:			
Cost of goods sold	7,841	7,239	6,224
Sales and distribution costs	12,447	12,231	10,334
Research and development costs	6,149	5,584	5,200
Administrative costs	2,721	2,658	2,426
Other operating income, net	413	640	1,731
Total employee costs in the Income statement	**29,571**	28,352	25,915

1. This reflects annual employee costs capitalised as intangible assets and property, plant and equipment that will subsequently be included in depreciation and impairment losses.

Average number of full-time employees[2]	41,993	40,342	40,164
Year-end number of full-time employees[2]	41,971	40,638	40,957

2. The number from 2014 includes approximately 2,400 full-time equivalent employees in NNIT A/S.

REMUNERATION TO EXECUTIVE MANAGEMENT AND BOARD OF DIRECTORS

DKK million	2016	2015	2014
Salary and cash bonus	77	89	71
Pension	20	22	18
Benefits[4]	10	7	2
Share-based incentive	11	44	27
Severance payments[1,4]	66	73	32
Executive Management in total[1,2,3]	**184**	235	150
Fee to Board of Directors	14	12	9
Total	**198**	247	159

1. Please refer to note 5.1 and 'Remuneration', pp 50–53, for further information.
2. As of 31 December 2016, president and CEO Lars Rebien Sørensen retired from Novo Nordisk. The 2016 remuneration for Lars Rebien Sørensen is included in the above table together with a severance payment of DKK 65.7 million. EVPs Jerzy Gruhn and Jesper Højland stepped down from the Executive Management of Novo Nordisk. The 2016 remuneration for Jerzy Gruhn and Jesper Høiland is included in the above table. EVP Kåre Schultz left Novo Nordisk as of 30 April 2015. The 2015 remuneration for Kåre Schultz is included in the above table together with a severance payment of DKK 72.7 million. In November 2014, EVP Lise Kingo decided to leave Novo Nordisk. The 2014 remuneration for Lise Kingo is included in the above table together with a severance payment of DKK 32.2 million.
3. Total remuneration for registered members of Executive Management amounts to DKK 138 million (DKK 108 million in 2015).
4. Benefits are included in Other employee costs, and severance payments are included in Wages and salaries in the table to the left.

2.5 OTHER OPERATING INCOME, NET

Accounting policies

Other operating income, net comprises licence income and income of a secondary nature in relation to the main activities of Novo Nordisk. Licence income is recognised on an accrual basis in accordance with the terms and substance of the relevant agreement. Operating profit from the wholly owned subsidiary NNE A/S, not related to Novo Nordisk's main activities, is recognised as Other operating income. Other operating income also includes income from sale of intellectual property rights.

Divested subsidiaries are recognised in the consolidated income statement until control is lost. Net gain or loss on divestments is determined as the difference between the sales proceeds and the carrying amount of net assets.

In March 2015, Novo Nordisk A/S disposed of 74.5% of its 100% interest in NNIT A/S. In total, DKK 2,376 million of non-recurring income from the partial divestment after cost of DKK 150 million was recorded as Other operating income in 2015. A total consideration of DKK 2,303 million was received and recorded in the cash flow statement.

2.6 INCOME TAXES AND DEFERRED INCOME TAXES

INCOME TAXES

Accounting policies

The tax expense for the period comprises current and deferred tax and interest on tax cases ongoing or settled during the year, including adjustments to previous years and changes in provision for uncertain tax positions. Tax is recognised in the Income statement, except to the extent that it relates to items recognised in Equity or Other comprehensive income.

Ongoing tax disputes, primarily related to transfer pricing cases, are included as part of Deferred tax assets, Tax receivables and Tax payables.

Management judgement regarding recognition of deferred income tax assets and provision for uncertain tax positions

Novo Nordisk is subject to income taxes around the world. Significant judgement and estimates are required in determining the worldwide accrual for income taxes, deferred income tax assets and liabilities, and provision for uncertain tax positions.

Novo Nordisk recognises deferred income tax assets if it is probable that sufficient taxable income will be available in the future against which the temporary differences and unused tax losses can be utilised. Management has considered future taxable income and used judgement in assessing whether deferred income tax assets should be recognised.

In the course of conducting business globally, tax and transfer pricing disputes with tax authorities may occur, and Management judgement is applied to assess the possible outcome of such disputes. The most probable outcome is used as the measurement method, and Novo Nordisk believes that the provision made for uncertain tax positions not yet settled with local tax authorities is adequate. However, the actual obligation may deviate and is dependent on the result of litigations and settlements with the relevant tax authorities.

Tax approach

Novo Nordisk's tax approach is to pursue a competitive tax level in a responsible way. This means paying tax in jurisdictions where business activity generates profits. As a general rule, Novo Nordisk subsidiaries pay corporate taxes in the countries in which they operate. 'Competitive tax level' implies achieving a tax level around the peer-group average. 'Responsible way' implies doing business in a way that meets expectations of a good corporate citizen. This means paying taxes where profits are earned in accordance with international transfer pricing rules. It means having a balanced tax risk profile and not engaging in tax-avoidance activities. Accordingly, a well-established subsidiary of Novo Nordisk will, in general, pay taxes in the country in which it operates.

Advance pricing agreements

To create certainty regarding tax payments, Novo Nordisk has applied for so-called advance pricing agreements (APAs) in key countries. An APA is an up-front agreement between the tax authorities in two (or more) countries, covering the pricing methodologies for relevant intercompany transactions, thereby determining the taxable income for the countries in question. An APA typically covers a future period of five tax years. Novo Nordisk's APA programme currently covers the USA and Japan.

INCOME TAXES EXPENSED

DKK million	2016	2015	2014
Current tax on profit for the year	8,981	9,648	8,562
Deferred tax on profit for the year	3,014	(1,130)	(748)
Tax on profit for the year	11,995	8,518	7,814
Adjustments recognised for current tax of prior years	(3,191)	3	(313)
Adjustments recognised for deferred tax of prior years	1,069	102	114
Income taxes in the Income statement	**9,873**	8,623	7,615
Current tax on Other comprehensive income for the year	(28)	–	99
Deferred tax on Other comprehensive income for the year	(296)	87	(1,076)
Tax on other comprehensive income for the year, (income)/expense	**(324)**	87	(977)

Adjustments recognised for prior years include adjustments caused by events that occurred in the current year related to current and deferred tax of prior years. Such adjustments predominantly arise from tax payments regarding tax disputes and reversal of associated tax liability recognised in prior years.

DKK million	2016	2015	2014
Computation of effective tax rate:			
Statutory corporate income tax rate in Denmark	22.0%	23.5%	24.5%
Deviation in foreign subsidiaries' tax rates compared with the Danish tax rate (net)	0.2%	(2.9%)	(1.9%)
Non-taxable income from partial divestment of NNIT A/S	–	(1.3%)	–
Non-taxable income less non-tax-deductible expenses (net)	0.1%	0.1%	(0.0%)
Others, including adjustment of prior years	(1.6%)	0.4%	(0.3%)
Effective tax rate	**20.7%**	19.8%	22.3%

The impact of the deviation in foreign subsidiaries' tax rates compared with the Danish tax rate is mainly driven by Swiss and US business activities.

2.6 INCOME TAXES AND DEFERRED INCOME TAXES (CONTINUED)

INCOME TAXES PAID

DKK million	2016	2015	2014
Income taxes paid in Denmark for current year	5,506	5,926	5,538
Income taxes paid outside Denmark for current year	2,645	3,040	2,282
Income taxes paid/ repayments relating to prior years	(5,252)	408	87
Total income taxes paid	**2,899**	9,374	7,907

The income taxes paid in 2016 relating to prior years include both repayments and adjustments arising from tax disputes primarily regarding transfer pricing.

DEFERRED INCOME TAXES

Accounting policies

Deferred income taxes arise from temporary differences between the accounting and taxable values of the individual consolidated companies and from realisable tax loss carry-forwards using the liability method. The tax value of tax loss carry-forwards is included in deferred tax assets to the extent that the tax losses and other tax assets are expected to be utilised in future taxable income. The deferred income taxes are measured according to current tax rules and at the tax rates expected to be in force on elimination of the temporary differences. In general, the Danish tax rules related to company dividends provide exemption from tax for most repatriated profits. No provision is made for income taxes that would be payable on the distribution of unremitted earnings unless a concrete distribution of earnings is planned. The potential withholding tax amounts to DKK 330 million for 2016 (DKK 288 million in 2015).

Tax on currency adjustments relating to internal profit on inventories is recognised in Other comprehensive income. The value of future tax deductions in relation to share programmes is recognised as deferred tax until the shares are paid out to the employees. Any difference between the estimated tax deduction and costs realised in the Income statement is charged to Equity.

DEVELOPMENT IN DEFERRED INCOME TAX ASSETS AND LIABILITIES

DKK million	Property, plant and equipment	Intangible assets	Inventories	Provisions and other liabilities	Other, including tax loss carry-forwards	Offset within countries	Total
2016							
Net deferred tax asset/(liability) at 1 January	(765)	(337)	3,593	2,559	1,750	–	6,800
Income/(charge) to the Income statement	(188)	(23)	(2,390)	(632)	(850)		(4,083)
Income/(charge) to Other comprehensive income	–	–	(27)	54	269		296
Income/(charge) to Equity[1]	–	–	–	–	(355)		(355)
Effect of exchange rate adjustment	(13)	1	–	24	–		12
Net deferred tax asset/(liability) at 31 December	(966)	(359)	1,176	2,005	814	–	**2,670**
Classified as follows:							
Deferred tax asset at 31 December	183	96	2,400	2,081	930	(3,007)	2,683
Deferred tax liability at 31 December	(1,149)	(455)	(1,224)	(76)	(116)	3,007	(13)

1. Deferred tax related to value adjustment of restricted stock units. In addition, DKK 440 million related to current tax has also been charged to Equity. The net charge to Equity is DKK 85 million.

2015							
Net deferred tax asset/(liability) at 1 January	(715)	15	2,668	2,053	1,371	–	5,392
Income/(charge) to the Income statement	(18)	(368)	689	362	363		1,028
Income/(charge) to Other comprehensive income	–	–	236	8	(331)		(87)
Income/(charge) to Equity	–	–	–	–	356		356
Effect of exchange rate adjustment	(32)	16	–	136	(9)		111
Net deferred tax asset/(liability) at 31 December	(765)	(337)	3,593	2,559	1,750	–	6,800
Classified as follows:							
Deferred tax asset at 31 December	219	186	4,650	2,566	1,897	(2,712)	6,806
Deferred tax liability at 31 December	(984)	(523)	(1,057)	(7)	(147)	2,712	(6)

SPECIFICATION OF TAX LOSS CARRY-FORWARDS AT 31 DECEMBER

DKK million	2016	2015
Recognised deferred tax loss carry-forwards	39	34
Unrecognised tax loss carry-forwards	235	243
Classified as follows:		
Expiry within one year	19	–
Expiry within two to five years	–	7
Expiry after more than five years	216	236

SECTION 3 OPERATING ASSETS AND LIABILITIES

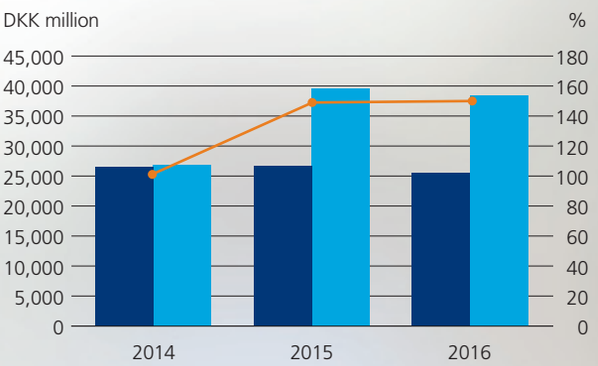
This section presents details on the operating assets that form the basis for the activities of Novo Nordisk, and related liabilities. These net assets impact Novo Nordisk's long-term target for 'Operating profit after tax to net operating assets' (OPAT/NOA); for a definition please refer to p 96.

For 2016, OPAT/NOA amounts to 150%, representing an increase of more than 70 percentage points over the last five years. The increase is explained by the low level of acquired intangible assets and a stable operating asset base despite significant business growth. The fact that Novo Nordisk, in line with industry practice, does not capitalise internal development costs also impacts OPAT/NOA. The overall approach to managing operating assets is to retain assets for research, development and production activities under the company's own control, and, generally, to lease non-core assets related to administration and distribution. This is a key factor in maintaining high quality in the company's products. Furthermore, being able at all times to deliver products to customers is a key priority; consequently, the total production capacity reflects this priority, and the inventory level includes a level of safety stock.

Impact of rebates in the USA

A significant factor in the development of net operating assets relates to the provision for sales rebates in the USA, presented as Provisions under current liabilities in the Balance sheet. The increase in 2016 reflects the combined increase in the Managed care and Medicare Part D rebates and is related to contract enhancements and price protection. This is countered by the effect of faster collection from pharmacy benefit managers and authorities.

DEVELOPMENT IN OPERATING PROFIT AFTER TAX TO NET OPERATING ASSETS



3.1 INTANGIBLE ASSETS

Accounting policies

Patents and licences, including acquired patents and licences for ongoing research and development projects, are carried at historical cost less accumulated amortisation and any impairment loss. Amortisation is based on the straight-line method over the estimated useful life, which is the shorter of the legal duration and the economic useful life, not exceeding 15 years. The amortisation of patents and licences begins after regulatory approval has been obtained.

Internal development of computer software and other directly attributable development costs related to major IT projects for internal use are recognised as intangible assets if the recognition criteria are met, for example a significant business system where the expenditure leads to the creation of a durable asset. Amortisation is based on the straight-line method over the estimated useful life of 3–15 years. The amortisation begins when the asset is in the location and condition necessary for it to be capable of operating in the manner intended by Management.

Research and development projects
Internal research costs are charged in full to the consolidated income statement in the period in which they are incurred. Consistent with industry practice, internal development costs are also expensed until regulatory approval is obtained or highly probable; please refer to note 2.3.

For acquired ongoing research and development projects, the probability effect is reflected in the cost of the asset, and the probability recognition criteria are therefore always considered satisfied. As the cost of acquired ongoing research and development projects can often be measured reliably, these projects fulfil the capitalisation criteria as intangible assets on acquisition. However, further internal development costs subsequent to acquisition are treated in the same way as other internal development costs.

Impairment of assets
Intangible assets with an indefinite useful life and intangible assets not yet available for use are not subject to amortisation but are tested annually for impairment, irrespective of whether there is any indication that they may be impaired.

Assets that are subject to amortisation, such as intangible assets in use or with a definite useful life, and other non-current assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Factors considered material that could trigger an impairment test include the following:

- Development of a competing drug
- Changes in the legal framework covering patents, rights and licences
- Advances in medicine and/or technology that affect the medical treatments
- Lower-than-predicted sales
- Adverse impact on reputation and/or brand names
- Changes in the economic lives of similar assets
- Relationship to other intangible assets or property, plant and equipment
- Changes or anticipated changes in participation rates or reimbursement policies.

If the carrying amount of intangible assets exceeds the recoverable amount based on the existence of one or more of the above indicators of impairment, any impairment is measured based on discounted projected cash flows. Impairments are reviewed at each reporting date for possible reversal.

3.1 INTANGIBLE ASSETS (CONTINUED)

INTANGIBLE ASSETS

DKK million	2016	2015
Patents and licences	1,591	1,139
Ongoing and developed software	1,123	1,019
Total	**2,714**	2,158

Additions to intangible assets amounts to DKK 1,199 million related to research and development projects within biopharmaceuticals (DKK 1,182 million in 2015 research and development projects within diabetes and obesity care).

In 2016, an impairment loss of DKK 416 million (DKK 243 million in 2015) related to patents and licences was recognised.

Intangible assets not yet in use amount to DKK 1,247 million (DKK 1,261 million in 2015), primarily patents and licences in relation to research and development projects. Impairment tests in 2016 and 2015 of patents and licences not yet in use are based on Management's projections and anticipated net present value of estimated future cash flows from marketable products. Management has used a pre-tax discount rate (WACC) of 7% based on the risk inherent in the related activity's current business model and industry comparisons. Terminal values used are based on the expected life of products, forecasted life cycle and cash flow over that period, and the useful life of the underlying assets.

AMORTISATION AND IMPAIRMENT LOSSES

DKK million	2016	2015
Cost of goods sold	186	127
Sales and distribution costs	11	11
Research and development costs	427	247
Administrative expenses	3	0
Other operating income, net	8	7
Total amortisation and impairment losses	**635**	392

3.2 PROPERTY, PLANT AND EQUIPMENT

Accounting policies

Property, plant and equipment is measured at historical cost less accumulated depreciation and any impairment loss. The cost of self-constructed assets includes costs directly and indirectly attributable to the construction of the assets. Subsequent cost is included in the asset's carrying amount or recognised as a separate asset only when it is probable that future economic benefits associated with the item will flow to Novo Nordisk and the cost of the item can be measured reliably. In general, construction of major investments is self-financed and thus no interest on loans is capitalised as part of the cost. Depreciation is based on the straight-line method over the estimated useful lives of the assets:

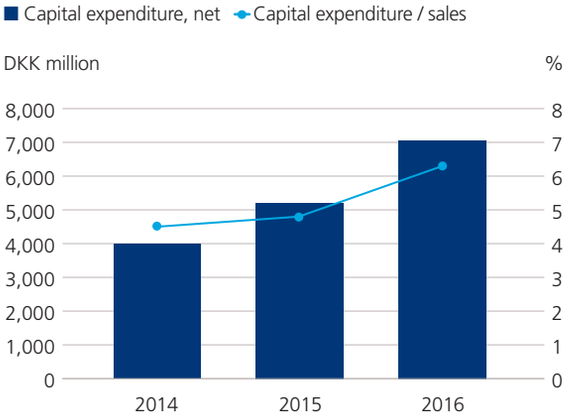
- Buildings: 12–50 years
- Plant and machinery: 5–16 years
- Other equipment: 3–10 years
- Land: not depreciated.

The depreciation commences when the asset is available for use, in other words when it is in the location and condition necessary for it to be capable of operating in the manner intended by Management.

The assets' residual values and useful lives are reviewed and adjusted, if appropriate, at the end of each reporting period. If the asset's carrying amount is higher than its estimated recoverable amount, it is written down to the recoverable amount; please refer to note 3.1 for a description of impairment of assets. Gains and losses on disposals are determined by comparing the proceeds with the carrying amount, and are recognised in the Income statement.

Plant and equipment with no alternative use developed as part of a research and development project is expensed. However, plant and equipment with an alternative use or used for general research and development purposes is capitalised and depreciated over its estimated useful life as research and development costs.

DEVELOPMENT IN CAPITAL EXPENDITURE



Capital expenditure in 2016 was primarily related to investments in new production facilities for active pharmaceutical ingredients for diabetes care, new diabetes care filling capacity, expansion of the manufacturing capacity for biopharmaceutical products and the construction of new research facilities.

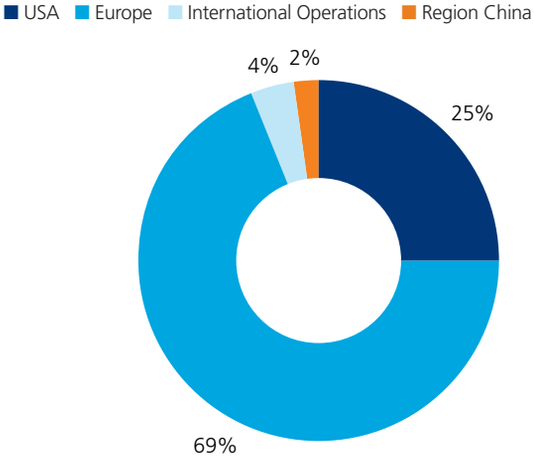
In August 2014, Novo Nordisk acquired a production plant in New Hampshire, USA. The ambition is that the new facility will increase production capacity for active pharmaceutical ingredients for the biopharmaceuticals portfolio, and it is intended to be operational in 2018.

In May 2015, Novo Nordisk initiated the construction of a new facility in Kalundborg, Denmark, for producing active pharmaceutical ingredients for NovoSeven® and future products for treating haemophilia. The facility is intended to be operational by the end of 2020.

In August 2015, Novo Nordisk announced the intention to construct new facilities in Clayton, USA, and Måløv, Denmark. The facilities in Clayton will produce active pharmaceutical ingredients, and the facility in Måløv will be for tableting and packaging of oral products. The facilities are intended to be operational during 2020.

In November 2015, Novo Nordisk initiated the construction of new insulin facility in Hillerød, Denmark. The ambition is that the facility will serve as a backup production facility for the US market and act as a launch site for new injectable diabetes products. The facility is intended to be operational during 2019.

ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT BY GEOGRAPHICAL AREA 2016



3.2 PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

PROPERTY, PLANT AND EQUIPMENT

DKK million	Land and buildings	Plant and machinery	Other equipment	Assets in course of construction	Total
2016					
Cost at the beginning of the year	18,003	22,035	3,516	7,616	51,170
Additions during the year	1,434	280	433	4,921	7,068
Disposals during the year	(196)	(429)	(111)	–	(736)
Transfer from/(to) other items	738	1,069	243	(2,050)	0
Effect of exchange rate adjustment	211	210	49	52	522
Cost at the end of the year	20,190	23,165	4,130	10,539	58,024
Depreciation and impairment losses at the beginning of the year	7,448	15,900	2,277	–	25,625
Depreciation for the year	786	1,342	304	–	2,432
Impairment losses for the year	11	37	78	–	126
Depreciation and impairment losses reversed on disposals during the year	(174)	(392)	(104)	–	(670)
Effect of exchange rate adjustment	111	192	29	–	332
Depreciation and impairment losses at the end of the year	8,182	17,079	2,584	–	27,845
Carrying amount at the end of the year	12,008	6,086	1,546	10,539	**30,179**
2015					
Cost at the beginning of the year	17,391	20,410	3,882	5,801	47,484
Additions during the year	334	456	222	4,212	5,224
Disposals during the year	(159)	(366)	(228)	–	(753)
Disposals related to partial divestment of NNIT A/S	(188)	(2)	(657)	–	(847)
Transfer from/(to) other items	658	1,565	264	(2,487)	0
Effect of exchange rate adjustment	(33)	(28)	33	90	62
Cost at the end of the year	18,003	22,035	3,516	7,616	51,170
Depreciation and impairment losses at the beginning of the year	6,933	14,910	2,505	–	24,348
Depreciation for the year	761	1,381	328	–	2,470
Impairment losses for the year	8	65	24	–	97
Depreciation and impairment losses reversed on disposals during the year	(140)	(332)	(215)	–	(687)
Depreciation reversed related to partial divestment of NNIT A/S	(61)	(2)	(387)	–	(450)
Effect of exchange rate adjustment	(53)	(122)	22	–	(153)
Depreciation and impairment losses at the end of the year	7,448	15,900	2,277	–	25,625
Carrying amount at the end of the year	10,555	6,135	1,239	7,616	25,545

DEPRECIATION AND IMPAIRMENT LOSSES

DKK million	2016	2015
Cost of goods sold	1,952	2,008
Sales and distribution costs	51	54
Research and development costs	493	425
Administrative costs	57	53
Other operating income, net	5	27
Total depreciation and impairment losses	**2,558**	2,567

3.3 INVENTORIES

Accounting policies

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out method. Cost comprises direct production costs such as raw materials, consumables and labour as well as indirect production costs. Production costs for work in progress and finished goods include indirect production costs such as employee costs, depreciation, maintenance etc.

If the expected sales price less completion costs to execute sales (net realisable value) is lower than the carrying amount, a write-down is recognised for the amount by which the carrying amount exceeds its net realisable value.

Inventory manufactured prior to regulatory approval (pre-launch inventory) is capitalised but immediately provided for, until there is a high probability of regulatory approval for the product. Before that point, a write-down is made against the carrying amount of inventory at its recoverable amount and recorded as research and development costs. Once there is a high probability of regulatory approval being obtained, the write-down recorded is reversed, up to no more than the original cost.

Key accounting estimate of indirect production costs capitalised

Indirect production costs account for 50% of the net inventory value, reflecting a lengthy production process compared with low direct raw material costs. The production of both Diabetes and obesity care and Biopharmaceutical products is highly complex from fermentation to purification and formulation, including quality control of all production processes. Furthermore, the process is very sensitive to manufacturing conditions. These factors all influence the parameters for capitalisation of indirect production costs at Novo Nordisk and the full cost of the products. Indirect production costs are measured using a standard cost method, which is reviewed regularly to ensure relevant measures of capacity utilisation, production lead time, cost base and other relevant factors, hence inventory is valued at actual cost. When calculating total inventory, Management must make certain judgements about cost of production, standard cost variances and idle capacity in estimating indirect production costs for capitalisation. Changes in the parameters for calculation of indirect production costs could have an impact on the gross margin and the overall valuation of inventories.

INVENTORIES

DKK million	2016	2015
Raw materials	2,285	2,020
Work in progress	9,379	8,549
Finished goods	4,035	3,608
Total inventories (gross)	15,699	14,177
Inventory write-downs at year-end	1,358	1,419
Total inventories (net)	**14,341**	12,758
Indirect production costs included in work in progress and finished goods	7,103	6,436
Share of total inventories (net)	50%	50%

MOVEMENTS IN INVENTORY WRITE-DOWNS

Inventory write-downs at the beginning of the year	1,419	1,165
Inventory write-downs during the year	861	978
Utilisation of inventory write-downs	(672)	(472)
Reversal of inventory write-downs	(250)	(252)
Inventory write-downs at the end of the year	**1,358**	1,419

All write-downs in both 2015 and 2016 relate to fully impaired inventory.

3.4 TRADE RECEIVABLES

Accounting policies

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less allowance for doubtful trade receivables.

The allowance is deducted from the carrying amount of Trade receivables and the amount of the loss is recognised in the Income statement under Sales and distribution costs. Subsequent recoveries of amounts previously written off are credited against Sales and distribution costs.

Key accounting estimate of allowance for doubtful trade receivables

Novo Nordisk's customer base comprises government agencies, wholesalers, retail pharmacies, managed care and other customers. Management makes allowance for doubtful trade receivables in anticipation of estimated losses resulting from the subsequent inability of customers to make required payments. If the financial circumstances of customers were to deteriorate, resulting in an impairment of their ability to make payments, an additional allowance could be required in future periods. When evaluating the adequacy of the allowance for doubtful trade receivables, Management analyses trade receivables and examines historical bad debt, customer concentrations, customer creditworthiness and payment history, current economic trends and changes in customer payment terms. Please refer to note 4.2 for a general description of credit risk.

Significant sales to countries within International Operations, and the fact that many of these countries have low credit ratings, mean that the relative impact of countries within International Operations on the allowance for doubtful trade receivables is increasing. Instability and sharp currency depreciation are impacting the political climate in Russia and Argentina, and Novo Nordisk is monitoring developments closely. Payment history as well as current economic conditions and indicators are taken into account in the valuation of trade receivables.

The increase in trade receivables compared with 2015 is mainly caused by the USA where payment terms for major customers have been extended across the industry. Novo Nordisk has used a trade receivable programme to partly reduce the impact.

Please refer to note 2.2 for a geographical split of trade receivables and allowance for doubtful trade receivables and note 4.2 for the trade receivable programme.

TRADE RECEIVABLES

DKK million	2016	2015
Trade receivables (gross)	21,457	16,651
Allowance for doubtful trade receivables	1,223	1,166
Trade receivables (net)	**20,234**	15,485
Trade receivables (net) equals a credit period of 66 days (52 days in 2015).		
Age analysis of trade receivables		
– Not yet due	18,980	14,605
– Overdue by between 1 and 179 days	1,079	880
– Overdue by between 180 and 360 days	175	0
Trade receivables with credit risk exposure	20,234	15,485

MOVEMENTS IN ALLOWANCE FOR DOUBTFUL TRADE RECEIVABLES

Carrying amount at the beginning of the year	1,166	995
Confirmed losses	(13)	(28)
Reversal of allowance for confirmed losses	(9)	(26)
Allowance for possible losses during the year	117	257
Effect of exchange rate adjustment	(38)	(32)
Allowance at the end of the year	**1,223**	1,166

3.5 RETIREMENT BENEFIT OBLIGATIONS

Accounting policies

Defined contribution plans
Novo Nordisk operates a number of defined contribution plans throughout the world. These plans are externally funded in entities that are legally separate from the Group. Novo Nordisk's contributions to the defined contribution plans are charged to the Income statement in the year to which they relate.

Defined benefit plans
In a few countries, Novo Nordisk still operates defined benefit plans. The defined benefit plans for Germany cover all employees employed before November 2003. Obligations relating to employees employed after 2003 are covered by a defined contribution plan. In Switzerland, the employee pension scheme is set up as a combined defined benefit and defined contribution plan, and is mandatory.

In Germany and Switzerland, the defined benefit plans are reimbursed by the international insurer Allianz regardless of the value of the plan assets. The risk related to the plan assets in these countries is therefore limited to counterparty risk against Allianz.

The plan in Japan covers all employees and is set up as a combined defined benefit and defined contribution plan. The plan in the USA is structured as a post-retirement healthcare plan covering all employees. From 2012, this plan was frozen such that it no longer credited future service or admitted new participants and a new defined contribution plan was established covering all employees in USA.

Recognition of defined benefit plans
The costs for the year for defined benefit plans are determined using the projected unit credit method. This reflects services rendered by employees 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 recognised immediately in the Income statement.

Pension plan assets are only recognised to the extent that Novo Nordisk is able to derive future economic benefits such as refunds from the plan or reductions of future contributions. Novo Nordisk manages the allocation and investment of pension plan assets with the purpose of meeting the long- term objectives. The main objectives are to meet present and future benefit obligations, provide sufficient liquidity to meet such payment requirements, and provide a total return that maximises the ratio of the plan assets to the plan liabilities by maximising return on the assets at an appropriate level of risk.

The Group's defined benefit plans are pension plans and medical plans and are usually funded by payments from Group companies and by employees to funds independent of Novo Nordisk. Where a plan is unfunded, a liability for the retirement benefit obligation is recognised in the Balance sheet. Costs recognised for retirement benefits are included in Cost of goods sold, Sales and distribution costs, Research and development costs, and Administrative costs.

The net obligation recognised in the Balance sheet is reported as non-current liabilities.

RETIREMENT BENEFIT OBLIGATIONS

DKK million	Germany	Switzerland	Japan	USA	Other	**2016 Total**	2015 Total
At the beginning of the year	763	344	370	433	358	2,268	1,975
Current service costs	27	37	31	24	38	157	148
Past service costs and settlements	–	(34)	–	–	(15)	(49)	(46)
Interest costs	18	3	4	18	8	51	47
Remeasurement (gains)/losses[1]	145	5	15	–	35	200	44
Plan participant contributions etc	–	11	–	–	5	16	25
Benefits paid to employees	(5)	(17)	(23)	(11)	(11)	(67)	(34)
Effect of exchange rate adjustment	(3)	1	23	14	–	35	109
At the end of the year	945	350	420	478	418	**2,611**[2]	2,268[2]

FAIR VALUE OF PLAN ASSETS

At the beginning of the year	472	223	296	–	91	1,082	944
Interest income	12	2	3	–	3	20	20
Settlements	–	–	–	–	(6)	(6)	(22)
Remeasurement gains/(losses)[1]	(3)	–	(2)	–	–	(5)	7
Employer contributions	23	26	26	11	16	102	96
Plan participant contributions etc	–	11	–	–	5	16	22
Benefits paid to employees	(5)	(17)	(23)	(11)	(11)	(67)	(34)
Effect of exchange rate adjustment	(2)	1	19	–	–	18	49
At the end of the year	497	246	319	–	98	**1,160**	1,082
Net retirement benefit obligations at the end of the year	448	104	101	478	320	**1,451**	1,186

1. Net remeasurement of DKK 205 million (DKK 37 million in 2015) primarily related to changes in financial assumptions, is included in Other comprehensive income.
2. The present value of partly funded retirement benefit obligations amounts to DKK 1,887 million (DKK 1,711 million in 2015). The present value of unfunded retirement benefit obligations amounts to DKK 724 million (DKK 557 million in 2015).

3.5 RETIREMENT BENEFIT OBLIGATIONS (CONTINUED)

Please refer to note 5.3 for a maturity analysis of the net retirement benefit obligation. Novo Nordisk does not expect the contributions over the next five years to differ significantly from current contributions.

Actuarial valuations are performed annually for all major defined benefit plans. Assumptions regarding future mortality are based on actuarial advice in accordance with published statistics and experience in each country. Other assumptions such as medical cost trend rate and inflation are also considered in the calculation.

Significant actuarial assumptions for the determination of the retirement benefit obligation (not considering plan assets) are discount rate and expected future remuneration increases. The sensitivity analysis below has been determined based on reasonably likely changes in the assumptions occurring at the end of the period.

DKK million	1 %-point increase	1 %-point decrease
Discount rate (decrease)/increase	(404)	509
Future remuneration (decrease)/increase	106	(94)

The sensitivities above consider the single change shown with the other assumptions assumed to be unchanged. In practice, changes in one assumption may be accompanied by offsetting changes in another assumption, although this is not always the case.

3.6 PROVISIONS AND CONTINGENT LIABILITIES

Accounting policies

Provisions for sales rebates and discounts granted to government agencies, wholesalers, retail pharmacies, managed care and other customers are recorded at the time the related revenues are recorded or when the incentives are offered. Provisions are calculated based on historical experience and the specific terms in the individual agreements. Unsettled rebates are recognised as Provisions when the timing or amount is uncertain. Where absolute amounts are known, the rebates are recognised as Other liabilities. Please refer to note 2.1 for further information on sales rebates and provisions.

Provisions for legal disputes are recognised where a legal or constructive obligation has been incurred as a result of past events and it is probable that there will be an outflow of resources that can be reliably estimated. In this case, Novo Nordisk arrives at an estimate based on an evaluation of the most likely outcome. Disputes for which no reliable estimate can be made are disclosed as contingent liabilities.

Novo Nordisk issues credit notes for expired goods as a part of normal business. Where there is historical experience or a reasonably accurate estimate of expected future returns can otherwise be made, a provision for estimated product returns is recorded. The provision is measured at gross sales value.

Provisions are measured at the present value of the anticipated expenditure for settlement of the legal or constructive obligation using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as a financial expense.

Key accounting estimate regarding ongoing legal disputes, litigations and investigations

Provisions for legal disputes consist of various types of provision linked to ongoing legal disputes. Management makes judgements about provisions and contingencies, including the probability of pending and potential future litigation outcomes, which, by their very nature, are dependent on inherently uncertain future events. When determining likely outcomes of litigations etc, Management considers the input of external counsels on each case, as well as known outcomes in case law.

Although Management believes that the total provisions for legal proceedings are adequate based on currently available information, there can be no assurance that there will not be any changes in facts or matters, or that any future lawsuits, claims, proceedings or investigations will not be material.

PROVISIONS

DKK million	Provisions for sales rebates	Provisions for legal disputes	Provisions for product returns	Other provisions[1]	2016 Total	2015 Total
At the beginning of the year	16,508	1,397	803	1,116	19,824	13,631
Additional provisions, including increases to existing provisions	56,954	963	323	448	58,688	46,618
Amount used during the year	(53,217)	(53)	(416)	(305)	(53,991)	(41,721)
Adjustments, including unused amounts reversed during the year	(822)	(428)	56	(97)	(1,291)	(56)
Effect of exchange rate adjustment	548	36	1	16	601	1,352
At the end of the year	19,971	1,915	767	1,178	**23,831**	19,824
Non-current liabilities	–	1,915	460	995	3,370	2,765
Current liabilities	19,971	–	307	183	20,461	17,059

1. Other provisions consist of various types of provision, including employee benefits such as jubilee benefits, company-owned life insurance etc. Assets related to company-owned life insurance are presented as part of Other financial assets.

For non-current liabilities, provisions for product returns will be utilised in 2017 and 2018 and other provisions will be utilised in 2017. In the case of provisions for legal disputes, the time of settlement cannot be determined.

3.6 PROVISIONS AND CONTINGENT LIABILITIES (CONTINUED)

Contingent liabilities

Novo Nordisk is currently involved in pending litigations, claims and investigations arising out of the normal conduct of its business. While provisions that Management deems to be reasonable and appropriate have been made for probable losses, there are uncertainties connected with these estimates. Novo Nordisk does not expect the pending litigations, claims and investigations, individually and in the aggregate, to have a material impact on Novo Nordisk's financial position, operating profit or cash flow in addition to the amounts accrued as provision for legal disputes.

Pending litigation against Novo Nordisk

As of 31 January 2017, Novo Nordisk, along with the majority of incretin-based product manufacturers in the USA, is a defendant in product liability lawsuits related to use of incretin-based medications. To date, 224 plaintiffs have named Novo Nordisk in product liability lawsuits, predominantly claiming damages for pancreatic cancer that allegedly developed as a result of using Victoza® and other GLP-1/DPP-IV products. 149 of the Novo Nordisk plaintiffs have also named other defendants in their lawsuits. Most Novo Nordisk plaintiffs have filed suit in California federal and state courts.

In November 2015, the California federal and state courts overseeing the vast majority of cases in the incretin-based products liability litigation issued an order granting the defendants' motion for summary judgment on federal pre-emption in all pancreatic cancer cases before those courts as of mid-Q4 2015. As a result of these rulings, 219 of the pancreatic cancer claims naming Novo Nordisk have been dismissed or stayed pending the outcome of an appeal. Currently, Novo Nordisk does not have any individual trials scheduled in 2017. Novo Nordisk does not expect the pending litigations to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

On 11 January 2017, a class action lawsuit was filed against Novo Nordisk, former CEO Lars Rebien Sørensen and CFO Jesper Brandgaard in the United States District Court for the District of New Jersey by the Lehigh County Employees' Retirement System on behalf of all purchasers of Novo Nordisk American Depository Receipts (ADRs) between April 2015 and October 2016. The lawsuit alleges that Novo Nordisk colluded with other insulin manufacturers to increase drug prices, artificially inflated its financial results and made materially misleading statements to potential investors. Subsequently, two other class action lawsuits were filed against Novo Nordisk, former CEO Lars Rebien Sørensen and CFO Jesper Brandgaard, in the same court. These lawsuits contain broadly similar allegations as the lawsuit filed on 11 January 2017. Novo Nordisk does not expect the litigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

On 30 January 2017, a class action lawsuit was filed against Novo Nordisk, Eli Lilly and Sanofi in the United States District Court for the District of Massachusetts on behalf of a U.S. class of purchasers of insulin products, who allege that their out-of-pocket costs for insulin products (Novolog® and Levemir® for Novo Nordisk) were based on artificially inflated benchmark prices. The lawsuit alleges that insulin manufacturers, including Novo Nordisk, negotiated significantly discounted prices with Pharmacy Benefit Managers at the expense of the class members, and concealed the existence of these rebates. Novo Nordisk does not expect the litigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

Pending claims against Novo Nordisk and investigations involving Novo Nordisk

In February 2011, the U.S. Attorney's Office for the District of Massachusetts served Novo Nordisk with a subpoena calling for the production of documents regarding potential civil and criminal offences relating to the company's marketing and promotional practices for the following products: NovoLog®, Levemir® and Victoza®. This matter is being conducted by the US Attorney for the District of Columbia. Novo Nordisk continues to cooperate with the US Attorney in this investigation. Novo Nordisk does not expect the investigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

In November 2014 and March 2016, the Washington State Attorney General's Office served Novo Nordisk with two Civil Investigative Demands calling for the production of documents and information regarding Novo Nordisk's haemophilia-related patient support programme, SevenSECURE®, as well as information relating to the marketing and promotion of NovoSeven®RT. Novo Nordisk continues to cooperate with the Washington State Attorney in this investigation. Novo Nordisk does not expect the investigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

In March 2016, the United States Department of Justice ('DOJ') served Novo Nordisk with a Civil Investigative Demand calling for the production of documents and information regarding Novo Nordisk's haemophilia-related patient support programmes, as well as information relating to the marketing and promotion of NovoSeven® RT. The investigation is being conducted by DOJ in conjunction with the U.S. Attorney's Office for the Western District of Oklahoma. Novo Nordisk continues to cooperate with DOJ and the U.S. Attorneys' Office in this investigation. Novo Nordisk does not expect the investigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

In March 2016, the U.S. Attorney's Office for the Southern District of New York served Novo Nordisk with a Civil Investigative Demand calling for the production of documents and information regarding Novo Nordisk's contracts and business relationships with pharmacy benefits managers (PBMs) concerning NovoLog®, Novolin® and Levemir®. Novo Nordisk continues to cooperate with the U.S. Attorney's Office for the Southern District of New York in this investigation. Novo Nordisk does not expect the investigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

On 18 January 2017, the Minnesota State Attorney General's office served Novo Nordisk with a Civil Investigative Demand calling for the production of documents and information relating to pricing and trade practices for Novo Nordisk's long acting insulin products, including Levemir® and Tresiba®, from 1 January 2008 until now. Novo Nordisk is cooperating with the Minnesota Attorney General in this investigation. Novo Nordisk does not expect the investigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

In addition to the above, the Novo Nordisk Group is engaged in certain litigation proceedings and various ongoing audits and investigations. In the opinion of Management, neither settlement or continuation of such proceedings nor such pending audits and investigations are expected to have a material effect on Novo Nordisk's financial position, operating profit or cash flow.

3.7 OTHER LIABILITIES

OTHER LIABILITIES

DKK million	2016	2015
Employee costs payable	5,068	4,545
Accruals	4,911	4,285
Sales rebates payable	1,718	1,555
VAT and duties payable	1,072	896
Payables regarding clinical trials	324	532
Amount owed to associated company	245	259
Other payables	843	583
Total other liabilities	**14,181**	12,655

SECTION 4 CAPITAL STRUCTURE AND FINANCING ITEMS

This section provides an insight into Novo Nordisk's capital structure, earnings per share, free cash flow and financing items. The free cash flow impacts Novo Nordisk's long-term target for 'Cash to earnings (three-year average)'. Cash to earnings is defined as 'free cash flow as a percentage of net profit'. Free cash flow is the cash amount generated that is available for future investments in Novo Nordisk and distribution to shareholders without consuming prior years' cash creation retained in the company.

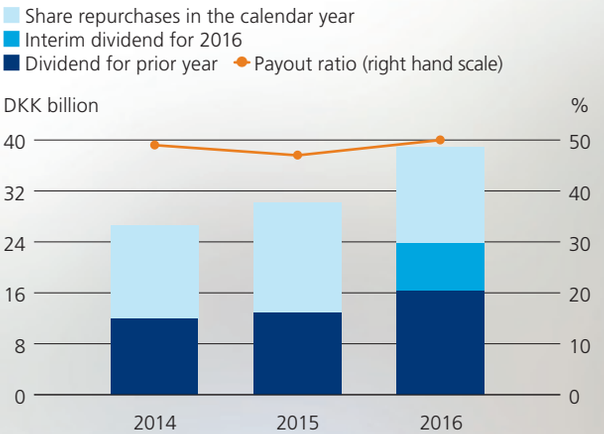
Novo Nordisk has a low debt-to-equity ratio reflecting growth based on limited debt financing. Further information on the company's capital structure can be found in 'Shares and capital structure' on pp 44–45.

Management asseses that the main financial risk is foreign exchange exposure, where Novo Nordisk aims to reduce the short-term impact from movements in key currencies by hedging future cash flows. Notes 4.2 and 4.3 include more information in this respect.

Cash distribution to shareholders

In August 2016, Novo Nordisk introduced an interim dividend resulting in a higher cash payment in 2016. The net cash distribution to shareholders in the form of dividends and share repurchases amounts to DKK 38.9 billion, compared with free cash flow of DKK 40.0 billion. This is in line with the guiding principle of paying out excess capital to investors after funding organic growth and potential acquisitions.

CASH DISTRIBUTION TO SHAREHOLDERS



Dividends are allocated to the year of payment.

4.1 SHARE CAPITAL, DISTRIBUTION TO SHAREHOLDERS AND EARNINGS PER SHARE

SHARE CAPITAL

DKK million	A share capital	B share capital	Total share capital
Development in share capital:			
Share capital 2012	107	453	560
Cancelled in 2013	–	(10)	(10)
Cancelled in 2014	–	(20)	(20)
Cancelled in 2015	–	(10)	(10)
Share capital at the beginning of the year	107	413	520
Cancelled in 2016	–	(10)	(10)
Share capital at the end of the year	107	403	**510**

At the end of 2016, the share capital amounted to DKK 107 million in A share capital and DKK 403 million in B share capital (equal to 2,013 million B shares of DKK 0.20).

4.1 SHARE CAPITAL, DISTRIBUTION TO SHAREHOLDERS AND EARNINGS PER SHARE (CONTINUED)

TREASURY SHARES

Accounting policies

Treasury shares are deducted from the share capital on cancellation at their nominal value of DKK 0.20 per share. Differences between this amount and the amount paid to acquire or received for disposing of treasury shares are deducted directly in Equity.

	Market value DKK million	As % of share capital before cancellation	As % of share capital after cancellation	**2016** Number of B shares of DKK 0.20 (million)	2015 Number of B shares of DKK 0.20 (million)
Holding at the beginning of the year	20,862	2.0%		52	57
Cancellation of treasury shares	(19,995)	(1.9%)		(50)	(50)
Holding of treasury shares, adjusted for cancellation	867	0.1%	0.1%	2	7
Transfer regarding restricted stock units	(1,760)		(0.2%)	(4)	(1)
Purchase during the year	15,057		1.9%	48	48
Sale during the year	–		–	–	(2)
Value adjustment	(2,533)		–	–	–
Holding at the end of the year	11,631		1.8%	**46**	52

Treasury shares are primarily acquired to reduce the company's share capital. In addition, a limited part is used to finance Novo Nordisk's long-term share-based incentive programme (restricted stock units) and restricted stock units to employees.

Novo Nordisk's guiding principle is that any excess capital, after the funding of organic growth opportunities and potential acquisitions, should be returned to investors. Novo Nordisk applies a pharmaceutical industry payout ratio to dividend payments, which are complemented by share repurchase programmes.

The purchase of treasury shares during the year relates to the remaining part of the 2015 share repurchase programme totalling DKK 1.6 billion and the DKK 15 billion share repurchase programme of Novo Nordisk B shares for 2016, of which DKK 1.5 billion is outstanding at year-end. The programme ends on 31 January 2017. Transfer of treasury shares relates to the long-term share-based incentive programme and restricted stock units to employees.

The holding of treasury shares amounts to 45,667,252 shares of DKK 0.20 at year-end, corresponding to DKK 9 million of the share capital (52,168,703 shares and DKK 10 million of the share capital in 2015). At year-end, 4.6 million shares of the holding of treasury B shares are regarded as hedges for the long-term share-based incentive programme and restricted stock units to employees.

CASH DISTRIBUTION TO SHAREHOLDERS

DKK million	**2016**	2015	2014
Interim dividend for the year	7,600	–	–
Dividend for prior year	16,230	12,905	11,866
Share repurchases for the calendar year	15,057	17,196	14,667
Total	**38,887**	30,101	26,533

The total dividend for 2016 amounts to DKK 19,048 million (DKK 7.60 per share). At the end of 2016, final dividend of DKK 11,448 million (DKK 4.60 per share) is included in Retained earnings. The interim dividend of DKK 7,600 million (DKK 3.00 per share) was paid in August 2016. The declared dividend for 2015 included in Retained earnings was DKK 16,230 million (DKK 6.40 per share) which was paid in March 2016. No dividend is declared on treasury shares.

EARNINGS PER SHARE

Accounting policies

Earnings per share is presented as both basic and diluted earnings per share. Basic earnings per share is calculated as net profit divided by the average number of shares outstanding. Diluted earnings per share is calculated as net profit divided by the sum of average number of shares outstanding, including the dilutive effect of the outstanding joint share pool. Please refer to 'Financial definitions' on p 96 for a description of the calculation of the dilutive effect.

DKK million		**2016**	2015	2014
Net profit for the year		37,925	34,860	26,481
Average number of shares outstanding	in 1,000 shares	2,529,945	2,571,219	2,621,226
Dilutive effect of outstanding joint share pool[1]	in 1,000 shares	4,784	6,479	8,992
Average number of shares outstanding, including dilutive effect of outstanding joint share pool	in 1,000 shares	2,534,729	2,577,698	2,630,218
Basic earnings per share	DKK	**14.99**	13.56	10.10
Diluted earnings per share	DKK	**14.96**	13.52	10.07

1. For further information on the outstanding joint share pool, please refer to note 5.1.

4.2 FINANCIAL RISKS

Novo Nordisk has centralised management of the Group's financial risks. The overall objectives and policies for the company's financial risk management are outlined in an internal Treasury Policy, which is approved by the Board of Directors. The Treasury Policy consists of the Foreign Exchange Policy, the Investment Policy, the Financing Policy and the Policy regarding Credit Risk on Financial Counterparts, and includes a description of permitted use of financial instruments and risk limits.

Novo Nordisk only hedges commercial exposures and consequently does not enter into derivative transactions for trading or speculative purposes. Novo Nordisk uses a fully integrated Treasury Management System to manage all financial positions. All positions are marked-to-market based on real-time quotes, and risk is assessed using generally accepted standards.

Foreign exchange risk

Foreign exchange risk is the principal financial risk for Novo Nordisk and as such has a significant impact on the Income statement, Other comprehensive income, Balance sheet and Statement of cash flows.

The overall objective of foreign exchange risk management is to reduce the short-term negative impact of exchange rate fluctuations on earnings and cash flow, thereby increasing the predictability of the financial results.

The majority of Novo Nordisk's sales are in USD, EUR, CNY, JPY, GBP and CAD. The foreign exchange risk is most significant in USD, CNY and JPY, while the EUR exchange rate risk is regarded as low because of Denmark's fixed-rate policy towards EUR.

Novo Nordisk hedges existing assets and liabilities in key currencies as well as future expected cash flows up to a maximum of 24 months forward. Hedge accounting is applied to match the impact of the hedged item and the hedging instrument in the consolidated income statement. Management has chosen to classify the result of hedging activities as part of financial items.

During 2016, the hedging horizon varied between 9 and 14 months for USD, CNY, JPY, GBP and CAD. Currency hedging is based on expectations of future exchange rates and mainly uses foreign exchange forwards and foreign exchange options matching the due dates of the hedged items. Expected cash flows are continually assessed using historical inflows, budgets and monthly sales forecasts. Hedge effectiveness is assessed on a regular basis.

The financial contracts existing at year-end cover the expected future cash flow for the following number of months:

	2016	2015
USD	12 months	11 months
CNY[1]	9 months	11 months
JPY	14 months	12 months
GBP	12 months	12 months
CAD	11 months	11 months

1. Chinese yuan traded offshore (CNH) is used as a proxy when hedging Novo Nordisk's CNY currency exposure.

KEY CURRENCIES

Exchange rate DKK per 100	**2016**	2015	2014
USD			
Average	673	673	562
Year-end	706	683	612
Year-end change	3.4%	11.6%	13.1%
CNY			
Average	101	107	91
Year-end	102	105	99
Year-end change	(2.9%)	6.1%	11.2%
JPY			
Average	6.21	5.56	5.32
Year-end	6.03	5.67	5.12
Year-end change	6.3%	10.7%	(0.4%)
GBP			
Average	911	1,028	925
Year-end	869	1,011	952
Year-end change	(14.0%)	6.2%	6.7%
CAD			
Average	508	527	509
Year-end	524	492	527
Year-end change	6.5%	(6.6%)	4.4%

Foreign exchange sensitivity analysis:
A 5% increase/decrease in the following currencies would impact Novo Nordisk's operating profit as outlined in the table below:

DKK million	Estimated for **2017**	2016
USD	2,100	2,000
CNY	320	300
JPY	200	150
GBP	90	85
CAD	80	70

4.2 FINANCIAL RISKS (CONTINUED)

At year-end, a 5% increase/decrease in all other currencies versus EUR and DKK would affect the hedging instruments' impact on Other comprehensive income and the Income statement as outlined in the table below:

DKK million	5% increase in all other currencies against DKK and EUR	5% decrease in all other currencies against DKK and EUR
2016		
Other comprehensive income	(2,477)	2,478
Income statement	94	(89)
Total	**(2,383)**	**2,389**
2015		
Other comprehensive income	(2,135)	2,250
Income statement	74	(96)
Total	(2,061)	2,154

The foreign exchange sensitivity analysis comprises effects from the Group's cash, Trade receivables and Trade payables, current and non-current loans, current and non-current financial investments, foreign exchange forwards and foreign exchange options at year-end 2016. Anticipated currency transactions, investments and non-current assets are not included.

Interest rate risk

Changes in interest rates affect Novo Nordisk's financial instruments. At the end of 2016, a 1 percentage point increase in the interest rate level would, all else being equal, result in a decrease in the fair value of Novo Nordisk's financial instruments of DKK 3 million (a decrease in the fair value of DKK 22 million in 2015).

The financial instruments included in the sensitivity analysis consist of marketable securities and non-current loans. Foreign exchange forwards and foreign exchange options are not included because of the limited effect that a parallel shift in interest rates in all currencies would have on these instruments.

Liquidity risk

The liquidity risk is considered to be low, and Novo Nordisk has no debt financing. Novo Nordisk ensures the availability of the required liquidity through a combination of cash management, highly liquid investment portfolios and uncommitted as well as committed facilities. Novo Nordisk uses cash pools for optimisation and centralisation of cash management.

Credit risk

Credit risk arises from the possibility that transactional counterparties may default on their obligations, causing financial losses for the Group. Novo Nordisk considers its maximum credit risk on financial counterparties to be DKK 21,228 million (2015: DKK 20,769 million). In addition, Novo Nordisk considers its maximum credit risk on Trade receivables, Other receivables less prepayments and Other financial assets to be DKK 22,974 million (2015: DKK 18,202 million). Please refer to note 4.7 for details of the Group's total financial assets.

To manage credit risk on financial counterparties, Novo Nordisk only enters into derivative financial contracts and money market deposits with financial counterparties possessing a satisfactory long-term credit rating from two out of the three selected ratings agencies: Standard and Poor's, Moody's and Fitch. Furthermore, maximum credit lines defined for each counterparty diversify the overall counterparty risk. The credit risk on bonds is limited, as investments are made in highly liquid bonds with solid credit ratings. The table below shows Novo Nordisk's credit exposure on cash, fixed-income marketable securities and financial derivatives.

Credit exposure on Cash at bank and on hand, Marketable securities and Derivative financial instruments (market value)

DKK million	Cash at bank and on hand	Marketable securities[1]	Derivative financial instruments	**Total**
2016				
AAA-range		2,007		2,007
AA-range	12,442		309	12,751
A-range	5,971		220	6,191
BBB-range	83			83
Not rated or below BBB-range	194	2		196
Total	18,690	2,009	529	**21,228**
2015				
AAA-range		1,027		1,027
AA-range	6,797	2,513	133	9,443
A-range	9,959		171	10,130
BBB-range	101			101
Not rated or below BBB-range	66	2		68
Total	16,923	3,542	304	20,769

1. Net yield on the bond portfolio is –0.05% (–0.10% in 2015).

Novo Nordisk has no significant concentration of credit risk related to Trade receivables or Other receivables and prepayments, as the exposure is spread over a large number of counterparties and customers. Novo Nordisk continues to monitor the credit exposure in Region International Operations due to the increasing sales and low credit ratings of many countries in this region.

Trade receivable programmes

Novo Nordisk's subsidiaries in Japan and USA employ trade receivable programmes where trade receivables are sold on a full non-recourse term to optimise working capital.

At year-end, the Group had derecognised receivables without recourse having due dates after 31 December amounting to:

DKK million	**2016**	2015	2014
Japan	2,259	1,899	1,669
USA	2,754	945	0

In addition, full non-recourse off-balance sheet factoring arrangement programmes are occasionally applied by Novo Nordisk affiliates around the world, with limited impact on the Group's trade receivables.

Please refer to note 2.2 for the split of allowance for trade receivables by geographical segment.

4.3 DERIVATIVE FINANCIAL INSTRUMENTS

Accounting policies

Use of derivative financial instruments
The derivative financial instruments are used to manage the exposure to market risk. None of the derivatives are held for trading.

Novo Nordisk uses forward exchange contracts and currency options to hedge forecast transactions, assets and liabilities. The overall policy is to hedge approximately 75% of total currency exposure.

Currently, net investments in foreign subsidiaries are not hedged.

Initial recognition and measurement
On initiation of the contract, Novo Nordisk designates each derivative financial contract that qualifies for hedge accounting as one of:

- hedges of the fair value of a recognised asset or liability (fair value hedge)
- hedges of the fair value of a forecast financial transaction (cash flow hedge).

All contracts are initially recognised at fair value and subsequently remeasured at fair value at the end of the reporting period.

Gains and losses on currency options that do not meet the criteria for hedge accounting are recognised directly in the Income statement under Financial income or Financial expenses.

Fair value hedges
Value adjustments of fair value hedges are recognised in the Income statement along with any value adjustments of the hedged asset or liability that are attributable to the hedged risk.

Cash flow hedges
Value adjustments of the effective part of cash flow hedges are recognised directly in Other comprehensive income. The cumulative value adjustment of these contracts is transferred from Other comprehensive income to the Income statement under Financial income or Financial expenses when the hedged transaction is recognised in the Income statement. For options, this cumulative value adjustment is reflected in the value of the option.

Discontinuance of cash flow hedging
When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the Income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the Income statement under Financial income or Financial expenses.

Fair value determination
The fair value of derivative financial instruments is measured on the basis of quoted market prices of financial instruments traded in active markets. If an active market exists, the fair value is based on the most recently observed market price at the end of the reporting period.

If a financial instrument is quoted in a market that is not active, Novo Nordisk bases its valuation on the most recent transaction price. Adjustment is made for subsequent changes in market conditions, for instance by including transactions in similar financial instruments assumed to be motivated by normal business considerations.

If an active market does not exist, the fair value of standard and simple financial instruments, such as foreign exchange forward contracts, interest rate swaps, currency swaps and unlisted bonds, is measured according to generally accepted valuation techniques. Market-based parameters are used to measure the fair value.

HEDGING ACTIVITIES

DKK million	2016 Contract amount at year-end	2016 Positive fair value at year-end	2016 Negative fair value at year-end	2015 Contract amount at year-end	2015 Positive fair value at year-end	2015 Negative fair value at year-end
Forward contracts USD	36,579	16	2,081	34,279	85	819
Forward contracts CNH, JPY, GBP and other currencies	10,070	199	110	7,351	117	92
Forward contracts, cash flow hedges	46,649	215	2,191	41,630	202	911
Currency options USD	588	50	–	5,285	20	–
Currency options JPY	190	11	–	248	3	–
Currency options, cash flow hedges[1]	778	61	–	5,533	23	–
Forward contracts USD	9,953	223	300	1,891	42	400
Forward contracts CNH, JPY, GBP and other currencies	3,087	79	87	862	17	71
Forward contracts, fair value hedges	13,040	302	387	2,753	59	471
Time value of currency options (hedge accounting not applied)	–	2	–	–	43	–
Total hedging activities	**60,467**	**580**	**2,578**	49,916	327	1,382
Recognised in the Income statement		304	387		102	471
Recognised in Other comprehensive income[2]		276	2,191		225	911
Presented in the Balance sheet as:						
Derivative financial instruments (current assets/liabilities)		529	2,578		304	1,382
Cash at bank		51			23	

1. Includes expired currency options of DKK 51 million deferred for realisation in 2017.
2. Realisation in 2016 of previously deferred loss amounts to DKK 682 million, as the remaining DKK 4 million will not be realised until 2017. Furthermore, an additional loss of DKK 1,911 million as of 31 December 2016 has been deferred for realisation in 2017 and 2018.

4.3 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

The above financial contracts regarding cash flow hedging are expected to impact the Income statement within the periods shown below. The split is based on an estimate of when the cash flow hedges are expected to be reclassified to fair value hedges with the fair value then being transferred to Financial income or Financial expenses. The cash flow impact is an immediate consequence of the reclassification

	2016		2015	
DKK million	Positive fair value at year-end	Negative fair value at year-end	Positive fair value at year-end	Negative fair value at year-end
Expected timing of Income statement impact				
0–12 months	236	2,191	225	907
More than 12 months	40	–	–	4
Total cash flow hedges for which hedge accounting is applied	**276**	**2,191**	225	911

4.4 CASH AND CASH EQUIVALENTS, FINANCIAL RESOURCES AND FREE CASH FLOW

Accounting policies

The Statement of cash flows shows how income and changes in balance sheet items affect cash and cash equivalents, in other words the cash generated or used in the period.

Cash from operating activities converts income statement items from the accrual basis of accounting to cash basis. As such, starting with net profit, non-cash items are reversed and actual payments included. Further, the change in working capital is taken into account as this shows the development in money tied up in the balance sheet. Cash from investing activities shows payments related to the purchase and sale of Novo Nordisk's long-term investments. This includes fixed assets such as construction of new production sites, intangible assets such as patents and licences, and financial assets.

Cash and cash equivalents consist of cash offset by short-term bank loans. Financial resources consist of cash and cash equivalents, marketable securities with original maturity of less than three months and undrawn committed credit facilities expiring after more than one year. The Statement of cash flows is presented in accordance with the indirect method commencing with Net profit for the year. Cash flows in foreign currencies are translated to DKK at the average exchange rate for the respective year.

DKK million	2016	2015	2014
CASH AND CASH EQUIVALENTS			
Cash at bank and on hand (note 4.2)	18,690	16,923	14,396
Current debt (bank overdrafts)	(229)	(1,073)	(720)
Cash and cash equivalents at the end of the year	**18,461**	15,850	13,676
FINANCIAL RESOURCES			
Cash and cash equivalents	18,461	15,850	13,676
Marketable securities (note 4.7)	2,009	3,542	1,509
Undrawn committed credit facility[1]	8,178	8,209	8,188
Total financial resources	**28,648**	27,601	23,373

1. The undrawn committed credit facility in 2016 is a EUR 1,100 million facility (EUR 1,100 million in 2015 and EUR 1,100 million in 2014) committed by a portfolio of international banks. The facility matures in 2019.

FREE CASH FLOW

DKK million	2016	2015	2014
Net cash generated from operating activities	48,314	38,287	31,692
Net cash used in investing activities	(6,790)	(6,098)	(2,064)
Net purchase of marketable securities	(1,533)	2,033	(2,232)
Free cash flow[2]	**39,991**	34,222	27,396

2. Additional non-IFRS measure; please refer to p 96 for definition.

4.5 CHANGE IN WORKING CAPITAL

Accounting policies

Working capital is defined as current assets less current liabilities and measures the liquid assets Novo Nordisk has available for the business.

CHANGE IN WORKING CAPITAL

DKK million	2016	2015	2014
Inventories	(1,583)	(1,401)	(1,805)
Trade receivables	(4,749)	(2,444)	(2,134)
Other receivables and prepayments	(154)	493	(296)
Trade payables	1,084	(23)	858
Other liabilities	1,526	1,604	1,665
Adjustment for the partial divestment of NNIT A/S	–	(207)	–
Change in working capital before exchange rate adjustments	**(3,876)**	(1,978)	(1,712)
Exchange rate adjustments	168	(179)	(436)
Cash flow change in working capital	**(3,708)**	(2,157)	(2,148)

4.6 OTHER NON-CASH ITEMS

For the purpose of presenting the Statement of cash flows, non-cash items with effect on the Income statement must be reversed to identify the actual cash flow effect from the Income statement. The adjustments are specified as follows:

OTHER NON-CASH ITEMS

DKK million	2016	2015	2014
Reversals of non-cash income statement items			
Interest income and interest expenses, net (note 4.8)	13	11	(62)
Capital gain on investments etc (note 4.8)	(16)	(15)	(34)
Result of associated company (note 4.8)	(24)	(14)	–
Share-based payment costs (note 5.1)	368	442	371
Changes in non-cash balance sheet items			
Increase/(decrease) in provisions (note 3.6)	4,007	6,193	3,138
Increase/(decrease) in retirement benefit obligations (note 3.5)	265	155	343
Remeasurements of retirement benefit obligations (note 3.5)	(205)	(37)	(247)
Other adjustments			
Exchange rate adjustments on working capital	(168)	179	436
Other, primarily exchange rate adjustments	(358)	(1,006)	218
Total other non-cash items	**3,882**	5,908	4,163

4.7 FINANCIAL ASSETS AND LIABILITIES

Accounting policies

Depending on the purpose, Novo Nordisk classifies investments into the following categories:

- Available-for-sale financial assets
- Loans and receivables
- Financial assets at fair value through the Income statement (derivatives).

Management determines the classification of its investments on initial recognition and re-evaluates this at the end of every reporting period to the extent that such a classification is permitted and required.

Recognition and measurement
Purchases and sales of investments are recognised on the settlement date. Investments are initially recognised at fair value.

Available-for-sale financial assets and financial assets at fair value are subsequently carried at fair value. Loans and receivables are carried at amortised cost based on the effective interest method.

Fair value disclosures are made separately for each class of financial instruments at the end of the reporting period.

Disposal of investments
Investments are removed from the balance sheet when the rights to receive cash flows from the investments have expired or have been transferred, and Novo Nordisk has transferred substantially all the risks and rewards of ownership.

Available-for-sale financial assets
Available-for-sale financial assets consist of equity investments and marketable securities. Equity investments are included in Other financial assets unless Management intends to dispose of the investment within 12 months of the end of the reporting period. In that case, the current part is included in Other receivables and prepayments.

Unrealised gains and losses arising from changes in the fair value of financial assets classified as available for sale are recognised in Other comprehensive income. When financial assets classified as available for sale are sold or impaired, the accumulated fair value adjustments are included in the Income statement.

The fair values of quoted investments (including marketable securities) are based on current bid prices at the end of the reporting period. Financial assets for which no active market exists are carried at fair value based on a valuation methodology or at cost if no reliable valuation model can be applied.

Loans and receivables
Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. If collection is expected within one year (or in the normal operating cycle of the business if longer), they are classified as Current assets. If not, they are presented as Non-current assets.

Trade receivables and Other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for allowance. Provision for allowance is made for Trade receivables when there is objective evidence that Novo Nordisk will not be able to collect all amounts due according to the original terms of the receivables.

The provision for allowance is deducted from the carrying amount of Trade receivables, and the amount of the loss is recognised in the Income statement under Sales and distribution costs. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against Sales and distribution costs in the Income statement.

4.7 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

FINANCIAL ASSETS BY CATEGORY

DKK million	Available-for-sale financial assets at fair value	Financial assets measured at fair value through the Income statement	Loans and receivables	Cash and cash equivalents	**Total**
2016					
Other financial assets	699		689		1,388
Trade receivables (note 3.4)			20,234		20,234
Other receivables			2,411		2,411
– less prepayments and VAT receivables			(1,584)		(1,584)
Marketable securities (bonds) (note 4.2)	2,009				2,009
Derivative financial instruments (note 4.3)		529			529
Cash at bank and on hand (note 4.4)				18,690	18,690
Total financial assets at the end of the year by category[1]	2,708	529	21,750	18,690	**43,677**
Total financial assets at the end of the year by category, 2015	4,279	304	17,151	16,923	38,657

1. Financial assets are all due within one year except for DKK 72 million due in 2018.

FINANCIAL LIABILITIES BY CATEGORY

DKK million	Financial liabilities measured at fair value through the Income statement	Financial liabilities measured at amortised cost	**Total**
2016			
Current debt (note 4.4)		229	229
Trade payables		6,011	6,011
Other liabilities (note 3.7)		14,181	14,181
– less VAT and duties payable (note 3.7)		(1,072)	(1,072)
Derivative financial instruments (note 4.3)	2,578		2,578
Total financial liabilities at the end of the year by category[2]	2,578	19,349	**21,927**

2. All financial liabilities are due within one year except for DKK 79 million due in 2018.

2015			
Current debt (note 4.4)		1,073	1,073
Trade payables		4,927	4,927
Other liabilities (note 3.7)		12,655	12,655
– less VAT and duties payable (note 3.7)		(896)	(896)
Derivative financial instruments (note 4.3)	1,382		1,382
Total financial liabilities at the end of the year by category[3]	1,382	17,759	19,141

3. All financial liabilities are due within one year.

For a description of the credit quality of financial assets such as Trade receivables, Cash at bank and on hand, Marketable securities, Current debt and Derivative financial instruments, refer to notes 4.2 and 4.3.

FAIR VALUE MEASUREMENT HIERARCHY

DKK million	**2016**	2015
Active market data	2,675	4,279
Directly or indirectly observable market data	529	304
Not based on observable market data	33	–
Total financial assets at fair value	**3,237**	4,583
Active market data	–	–
Directly or indirectly observable market data	2,578	1,382
Not based on observable market data	–	–
Total financial liabilities at fair value	**2,578**	1,382

Financial assets and liabilities measured at fair value can be categorised using the fair value measurement hierarchy above. There have not been any transfers between the categories 'Active market data' and 'Directly or indirectly observable market data' during 2016 or 2015. There are no intangible assets or items of property, plant and equipment measured at fair value.

4.8 FINANCIAL INCOME AND EXPENSES

Accounting policies

As described in note 4.2, Management has chosen to classify the result of hedging activities as part of financial items in the Income statement. Financial items are primarily related to foreign exchange elements and are mainly impacted by the cumulative value adjustment of cash flow hedges transferred from Other comprehensive income to the Income statement when the hedged transaction is recognised in the Income statement. Further, value adjustments of fair value hedges are recognised in Financial income and Financial expenses along with any value adjustments of the hedged asset or liability that are attributable to the hedged risk. Finally, value adjustments of assets and liabilities in non-hedged currencies will impact Financial income and Financial expenses.

FINANCIAL INCOME

DKK million	**2016**	2015	2014
Interest income	52	56	101
Financial gain from currency options (net)	–	–	32
Capital gain on investments etc	16	15	34
Result of associated company	24	14	–
Total financial income	**92**	85	167

FINANCIAL EXPENSES

DKK million	**2016**	2015	2014
Interest expenses	65	67	39
Foreign exchange loss (net)[1]	335	504	288
Financial loss from forward contracts (net)	158	5,232	125
Financial loss from currency options (net)	83	162	–
Other financial expenses	85	81	111
Total financial expenses	**726**	6,046	563

1. Primarily related to trade receivables, other receivables and trade payables.

FINANCIAL IMPACT FROM FORWARD CONTRACTS AND CURRENCY OPTIONS, SPECIFIED

DKK million	**2016**	2015	2014
Forward contracts			
Income/(loss) transferred from Other comprehensive income	(705)	(2,237)	1,104
Value adjustment of transferred contracts	62	(3,212)	(1,160)
Unrealised fair value adjustments of forward contracts	(85)	(412)	(355)
Foreign exchange gain/loss on forward contracts	570	629	286
Financial income/(expense) from forward contracts	**(158)**	(5,232)	(125)
Currency options			
Realised income/(loss) transferred from Other comprehensive income	23	21	125
Value adjustment of transferred options	0	(12)	(12)
Foreign exchange gain/loss on currency options	(106)	(171)	(81)
Financial income/(expense) from currency options	**(83)**	(162)	32

SECTION 5 OTHER DISCLOSURES

This section provides details on notes that are statutory or by their nature of secondary importance for understanding the financial performance of Novo Nordisk. A list of subsidiaries in the Novo Nordisk Group is also included here.

5.1 SHARE-BASED PAYMENT SCHEMES

Accounting policies

Share-based compensation
Novo Nordisk operates equity-settled, share-based compensation plans. The fair value of the employee services received in exchange for the grant of shares is recognised as an expense and allocated over the vesting period.

The total amount to be expensed over the vesting period is determined by reference to the fair value of the shares granted, excluding the impact of any non-market vesting conditions. The fair value is fixed at the grant date, and adjusted for expected dividends during the vesting period. Non-market vesting conditions are included in assumptions about the number of shares that are expected to vest. At the end of each reporting period, Novo Nordisk revises its estimates of the number of shares expected to vest. Novo Nordisk recognises the impact of the revision of the original estimates, if any, in the Income statement and in a corresponding adjustment to Equity (change in proceeds) over the remaining vesting period. Adjustments relating to prior years are included in the Income statement in the year of adjustment.

SHARE-BASED PAYMENT

Expensed in the Income statement

DKK million	2016	2015	2014
Restricted stock units to employees	245	135	141
Long-term share-based incentive programme (Senior Management Board)[1, 2]	29	108	66
Long-term share-based incentive programme (management group below Senior Management Board)[3]	94	199	164
Share-based payment expensed in the Income statement	368	442	371

1. Expense for the year reflects the full value at launch of the programme (adjusted for expected dividend) for the year as vesting conditions are met.
2. The programme includes former members of Senior Management Board with a total value of DKK 3 million (DKK 16 million in 2015 and DKK 0 million in 2014).
3. Expense for the year reflects the value at launch (adjusted for expected dividend) of the last four programmes, amortised over four years.

Restricted stock units to employees

To commemorate the Group's net sales passing DKK 100 billion for the first time in 2015, all employees in the Company (excluding NNE A/S and Steno Diabetes Center A/S) as of January, 2016 were offered 50 restricted stock units. A restricted stock unit gives the holder the right to receive one Novo Nordisk B share free of charge in February 2019 subject to continued employment. The cost of the DKK 508 million programme is amortised over the vesting period.

On 1 April 2016, restricted stock units from the 90th anniversary programme from 2013 were granted to Novo Nordisk employees. The cost of the DKK 467 million programme has been amortised over the vesting period.

Long-term share-based incentive programme

For a description of the programme, please refer to 'Remuneration' in 'Governance, leadership and shares', pp 50–53.

Senior Management Board
On 1 February 2017, the Board of Directors approved the transfer of a total of 96,705 Novo Nordisk B shares to a joint pool for the financial year 2016. This allocation amounts on average to 3.2 months' fixed base salary plus pension contribution for the CEO, 2.4 months' fixed base salary plus pension contribution per member of Executive Management as of 1 March 2016 and 2.1 months' fixed base salary for Senior Vice Presidents, corresponding to a value at launch of the programme of DKK 29 million. The full amount was expensed in 2016, as the shares will remain in the joint pool if a member of the Senior Management Board leaves Novo Nordisk. The expense for 2016 reflects those shares that vested based on service and performance.

The grant date of the programme was February 2016, and the share price used for the conversion was the average share price (DKK 330) for Novo Nordisk B shares on Nasdaq Copenhagen in the period 3–17 February 2016, adjusted for expected dividend. Based on the split of participants when the joint pool was established, approximately 35% of the pool will be allocated to members of Executive Management and 65% to other members of the Senior Management Board.

The shares allocated to the joint pool for 2013 were released to the individual participants subsequent to approval of the Annual Report 2016 by the Board of Directors and after the announcement of the 2016 full-year financial results on 2 February 2017. The shares allocated correspond to a value at launch of the programme of DKK 51 million, expensed in 2013.

Management group below Senior Management Board
The management group below the Senior Management Board has a share-based incentive programme with similar performance criteria. For 2016, a total of 224,055 shares were allocated to the pool for this group, corresponding to a value at launch of the programme (adjusted for expected dividends) of DKK 68 million. The costs of the 2016 programme are amortised over the vesting period from 2016–2019 at an annual amount of DKK 17 million.

The shares allocated to the pool for 2013 were released to the individual participants subsequent to approval of the Annual Report 2016 by the Board of Directors and after the announcement of the 2016 full-year financial results on 2 February 2017. The shares allocated correspond to a value at launch of the programme of DKK 126 million amortised over the period 2013–2016. The number of shares to be transferred (501,824 shares) is lower than the original number of shares allocated to the share pool, as some participants had left the company before the programme's release conditions were met.

5.1 SHARE-BASED PAYMENT SCHEMES (CONTINUED)

GENERAL TERMS AND CONDITIONS OF LAUNCHED PROGRAMMES

	Restricted stock units to employees			Shares for Senior Management Board			Shares for management group below Senior Management Board		
	2016	2015	2014	**2016**	2015	2014	**2016**	2015	2014
Number of shares awarded in the year	1,465,411	–	–	96,705	378,943	293,044	224,055	879,988	683,728
Value per share at launch (DKK)	346	–	–	304	285	226	304	285	226
Vesting period	3 years	–	–	3 years	3 years	3 years	3 years	3 years	3 years
Allocated to recipients	Feb. 2019			Feb. 2020	Feb. 2019	Feb. 2018	Feb. 2020	Feb. 2019	Feb. 2018
Total market value at launch (DKK million)	508	–	–	29	108	66	68	251	155
Expensed in the Income statement (DKK million)	169	–	–	29	108	66	17	63	37
Amortisation period of the programme	2016 to 2019	–	–	Expensed in 2016	Expensed in 2015	Expensed in 2014	2016 to 2019	2015 to 2018	2014 to 2017

OUTSTANDING RESTRICTED STOCK UNITS

	2016	2015
Outstanding at the beginning of the year	7,158,636	7,960,080
Released restricted stock units to employees	(2,590,000)	–
Released shares from 2012 Management pool	(1,808,729)	(1,787,640)
Released shares from 2012–2014 Management pools[1]	–	(120,638)
Cancelled shares from Management pool	(174,552)	(152,097)
Allocated restricted stock units to employees (2013 programme)	220,000	–
Allocated restricted stock units to employees (2016 programme)	1,465,411	–
Shares allocated to Management pools	320,760	1,258,931
Outstanding at the end of the year	**4,591,526**	7,158,636

1. Released 2012–2014 programme following the partial divestment of NNIT A/S.

OUTSTANDING RESTRICTED STOCK UNITS

	Issued[1]	Released	Cancelled (accumulated)	**Outstanding**	Value at launch date DKK million	Vesting date
Restricted stock units to employees						
2013 Restricted stock units	2,590,000	(2,590,000)	–	–	467	Q2 2016
2016 Restricted stock units	1,465,411	–	–	1,465,411	508	Q1 2019
Outstanding restricted stock units to employees	4,055,411	(2,590,000)	–	1,465,411		
Shares allocated to joint pools for Senior Management Board						
2012 Shares allocated to joint pool	487,730	(487,730)	–	0	73	Q1 2016
2013 Shares allocated to joint pool	254,513	(8,993)[2]	–	245,520	51	Q1 2017
2014 Shares allocated to joint pool	293,044	(9,369)[2]	–	283,675	66	Q1 2018
2015 Shares allocated to joint pool	378,943	–	(522)	378,421	108	Q1 2019
2016 Shares allocated to joint pool[3]	96,705	–	–	96,705	29	Q1 2020
Outstanding shares in joint pool for Senior Management Board	1,510,935	(506,092)	(522)	1,004,321		
Shares allocated to pools for management group below Senior Management Board						
2012 Shares allocated to pool	1,559,235	(1,366,594)	(177,262)	15,379	234	Q1 2016
2013 Shares allocated to pool	622,190	(22,620)[2]	(97,746)	501,824	126	Q1 2017
2014 Shares allocated to pool	683,728	(34,061)[2]	(76,704)	572,963	155	Q1 2018
2015 Shares allocated to pool	879,988	–	(72,415)	807,573	251	Q1 2019
2016 Shares allocated to pool[3]	224,055	–	–	224,055	68	Q1 2020
Outstanding shares in pool for management group below Senior Management Board	3,969,196	(1,423,275)	(424,127)	2,121,794		
Outstanding at the end of 2016	9,535,542	(4,519,367)	(424,649)	**4,591,526**		

1. All restricted stock units and shares allocated to Management pools are hedged by treasury shares.
2. Released shares from 2013–2014 Management pools relate to NNIT employees following the IPO of NNIT A/S.
3. 2016 programme released subsequent to approval of the Annual Report 2016 on 1 February 2017.

5.2 MANAGEMENT'S HOLDINGS OF NOVO NORDISK SHARES

The internal rules for trading in Novo Nordisk securities by board members, executives and certain employees only permit trading in the 15-calendar-day period following each quarterly announcement.

MANAGEMENT'S HOLDING OF SHARES	At the beginning of the year[1]	Additions during the year	Sold/transferred during the year	At the end of the year	Market value[2] DKK million
Göran Ando	13,000	2,100	(100)	15,000	3.8
Bruno Angelici	2,500			2,500	0.7
Jeppe Christiansen	3,529	4,750		8,279	2.1
Brian Daniels	–	1,200		1,200	0.3
Liz Hewitt	2,725			2,725	0.7
Liselotte Hyveled	4,948	2,100	(1,093)	5,955	1.5
Anne Marie Kverneland	10,471	100	(282)	10,289	2.6
Sylvie Grégoire	875			875	0.2
Søren Thuesen Pedersen	1,615	200		1,815	0.5
Stig Strøbæk	1,950	100		2,050	0.5
Mary Szela	935			935	0.2
Board of Directors in total	42,548	10,550	(1,475)	51,623	13.1
Lars Rebien Sørensen	392,365	41,210	(30,000)	403,575	102.8
Lars Fruergaard Jørgensen	101,360	13,765	(5,000)	110,125	28.1
Jesper Brandgaard	186,205	27,435	(27,335)	186,305	47.5
Mads Krogsgaard Thomsen	280,355	27,435	(10,070)	297,720	75.8
Henrik Wulff	73,810	13,765		87,575	22.3
Non-registered members of Executive Management	102,530	26,965	(8,000)	121,495	30.9
Executive Management in total	1,136,625	150,575	(80,405)	1,206,795	307.4
Other members of the Senior Management Board	645,187	236,030	(352,028)	529,189	134.8
Joint pool for Executive Management and other members of the Senior Management Board[3]	994,777	86,769	(313,305)	768,241[4]	195.7
Total	2,819,137	483,924	(747,213)	**2,555,848**	651.0

1. Following the change in the Board of Directors and the retirement of members of Executive Management and the Senior Management Board, the holding of shares at the beginning of the year has been updated compared with the Annual Report 2015.
2. Calculation of market value is based on the quoted share price of DKK 254.70 at the end of the year.
3. The annual allocation to the joint pool is locked up for three years before it is transferred to the participants employed at the end of each three-year period. Based on the split of participants when the joint pool was established, approximately 35% of the pool will be allocated to the members of Executive Management and approximately 65% to other members of the Senior Management Board. In the lock-up period, the joint pool may potentially be reduced in the event of lower-than-planned value creation in subsequent years.
4. The joint pool includes the 2013 programme released on 2 February 2017 but excludes 236,080 shares assigned to retired Executive Management and Senior Management Board members.

5.3 COMMITMENTS

Commitments

Total contractual obligations and recognised non-current debt can be specified as follows (payments due by period):

2016

DKK million	Within 1 year	1–3 years	3–5 years	More than 5 years	Total
Retirement benefit obligations	43	83	78	1,247	1,451
Total non-current liabilities recognised in the Balance sheet	*43*	*83*	*78*	*1,247*	*1,451*
Operating leases[1]	1,214	2,061	1,697	2,329	7,301
Research and development obligations	2,199	1,069	138	–	3,406
Purchase obligations relating to investments in property, plant and equipment	521	–	–	–	521
Other purchase obligations	4,335	2,166	926	–	7,427
Total obligations not recognised in the Balance sheet	*8,269*	*5,296*	*2,761*	*2,329*	*18,655*
Total contractual obligations	8,312	5,379	2,839	3,576	**20,106**

2015

DKK million	Within 1 year	1–3 years	3–5 years	More than 5 years	Total
Retirement benefit obligations	71	134	118	863	1,186
Total non-current liabilities recognised in the Balance sheet	*71*	*134*	*118*	*863*	*1,186*
Operating leases[1]	1,084	1,631	1,248	2,390	6,353
Research and development obligations	1,586	691	180	–	2,457
Purchase obligations relating to investments in property, plant and equipment	586	0	0	0	586
Other purchase obligations	3,835	1,769	795	112	6,511
Total obligations not recognised in the Balance sheet	*7,091*	*4,091*	*2,223*	*2,502*	*15,907*
Total contractual obligations	7,162	4,225	2,341	3,365	17,093

1. No material finance lease obligations exist in 2016 or 2015.

The operating lease commitments are related to non-cancellable operating leases primarily for premises, company cars and office equipment. Approximately 79% of the commitments are related to leases outside Denmark. The lease costs for 2016 and 2015 were DKK 1,513 million and DKK 1,293 million respectively.

The purchase obligations primarily relate to purchase agreements regarding medical equipment and consumer goods. Novo Nordisk expects to fund these commitments with existing cash and cash flow from operations.

Research and development obligations entail uncertainties in relation to the period in which payments are due because a proportion of the obligations are dependent on milestone achievements. The due periods disclosed are based on Management's best estimate. Novo Nordisk has engaged in research and development projects with a number of external enterprises.

DKK million	2016	2015
Other guarantees Other guarantees primarily related to guarantees issued by Novo Nordisk in relation to rented property	808	748
Security for debt Land, buildings and equipment etc at carrying amount	68	78

World Diabetes Foundation (WDF)

At the Annual General Meeting in 2014, a new donation was agreed to by the shareholders. According to this agreement, Novo Nordisk A/S is obliged to make annual donation to the Foundation in the period 2015 to 2024 of 0,01% of the net insulin sales of the Group. The annual donation in the period 2015 to 2016 cannot exceed DKK 8 million per year.

The new donation is given in addition to the existing donation from 2008, according to which Novo Nordisk A/S is obliged to make annual donation to the Foundation of 0,125% of the net insulin sales of the Group. The annual donation in the period 2012–2017 cannot exceed the lower of DKK 80 million or 15% of the taxable income of Novo Nordisk A/S in the financial year in question.

The total donation per year according to the two donation programmes will not exceed the lower of DKK 88 million or 15% of the taxable income of Novo Nordisk A/S in the financial year in question.

For the years 2018–2024 the donation is 0,1% of the net insulin sales of the Group. The annual donation in this period cannot exceed the lower of DKK 90 million or 15% of the taxable income of Novo Nordisk A/S in the financial year in question."

In 2016, the donation amounts to DKK 85 million (DKK 86 million in 2015 and DKK 66 million in 2014), which is recognised in Administrative costs in the Income statement.

Disclosure regarding change of control

The EU Takeover Bids Directive, as partially implemented by the Danish Financial Statements Act, contains certain rules relating to listed companies on disclosure of information that may be of interest to the market and potential takeover bidders, in particular in relation to disclosure of change of control provisions.

The company's A shares are not listed and are held by Novo A/S, a Danish public limited liability company wholly owned by the Novo Nordisk Foundation. According to the Articles of Association of the Foundation, the A shares cannot be divested. For information on the ownership structure of Novo Nordisk, please refer to 'Shares and capital structure' on pp 44–45. For information on change of control clauses in relation to employee contracts for Executive Management of Novo Nordisk, please refer to 'Remuneration' on pp 50–53.

In addition, Novo Nordisk discloses that the Group does not have any significant agreements to which the Group is a party and that take effect, alter or terminate upon a change of control of the Group following implementation of a takeover bid.

5.4 RELATED PARTY TRANSACTIONS

Novo Nordisk A/S is controlled by Novo A/S (incorporated in Denmark), which owns 27.5% of the share capital in Novo Nordisk A/S, representing 75.4% of the total number of votes, excluding treasury shares. The remaining shares are widely held. The ultimate parent of the Group is the Novo Nordisk Foundation (incorporated in Denmark). Both entities are considered related parties.

Being an associated company of Novo Nordisk A/S, NNIT Group is considered a related party. Due to joint ownership, associated companies and Management of Novo Nordisk A/S, the Novozymes Group and Xellia Pharmaceuticals are also considered related parties.

The Group has had the following material transactions with related parties:

DKK million	2016	2015	2014
Novo Nordisk Foundation			
Donations to Steno Diabetes Center A/S via Novo Nordisk	(69)	(69)	(51)
Services provided by Novo Nordisk	(3)	(3)	–
Services provided by Novo Nordisk Foundation	31	–	–
Novo A/S			
Services provided by Novo Nordisk	(2)	(3)	(5)
Sale of NNIT A/S B shares	–	(797)	–
Dividend payment from Novo Nordisk	5,052	2,687	2,418
NNIT Group			
Services provided by Novo Nordisk	(30)	(32)	–
Services provided by NNIT	1,239	1,316	–
Dividend payment from NNIT	(26)	–	–
Novozymes Group			
Services provided by Novo Nordisk	(163)	(185)	(189)
Services provided by Novozymes	150	165	142
Xellia Pharmaceuticals			
Services provided by Novo Nordisk	(108)	(11)	(28)

Novo Nordisk has transferred the activities of Steno Diabetes Center to Capital Region of Denmark as of 1 January 2017.

There have not been any transactions with the Board of Directors or Executive Management of NNIT A/S, Novozymes A/S, Novo A/S, the Novo Nordisk Foundation, Xellia Pharmaceuticals ApS or associated companies. In Novo Nordisk A/S, there have been no transactions with the Board of Directors or Executive Management besides remuneration.

For information on remuneration to the Management of Novo Nordisk, please refer to 'Remuneration' on pp 50–53 and note 2.4, 'Employee costs'. There are no loans to the Board of Directors or Executive Management in 2016, nor were there in 2015 or 2014.

There are no material unsettled transactions with related parties at the end of the year.

5.5 FEE TO STATUTORY AUDITORS

DKK million	2016	2015	2014
Statutory audit	24	24	24
Audit-related services	4	4	4
Tax advisory services	9	8	8
Other services	4	7	11
Total fee to statutory auditors	41	43	47

5.6 SUBSEQUENT EVENTS

Subsequent to 31 December 2016, two class action lawsuits were filed and a Civil Investigative Demand was served. Please refer to note 3.6 for details on the cases. Novo Nordisk does not expect these cases, or other subsequent events, to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

5.7 COMPANIES IN THE NOVO NORDISK GROUP

Activity: ● Sales and marketing ● Production ● Research and development ● Services/investments

Company and country	Percentage of shares owned	Activity
Parent company		
Novo Nordisk A/S, Denmark	–	● ● ● ●
Subsidiaries by region		
USA		
Novo Nordisk US Bio Production, Inc., United States	100	●
Novo Nordisk US Holdings Inc., United States	100	●
Novo Nordisk Pharmaceutical Industries Inc., United States	100	●
Novo Nordisk Inc., United States	100	●
Novo Nordisk Research Center Indianapolis, Inc., United States	100	●
Pacific		
Novo Nordisk Pharmaceuticals Pty. Ltd., Australia	100	●
Novo Nordisk Canada Inc., Canada	100	●
Novo Nordisk Region Pacific A/S, Denmark	100	●
Novo Nordisk Pharma Ltd., Japan	100	● ●
Novo Nordisk Pharmaceuticals Ltd., New Zealand	100	●
Novo Nordisk Pharma Korea Ltd., South Korea	100	●
Europe		
Novo Nordisk Pharma GmbH, Austria	100	●
S.A. Novo Nordisk Pharma N.V., Belgium	100	●
Novo Nordisk Pharma d.o.o., Bosnia-Hercegovina	100	●
Novo Nordisk Pharma EAD, Bulgaria	100	●
Novo Nordisk Hrvatska d.o.o., Croatia	100	●
Novo Nordisk s.r.o., Czech Republic	100	●
Novo Nordisk Pharmatech A/S, Denmark	100	● ●
Novo Nordisk Region Europe A/S, Denmark	100	●
Novo Nordisk Region Europe Pharmaceuticals A/S, Denmark	100	●
Novo Nordisk Farma OY, Finland	100	●
Novo Nordisk, France	100	●
Novo Nordisk Production SAS, France	100	●
Novo Nordisk Pharma GmbH, Germany	100	●
Novo Nordisk Hellas Epe., Greece	100	●
Novo Nordisk Hungária Kft., Hungary	100	●
Novo Nordisk Limited, Ireland	100	●
Novo Nordisk S.P.A., Italy	100	●
UAB Novo Nordisk Pharma, Lithuania	100	●
Novo Nordisk Farma dooel, Macedonia	100	●
Novo Nordisk B.V., Netherlands	100	●
Novo Nordisk Scandinavia AS, Norway	100	●
Novo Nordisk Pharmaceutical Services Sp. z.o.o., Poland	100	●
Novo Nordisk Comércio Produtos Farmacêuticos Lda., Portugal	100	●
Novo Nordisk Farma S.R.L., Romania	100	●
Novo Nordisk Pharma d.o.o. Belgrade (Serbia), Serbia	100	●
Novo Nordisk Slovakia s.r.o., Slovakia	100	●
Novo Nordisk, d.o.o., Slovenia	100	●
Novo Nordisk Pharma S.A., Spain	100	●
Novo Nordisk Scandinavia AB, Sweden	100	●
Novo Nordisk Health Care AG, Switzerland	100	● ●
Novo Nordisk Pharma AG, Switzerland	100	●
Novo Nordisk Holding Limited, United Kingdom	100	●
Novo Nordisk Limited, United Kingdom	100	●

Company and country	Percentage of shares owned	Activity
International Operations		
Aldaph SpA, Algeria	100	● ●
Novo Nordisk Pharma Argentina S.A., Argentina	100	●
Novo Nordisk Produção Farmacêutica do Brasil Ltda., Brazil	100	●
Novo Nordisk Farmacêutica do Brasil Ltda., Brazil	100	●
Novo Nordisk Farmacêutica Limitada, Chile	100	●
Novo Nordisk Colombia SAS, Colombia	100	●
Novo Nordisk Pharma Operations A/S, Denmark	100	●
Novo Nordisk Region International Operations A/S, Denmark	100	●
Novo Nordisk Egypt LLC, Egypt	100	●
Novo Nordisk India Private Limited, India	100	●
Novo Nordisk Service Centre (India) Pvt. Ltd., India	100	●
PT. Novo Nordisk Indonesia, Indonesia	100	●
Novo Nordisk Pars, Iran	100	●
Novo Nordisk Ltd, Israel	100	●
Novo Nordisk Kenya Ltd., Kenya	100	●
Novo Nordisk Pharma SARL, Lebanon	100	●
Novo Nordisk Pharma (Malaysia) Sdn Bhd, Malaysia	100	●
Novo Nordisk Pharma Operations (BASEA) Sdn Bhd, Malaysia	100	●
Novo Nordisk Mexico S.A. de C.V., Mexico	100	●
Novo Nordisk Servicios Profesionales S.A. de C.V., Mexico	100	●
Novo Nordisk Farmacéutica S.A. de C.V., Mexico	100	●
Novo Nordisk Pharma SAS, Morocco	100	●
Novo Nordisk Pharma Limited, Nigeria	100	●
Novo Nordisk Pharma (Private) Limited, Pakistan	100	●
Novo Nordisk Panama S.A., Panama	100	●
Novo Nordisk Pharmaceuticals (Philippines) Inc., Philippines	100	●
Novo Nordisk Limited Liability Company, Russia	100	●
Novo Nordisk Production Support LLC, Russia	100	●
Novo Investment Pte Limited, Singapore	100	●
Novo Nordisk Pharma (Singapore) Pte Ltd., Singapore	100	●
Novo Nordisk (Pty) Limited, South Africa	100	●
Novo Nordisk Region International Operations AG, Switzerland	100	●
Novo Nordisk Pharma (Thailand) Ltd., Thailand	49	●
Novo Nordisk Tunisie SARL, Tunisia	100	●
Novo Nordisk Saglik Ürünleri Tic. Ltd. Sti., Turkey	100	●
Novo Nordisk Pharma Gulf FZ-LLC, United Arab Emirates	100	●
Novo Nordisk Venezuela Casa de Representación C.A.,Venezuela	100	●
Region China		
Novo Nordisk (China) Pharmaceuticals Co., Ltd., China	100	● ●
Beijing Novo Nordisk Pharmaceuticals Science & Technology Co., Ltd., China	100	●
Novo Nordisk Region China A/S, Denmark	100	●
Novo Nordisk Hong Kong Limited, Hong Kong	100	●
Novo Nordisk Pharma (Taiwan) Ltd., Taiwan	100	●
Other subsidiaries and associated companies		
NNE A/S, Denmark	100	●
NNIT A/S, Denmark	26	●

Companies without significant activities are not included in the list. In addition to the companies listed above, NNE A/S has its own subsidiaries.

5.8 FINANCIAL DEFINITIONS

ADR
An American Depositary Receipt (or ADR) represents ownership of the shares of a non-US company and trades in US financial markets.

Basic earnings per share (EPS)
Net profit divided by the average number of shares outstanding.

Diluted earnings per share
Net profit divided by average number of shares outstanding, including the dilutive effect of the outstanding restricted stock units.

Effective tax rate
Income taxes as a percentage of profit before income taxes.

Equity ratio
Total equity at year-end as a percentage of total assets at year-end.

Gross margin
Gross profit as a percentage of sales.

Net profit margin
Net profit as a percentage of sales.

Number of shares outstanding
The total number of shares, excluding the holding of treasury shares.

Operating margin
Operating profit as a percentage of sales.

Other comprehensive income (OCI)
Other comprehensive income comprises all items recognised in Equity for the year other than those related to transactions with owners of the company. Examples of items that are required to be presented in OCI are:

- Exchange rate adjustments of investments in subsidiaries
- Remeasurements of defined benefit plans
- Changes in fair value of financial instruments in a cash flow hedge.

Payout ratio
Total dividends for the year as a percentage of net profit.

Return on equity (ROE)
Net profit for the year as a percentage of shareholders' equity (average).

Non-IFRS financial measures
In the Annual Report, Novo Nordisk discloses certain financial measures of the Group's financial performance, financial position and cash flows that reflect adjustments to the most directly comparable measures calculated and presented in accordance with IFRS. These non-IFRS financial measures may not be defined and calculated by other companies in the same manner, and may thus not be comparable with such measures.

The non-IFRS financial measures presented in the Annual Report are:

- Cash to earnings
- Financial resources at the end of the year
- Free cash flow
- Operating profit after tax to net operating assets
- Sales growth in local currencies.

Cash to earnings
Cash to earnings is defined as 'free cash flow as a percentage of net profit'.

Financial resources at the end of the year
Financial resources at the end of the year is defined as the sum of cash and cash equivalents at the end of the year, bonds with original term to maturity exceeding three months and undrawn committed credit facilities.

Free cash flow
Novo Nordisk defines free cash flow as 'net cash generated from operating activities' less 'net cash used in investing activities' excluding net change in marketable securities.

Operating profit after tax to net operating assets (OPAT/NOA)
Operating profit after tax to net operating assets is defined as 'operating profit after tax (using the effective tax rate) as a percentage of average inventories, receivables, property, plant and equipment, intangible assets and deferred tax assets less non-interest-bearing liabilities including provisions and deferred tax liabilities (where average is the sum of the above assets and liabilities at the beginning of the year and at year-end divided by two)'.

Sales growth in local currencies
Sales growth in local currencies is defined as sales for the year measured at prior-year average exchange rates compared with sales for the prior year measured at prior-year average exchange rates.

QUARTERLY FINANCIAL FIGURES 2015 AND 2016

	2015				2016			
DKK million	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Net sales	25,200	27,059	26,792	28,876	27,212	27,459	27,537	29,572
Sales by business segment:								
New-generation insulin	271	330	376	461	626	983	1,143	1,707
Modern insulin	11,498	12,604	12,500	13,562	11,715	11,806	11,770	12,219
Human insulin	2,897	2,784	2,772	2,778	2,725	2,667	2,760	2,938
Victoza®	3,957	4,486	4,680	4,904	4,591	4,952	5,106	5,397
Other diabetes and obesity care	1,195	1,075	1,223	1,237	1,374	1,391	1,513	1,566
Diabetes and obesity care total	19,818	21,279	21,551	22,942	21,031	21,799	22,292	23,827
Haemophilia	2,734	2,757	2,371	2,785	2,836	2,530	2,285	2,821
Norditropin® (human growth hormone)	1,830	2,083	1,842	2,065	2,407	2,158	2,003	2,202
Other biopharmaceuticals	818	940	1,028	1,084	938	972	957	722
Biopharmaceuticals total	5,382	5,780	5,241	5,934	6,181	5,660	5,245	5,745
Sales by geographical segment:								
USA	12,011	13,820	13,939	15,169	13,730	13,947	14,174	15,343
Europe	4,977	5,222	5,200	5,399	5,016	5,298	5,093	5,275
International Operations	3,423	3,596	3,111	3,681	3,516	3,331	3,326	3,877
Region China	2,847	2,284	2,415	2,325	2,875	2,509	2,534	2,540
Pacific	1,942	2,137	2,127	2,302	2,075	2,374	2,410	2,537
Gross profit	21,326	23,200	22,945	24,268	22,978	23,414	23,551	24,654
Sales and distribution costs	6,147	7,175	6,951	8,039	6,741	6,867	6,860	7,909
Research and development costs	3,250	3,035	3,289	4,034	3,304	3,331	3,458	4,470
Administrative costs	854	887	952	1,164	908	873	1,015	1,166
Other operating income, net	2,782	379	227	94	284	154	202	97
Non-recurring income from the partial divestment of NNIT A/S	*2,376*	–	–	–	–	–	–	–
Operating profit	13,857	12,482	11,980	11,125	12,309	12,497	12,420	11,206
Net financials	(1,372)	(1,934)	(1,844)	(811)	(356)	105	(119)	(264)
Profit before income taxes	12,485	10,548	10,136	10,314	11,953	12,602	12,301	10,942
Income taxes	2,609	2,205	1,753	2,056	2,498	2,634	2,498	2,243
Net profit	9,876	8,343	8,383	8,258	9,455	9,968	9,803	8,699
Depreciation, amortisation and impairment losses	663	648	633	1,015	624	717	736	1,116
Total assets	77,457	81,313	85,195	91,799	82,368	88,269	87,340	97,539
Total equity	32,108	39,111	43,109	46,969	37,284	42,585	41,327	45,269
FINANCIAL RATIOS								
As percentage of sales								
Sales and distribution costs	24.4%	26.5%	25.9%	27.8%	24.8%	25.0%	24.9%	26.7%
Research and development costs	12.9%	11.2%	12.3%	14.0%	12.1%	12.1%	12.6%	15.1%
Administrative costs	3.4%	3.3%	3.6%	4.0%	3.3%	3.2%	3.7%	3.9%
Gross margin[1]	84.6%	85.7%	85.6%	84.0%	84.4%	85.3%	85.5%	83.4%
Operating margin[1]	55.0%	46.1%	44.7%	38.5%	45.2%	45.5%	45.1%	37.9%
Equity ratio[1]	41.5%	48.1%	50.6%	51.2%	45.3%	48.2%	47.3%	46.4%
SHARE RATIOS								
Basic earnings per share/ADR (in DKK)[1]	3.80	3.24	3.27	3.25	3.72	3.93	3.88	3.46
Diluted earnings per share/ADR (in DKK)	3.79	3.23	3.26	3.24	3.71	3.92	3.87	3.46
Average number of shares outstanding (million) – basic	2,597	2,578	2,566	2,553	2,544	2,536	2,527	2,513
Average number of shares outstanding (million) – diluted	2,604	2,584	2,572	2,560	2,550	2,541	2,531	2,517
EMPLOYEES								
Number of full-time employees at the end of the period	39,062	39,658	40,261	40,638	41,571	42,265	42,605	41,971

1. For definitions, please refer to p 96.

STATEMENT OF SOCIAL PERFORMANCE

FOR THE YEAR ENDED 31 DECEMBER

	Note	2016	2015	2014
PATIENTS				
Patients reached with Novo Nordisk diabetes care products (estimate in millions)	2.1	28.0	26.8	24.4
Least developed countries where Novo Nordisk sells insulin according to the differential pricing policy	2.2	22	23	32
Donations (DKK million)	2.3	106	105	84
Animals purchased for research	2.4	77,920	67,240	64,533
New patent families (first filings)	2.5	74	77	93
EMPLOYEES				
Employees (total)	3.1	42,446	41,122	41,450[1]
Employee turnover	3.1	9.7%	9.2%	9.0%
Working the Novo Nordisk Way (scale 1–5)		4.4	4.3	4.3
Gender in Management (ratio men:women)	3.1	59:41	59:41	60:40
Frequency of occupational accidents (number/million working hours)	3.2	3.0	3.0	3.2
ASSURANCE				
Relevant employees trained in business ethics		99%	98%	98%
Business ethics reviews	4.1	52	49	42
Fulfilment of action points from facilitations of the Novo Nordisk Way	4.2	95%	94%	95%
Supplier audits	4.3	223	240	224
Product recalls	4.4	6	2	2
Failed inspections	4.5	0	0	0
Company reputation (scale 0–100)	4.6	79.2	82.4	80.8

1. Includes approximately 2,400 employees in NNIT A/S.

NOTES TO THE CONSOLIDATED SOCIAL STATEMENT

Basis of preparation | Patients | Employees | Assurance

In the Consolidated social statement, Novo Nordisk reports on three dimensions of performance: patients, employees and assurance. Progress is reported on three long-term targets: reach more patients with diabetes care products, ensure that the organisation is working in accordance with the Novo Nordisk Way and company reputation (read more on pp 11, 12 and 15).

To support the long-term targets, the social statement contains additional performance information of strategic importance, such as least developed countries buying insulin according to the differential pricing policy, employee turnover, gender diversity, training of employees in business ethics, supplier audits and product quality.

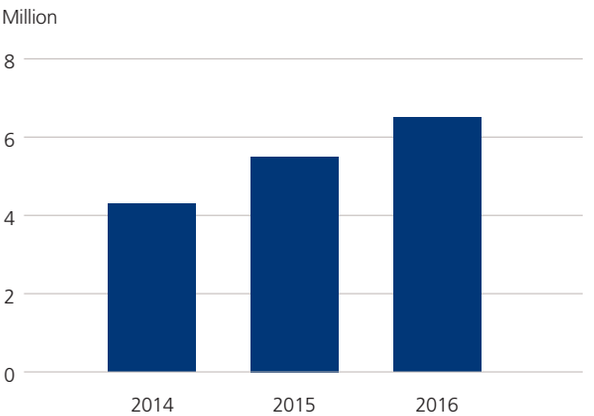
Renewed long-term commitment to providing access to affordable insulin

Novo Nordisk has renewed its long-term commitment to providing access to affordable insulin with an expanded scope. Human insulin will be offered at a guaranteed ceiling price (4 US dollars per vial in 2017) to least developed and low-income countries as well as to selected humanitarian relief organisations. The new commitment replaces the long-standing differential pricing policy.

Novo Nordisk's long-term target to reach 40 million people with its diabetes care products in 2020 is intended to enhance access to quality of care. In 2016, the estimated number reached was 28 million patients, compared with 26.8 million in 2015, a 4% increase.

Current projections show that it will not be possible to reach the target, of 40 million patients by 2020, which was set in 2013 from a baseline of 20 million in 2010. This is due to a more challenging market environment than anticipated. Novo Nordisk remains committed to continuing its efforts to reach more patients and to improve diabetes care. In 2016, the company announced a new Novo Nordisk Access to Insulin Commitment. This provides low-income countries and selected humanitarian organisations with an effective guarantee that Novo Nordisk will ensure availability of low-priced human insulin, and provides a lower ceiling price than the previous differential pricing policy.

PATIENTS REACHED WITH INSULIN SOLD AT OR BELOW THE DIFFERENTIAL PRICING POLICY PRICE



SECTION 1 BASIS OF PREPARATION

General reporting standards and principles

The Consolidated social statement has been prepared in accordance with the Danish Financial Statements Act (FSA), sections 99a and 99b. Section 99a requires Novo Nordisk to account for the company's activities relating to social responsibility, reporting on business model, significant risks, business strategies, and activities in the areas of human rights, labour standards, environment, anti-corruption and climate. Section 99b requires Novo Nordisk to account for the gender diversity at Board level by reporting on targets and policies ensuring increased gender diversity over time. A detailed discussion of risks, policies and performance is available in Novo Nordisk's annual Communication on Progress to the UN Global Compact at novonordisk.com/annualreport and on the UN Global Compact's website at unglobalcompact.org/COP.

Novo Nordisk adheres to the following internationally recognised voluntary reporting standards and principles (for overview, read more on p 113):

- The International Integrated Reporting Framework, <IR>, developed by the International Integrated Reporting Council. The framework consists of a set of content elements and guiding principles intended to improve the quality of information available to providers of financial capital.
- The UN Global Compact is a strategic policy initiative for businesses that are committed to aligning their operations and strategies with 10 universally accepted principles in the areas of human rights, labour, environment and anti-corruption. As a signatory, Novo Nordisk reports on progress during 2016 in its Communication on Progress, which can be found at novonordisk.com/annualreport.
- The framework AA1000APS(2008) and AA1000AS(2008) states that reporting must provide a complete, accurate, relevant and balanced picture of the organisation's approach to and impact on society.

To Novo Nordisk, AA1000APS(2008) is a component in creating a generally applicable approach to assessing and strengthening the credibility of the Group's public reporting of social and environmental information. Novo Nordisk has designed processes to ensure that the qualitative and quantitative information that documents the social and environmental dimensions of performance is assured, as well as the systems that underpin the data and performance. The principles outlined in AA1000APS(2008) have been applied as described below.

Inclusivity
As a pharmaceutical business with global reach, Novo Nordisk is committed to being accountable to those stakeholders who are impacted by the organisation. From a social responsibility perspective, the key stakeholder groups are patients who rely on Novo Nordisk products, employees at Novo Nordisk and throughout the Group's value chain, and local communities. Novo Nordisk maps its stakeholders and has processes in place to ensure inclusion of stakeholder concerns and expectations. In addition, Novo Nordisk continuously develops its stakeholder engagement and sustainability capacity at corporate and affiliate levels.

Materiality
Key issues are identified through ongoing stakeholder engagement and trendspotting, and are addressed by programmes or action plans with clear and measurable targets. Long-term targets are set to guide performance in strategic areas. The issues presented in the Annual Report are deemed to have a significant impact on the Group's future business performance and may support stakeholders in their decision-making.

Responsiveness
The report reaches out to a wide range of stakeholders, each with specific needs and interests. To most stakeholders, however, the Annual Report is just one element of interaction and communication with the company. The Annual Report reflects how the company is managing operations in ways that respond to and consider stakeholder concerns and interests.

Applying materiality

Novo Nordisk leans on the International Integrated Reporting Council's definition of materiality, which states that 'a matter is material if it is of such relevance and importance that it could substantively influence the assessments of providers of financial capital with regard to the organisation's ability to create value over the short, medium and long term'. In determining whether a matter is material, Executive Management and the Board of Directors consider whether the matter could substantively affect the company's strategy, its business model, its ability to access required resources or its key stakeholders. The most material matters are included in the Annual Report.

In assessing which information to include in the Annual Report, legal requirements and disclosure commitments made by Novo Nordisk are considered. Furthermore, it is assessed whether information is tied directly or indirectly to Novo Nordisk's ability to create value over the short, medium and long term.

The outcomes of formal reviews, research, stakeholder engagement and internal materiality discussions are presented to Executive Management and the Board of Directors as a proposal for content in the Management review, while disclosures in the Financial, Social and Environmental statements are approved by the Audit Committee.

The conclusion from the external assurance provider is available in the Independent assurance report on p 111.

Principles of consolidation

The Consolidated social statement and disclosures cover the Novo Nordisk Group comprising Novo Nordisk A/S and entities controlled by Novo Nordisk A/S.

SOCIAL ACCOUNTING POLICIES

The accounting policies set out below and in the notes have been applied consistently in the preparation of the Consolidated social statement for all the years presented.

Changes to accounting policies and disclosures

There have been no material changes to the accounting policies and disclosures for 2016.

OTHER ACCOUNTING POLICIES

Working the Novo Nordisk Way
Working the Novo Nordisk Way is an employee assessment measured on a scale of 1–5, with 5 being the best, and is a simple average of respondents' answers to all mandatory questions in the annual employee survey, eVoice. For 2016, the eVoice response rate was 96%, compared with 91% in 2015.

Relevant employees trained in business ethics
The mandatory business ethics training is based on globally applicable e-learning, standard operating procedures (SOPs) and related tests released annually by the Novo Nordisk Business Ethics Compliance Office. The target groups for the individual SOPs vary in size and are defined by Novo Nordisk in each SOP. The target groups are all employees in Novo Nordisk at the end of the reporting period except employees on leave, student assistants, PhDs and postdocs. The percentage of employees completing the training is calculated as the percentage of completion of both the SOPs and the related tests, based on internal registrations.

SECTION 2 PATIENTS

2.1 PATIENTS REACHED WITH NOVO NORDISK DIABETES CARE PRODUCTS (ESTIMATE)

Accounting policies

The number of full-year patients reached with Novo Nordisk diabetes care products, excluding devices and PrandiMet®, is estimated by dividing Novo Nordisk's annual sales volume by the annual usage dose per patient for each product class as defined by the World Health Organisation (WHO). PrandiMet® is not included as no WHO-defined dosage exists.

The WHO-defined daily dosage has not changed since 1982 and may not reflect the recommended or prescribed daily dose accurately. Actual doses are based on individual characteristics (eg age and weight) and pharmacokinetic considerations. Despite this uncertainty, Novo Nordisk assesses this to be the most consistent way of reporting.

Development
The estimated number of full-year patients reached with Novo Nordisk's diabetes care products increased from 26.8 million in 2015 to 28.0 million in 2016. The development reflects an overall increase in the number of people treated with Novo Nordisk's insulin products, and was mainly driven by human insulin (0.6 million people) and modern and new-generation insulin (0.5 million people).

2.2 LEAST DEVELOPED COUNTRIES WHERE NOVO NORDISK SELLS INSULIN ACCORDING TO THE DIFFERENTIAL PRICING POLICY

Accounting policies

Novo Nordisk has formulated a differential pricing policy for the Least Developed Countries (LDCs) as defined by the UN. The differential pricing policy is part of Novo Nordisk's global initiative to promote access to healthcare for all LDCs. The purpose of the policy is to offer human insulin in vials to all LDCs at or below a market price of 20% of the average prices for human insulin in vials in the Western world. The Western world is defined as Europe (the EU, Switzerland and Norway), the USA, Canada and Japan. The number of LDCs where Novo Nordisk sells human insulin in vials according to the differential pricing policy is measured by direct or indirect sales by Novo Nordisk via government tender or private market sales to wholesalers, distributors or non-governmental organisations.

NUMBER OF LDCs	2016	2015	2014
Total LDCs	48	48	48
LDCs not buying according to pricing policy	4	3	2
LDCs with no sales	22	22	14
Total LDCs buying insulin according to pricing policy	**22**	23	32

2.2 LEAST DEVELOPED COUNTRIES WHERE NOVO NORDISK SELLS INSULIN ACCORDING TO THE DIFFERENTIAL PRICING POLICY (CONTINUED)

Novo Nordisk sold human insulin according to the company's differential pricing policy in 22 of the world's 48 LDCs, compared with 23 in 2015. The total estimated number of people treated with insulin sold at or below the differential pricing policy price in the LDCs was approximately 349,000 in 2016, compared with approximately 411,000 in 2015. The decline is mainly attributed to lower sales in Sudan and sales exceeding the ceiling price in the Democratic Republic of Congo (DRC).

In 2016, an estimated 6.5 million people were treated with insulin for less than 0.18 US dollar per day worldwide, compared with 5.5 million people in 2015.

Novo Nordisk operated in Cambodia, Laos, Myanmar and the DRC, but did not sell insulin at the differential price here. The governments in those countries were offered the opportunity to buy insulin at the differential price, but the insulin sold there in 2016 was sold to the private market.

Novo Nordisk is unable to guarantee that the price at which the company sells the insulin will be reflected in the price to the consumer. Printing the price on the actual product is one initiative to avoid mark-ups on price. While Novo Nordisk prefers to sell insulin at the differential price through government tenders, the company is willing to sell to private distributors and agents.

2.3 DONATIONS

Accounting policies

Donations by Novo Nordisk to the World Diabetes Foundation and the Novo Nordisk Haemophilia Foundation are recognised as an expense when the donation is paid out or when an unconditional commitment to donate has been made. For additional information regarding the World Diabetes Foundation, please refer to note 5.3 in the Consolidated financial statements.

DKK million	2016	2015	2014
World Diabetes Foundation	85	86	66
Novo Nordisk Haemophilia Foundation	21	19	18
Total donations	**106**	105	84

2.4 ANIMALS PURCHASED FOR RESEARCH

Accounting policies

Animals purchased for research is recorded as the number of animals purchased for all research undertaken by Novo Nordisk either in-house or by external contractors. The number of animals purchased is based on internal registration of purchased animals and yearly reports from external contractors.

ANIMALS PURCHASED	2016	2015	2014
Mice, rats and other rodents	76,049	65,335	62,423
Pigs	891	939	818
Rabbits	347	443	574
Dogs	227	214	374
Non-human primates	406	302	344
Other vertebrates	0	7	0
	77,920	67,240	64,533

The number of animals purchased for research in 2016 increased by 16% compared with 2015 due to an increase in early-phase research. In all, 98% of the animals purchased were rodents. The variation in the purchase of large animals from year to year reflects the different development phases the research projects have reached.

2.5 NEW PATENT FAMILIES (FIRST FILINGS)

Accounting policies

New patent families (first filings) is recorded as the number of new patent applications that were filed during the year.

Development
A total of 74 new patent families were established in 2016, a slight decrease of 4% compared with filing activity in 2015, when 77 patent families were established.

The patent expiry dates for the product portfolio are shown in the table below. The dates provided are for expiry in the USA, Germany, China and Japan of patents on the active ingredient, unless otherwise indicated, and include extensions of patent term (including for paediatric extension, where applicable). For several products, in addition to the compound patent, Novo Nordisk holds other patents on manufacturing processes, formulations or uses that may be relevant for exclusivity beyond the expiration of the active ingredient patent. Furthermore, regulatory data protection may apply.

2.5 MARKETED PRODUCTS IN KEY MARKETS (ACTIVE INGREDIENTS)	USA	Germany	China	Japan
Diabetes care:				
NovoRapid® (NovoLog®)	Expired[1]	Expired[1]	Expired[1]	Expired[1]
NovoMix® 30 (NovoLog® Mix 70/30)	Expired[1]	Expired	Expired	Expired
Levemir®	2019	2019	Expired	2019
NovoNorm® (Prandin®)	Expired	Expired	Expired	2016
Victoza®[2]	2022	2022	2017	2022
Tresiba®	2029	2028	2024	2027
Ryzodeg®	2029	2028	2024	2027
Xultophy®	2029	2028	2024	2027
Obesity:				
Saxenda®	2022	2022	2017	2017
Biopharmaceuticals:				
Norditropin® (Norditropin® SimpleXx®)	2017[3]	2017[3]	2017[4]	2017[3]
NovoSeven®	Expired[4]	Expired[4]	Expired[4]	Expired[4]
NovoEight®	N/A[5]	N/A[5]	N/A[5]	N/A[5]
NovoThirteen® (TRETTEN®)	2021[6]	Expired	N/A	Expired
Vagifem® 10 mcg	2022[7,8]	2021[7]	N/A	2021[7]

1. Formulation patent until 2017.
2. In January 2017, TEVA filed an Abbreviated New Drug Application ("ANDA") for Liraglutide Injection, 18 mg/3 ml (6 mg/ml) ("Liraglutide") with the USFDA.
3. Formulation patent providing exclusivity to the composition of excipients used in the drug products.
4. Room temperature-stable formulation patent until 2023.
5. Process patents until 2028 in China, Germany and Japan and until 2030 in the US.
6. Data protection runs until 2025.
7. Patent covers low-dose treatment regimen.
8. Licensed to three generic manufacturers from October 2016.

SECTION 3 EMPLOYEES

3.1 EMPLOYEES

Accounting policies

The number of employees is recorded as all employees except externals, employees on unpaid leave, interns, bachelor and master thesis employees, and substitutes at year-end.

The rate of turnover is measured as the number of employees, excluding temporary employees, who left the Group during the financial year compared with the average number of employees, excluding temporary employees.

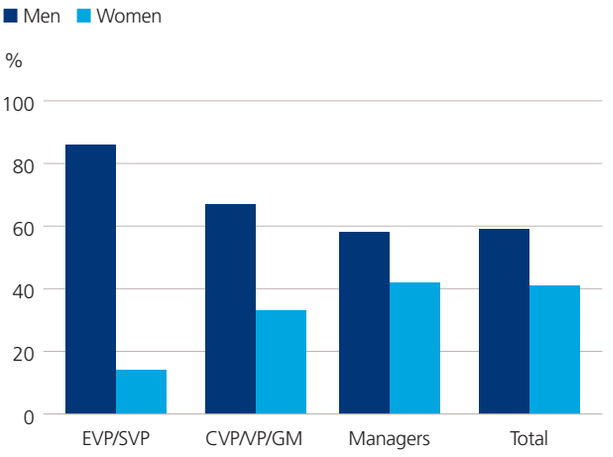
Diversity in Novo Nordisk is reported as the percentage split by gender in all managerial positions and for newly appointed managers. Managerial positions are defined as all managers in Novo Nordisk (global job level incl CEO, EVP, SVP, CVP, VP, Director, Manager and Team Leader). New managers are defined as all employees who have moved to a managerial position within the last 12 months – both promoted and externally hired.

EMPLOYEES	2016	2015	2014
USA	6,128	6,193	6,205
Europe	22,529	21,871	22,136
– of which in Denmark	*18,221*	*17,398*	*17,664*
International Operations	7,875	7,198	6,550
Pacific	1,558	1,471	1,462
Region China	4,356	4,389	5,097
Total employees	**42,446**	41,122	41,450[1]
Full-time employees	41,971	40,638	40,957[1]
Employee turnover	**9.7%**	9.2%	9.0%
Increase in employees	3%	(1%)	8%
Share of women among newly appointed managers	43%	44%	42%

1. Includes approximately 2,400 employees in NNIT A/S.

In November 2016, Novo Nordisk reduced its workforce by 2% across its global organisation. The decision taken was one of several actions to reduce operating costs in response to a challenging competitive environment in 2017, especially in its large US market. The reductions primarily affected R&D units, headquarter staff functions as well as positions in the global commercial organisation, mainly in the USA. Around half of the lay-offs were in Denmark. At the end of 2016, the total number of employees was 42,446, corresponding to 41,971 full-time positions, which is a 3% increase compared with 2015. The growth is primarily driven by expansion within the International Operations sales region and in Product Supply.

GENDER IN MANAGEMENT 2016



Among employees as a whole, the gender split was approximately 50:50 in 2016, which is the same as in 2015.

3.2 FREQUENCY OF OCCUPATIONAL ACCIDENTS

Accounting policies

The frequency of occupational accidents with absence is measured as the internally reported number of accidents using full-time employees, excluding externals, employees on unpaid leave, interns, bachelor and master thesis employees, and substitutes, per million nominal working hours. An occupational accident with absence is any work-related accident causing at least one day of absence in addition to the day of the accident.

Development
The average frequency rate of occupational accidents with absence in 2016 was 3.0 per million working hours, unchanged from 2015. The number of occupational accidents with absence increased by 1% compared with 2015. One Novo Nordisk employee in Pakistan died in a work-related accident. Novo Nordisk works with a zero-injury mindset and has a long-term commitment to continuously improving safety performance. The link between company values and safety behaviour is emphasised to ensure that employees always make the safe choice.

SECTION 4 ASSURANCE

4.1 BUSINESS ETHICS REVIEWS

The number of business ethics reviews is recorded as the number of business ethics reviews and trend reports performed by Group Internal Audit in affiliates, production sites and headquarter areas. Any gaps between procedures and behaviour are identified and presented to Management and the Board of Directors as findings. An action plan for the closure of findings is agreed upon, and Group Internal Audit follows up on the implementation of the agreed actions before closing the findings.

Development
A total of 52 business ethics reviews were completed in 2016 with 234 findings, compared with 49 reviews with 183 findings in 2015. It is Group Internal Audit's assessment that the overall business ethics compliance level is sound. Closure of findings progressed as planned, and there were no overdue findings as of 31 December 2016.

4.2 FULFILMENT OF ACTION POINTS FROM FACILITATIONS OF THE NOVO NORDISK WAY

Accounting policies

Facilitation is the internal audit process for assessing compliance with the Novo Nordisk Way. The assessment is based on review of documentation followed by an on-site visit where randomly selected employees, management and stakeholders are interviewed. Any identified gaps related to Novo Nordisk Way are identified and presented to Management as findings. The facilitator and management agree on an action plan to close the findings. The percentage of fulfilment of action points is measured as an average of timely closure of action points issued in the current year and the two previous years. The reason for using a three-year average as the basis for the calculation is that action lead times typically vary from a few months to more than a year.

FACILITATIONS AND FINDINGS	2016	2015	2014
Fulfilment of action points	95%	94%	95%
Facilitations	84	65	69
Findings	283	257	213

A total of 84 units were facilitated covering approximately 25,000 employees, 12% of whom were interviewed. In addition, feedback on those units was collected from almost 1,000 stakeholders. Overall, the facilitations in 2016, as in 2015, showed a 'high level' of compliance with the Novo Nordisk Way. Corrective actions and corresponding deadlines were agreed with local management for all actions. The main areas of improvement identified, covering more than half of all findings, concerned Essential 2 'We set ambitious goals and strive for excellence', Essential 7 'We focus on personal performance and development' and Essential 9 'We optimise the way we work and strive for simplicity'. The ten Essentials are part of the Novo Nordisk Way. Read more on page p 19.

4.3 SUPPLIER AUDITS

Accounting policies

The number of supplier audits concluded by Novo Nordisk's Supplier Audit department includes the number of responsible sourcing audits and quality audits conducted in the areas of direct and indirect spend materials.

BY TYPE OF AUDIT	2016	2015	2014
Responsible sourcing audits	27	28	25
Quality audits	196	212	199
Total supplier audits	**223**	240	224

The number of audits concluded in 2016 decreased by 7% compared with 2015. More audits were conducted in 2015, mainly due to Management's decision to build new factories. There were no critical findings in 2016.

4.4 PRODUCT RECALLS

Accounting policies

The number of product recalls is recorded as the number of times Novo Nordisk has instituted a recall and includes recalls in connection with clinical trials. A recall can affect various countries but only counts as one recall.

Development

In 2016, Novo Nordisk had six instances of product recalls compared with two in 2015; one was critical. Two of the recalls were due to inappropriate product storage in the external distribution chain while four were due to products that did not fully meet specifications. Local health authorities were informed in all instances to ensure that distributors, pharmacies, doctors and patients received appropriate information.

4.5 FAILED INSPECTIONS

Accounting policies

The number of failed inspections is measured in relation to the US Food & Drug Administration (USFDA), European Medicines Agency (EMA), the Japanese Pharmaceuticals & Medical Devices Agency (PMDA), Lloyd's Register Quality Assurance (LRQA) and domestic authorities for strategic manufacturing sites. Failed inspections are defined as inspections where Warning Letters or EMA non-compliance letters related to GMP inspections are received, GMP/ISO certificates for strategic sites are lost, pre-approval inspections result in a Warning Letter, study conclusions are changed due to GCP/GLP inspection issues, or marketing or import authorisations are withdrawn due to inspection issues. Strategic sites are defined as the manufacturing sites in Brazil, China, Denmark, France and the USA.

Development

In 2016, as in 2015, there were no failed inspections among those resolved at year-end. In 2016, 74 inspections were conducted compared with 82 in 2015. At year-end, 49 inspections had been passed and 25 were unresolved, as final inspection reports had not been received or the final authority acceptance was pending, which is normal. All but five 2015 inspections have been explicitly passed; among the unresolved were two USFDA GMP inspections.

4.6 COMPANY REPUTATION

Accounting policies

Company reputation is measured annually using the RepTrak® methodology developed by Reputation Institute. The total score is measured as the mean company reputation score among people with diabetes, general practitioners, diabetes specialists and employees across 15 key markets. Reputation is measured on a scale of 0–100, with 100 being the best possible score. A score above 80 is considered excellent; a score between 70 and 80 is considered strong. Data was collected from January through October 2016.

The data for external stakeholders are collected through annual surveys carried out by external consultancy firms. The employee data are collected from the annual employee survey. For a few of the markets, historical data are not available for all the external stakeholder groups included. This has been assessed as having no material impact on the numbers reported nor on development trends.

COMPANY REPUTATION BY STAKEHOLDER GROUP	2016	2015	2014
People with diabetes	73.8	73.9	71.9
Employees	82.7	83.8	84.0
General practitioners	79.5	85.4	82.2
Diabetes specialists	80.8	86.4	85.1
Total score	**79.2**	82.4	80.8

The decline in score among general practitioners and diabetes specialists reflects a general trend across the pharmaceutical sector.

STATEMENT OF ENVIRONMENTAL PERFORMANCE

FOR THE YEAR ENDED 31 DECEMBER

	Note	2016	2015	2014
RESOURCES				
Energy consumption (1,000 GJ)	2.1	2,935	2,778	2,556
Water consumption (1,000 m^3)	2.2	3,293	3,131	2,959
EMISSIONS, ORGANIC RESIDUES AND WASTE				
Share of renewable power for production	3.1	78%	78%	73%
CO_2 emissions from energy consumption (1,000 tons)	3.1	92	107	120
CO_2 emissions from transport (1,000 tons)	3.1	38	43	57
Organic residues (tons)	3.2	114,805	124,049	110,095
Waste (tons)	3.3	37,940	34,715	30,720
Non-hazardous waste (ratio)	3.3	34%	42%	50%
Breaches of regulatory limit values	3.4	42	28	9

NOTES TO THE CONSOLIDATED ENVIRONMENTAL STATEMENT

Basis of preparation | Resources | Emissions, organic residues and waste

In the Consolidated environmental statement, Novo Nordisk reports on performance in terms of resources and emissions, organic residues and waste. Progress is reported against the long-term targets to continuously reduce environmental impacts. Read more on pp 13 and 15.

To support the three long-term targets, the environmental statement contains additional performance information of strategic importance such as organic residue, waste and breaches of regulatory limit values.

Significant reductions in CO_2 emissions from energy consumption

In 2015, Novo Nordisk set a bold target pledging that all production sites will run on electricity from renewable sources by 2020. The share of electricity from renewable sources remained at 78% in 2016, in volume 283 million kWh. Of the 16 production sites, 11 are now fully supplied with electricity from renewable sources. With regard to fuel used for steam and heat production, seven of the eight production sites in Denmark use bio-natural gas, which is biogas produced from liquid manure, food waste and organic waste from the industry. The biogas is upgraded to meet the quality requirements of natural gas and feeds into the natural gas distribution system. The facility in Brazil uses certified wood to produce the steam used in production. The remaining production facilities use natural gas.

SECTION 1 BASIS OF PREPARATION

General reporting standards and principles

The Consolidated environmental statement has been prepared in accordance with the same standards as those for the Consolidated social statement. Read more in section 1 'Basis of preparation' of the Consolidated social statement on p 99.

Principles of consolidation

The Consolidated environmental statement covers the production sites including office buildings and R&D at the sites, except for CO_2 emissions from transport, which covers external suppliers used to distribute Novo Nordisk products.

ENVIRONMENTAL ACCOUNTING POLICIES

The accounting policies set out below have been consistently applied in preparation of the Consolidated environmental statement for all the years presented.

Changes to accounting policies and disclosures

The following disclosure change has been made to align with Management priorities:

- 'Share of renewable power for production' has been added, as it is a strategic focus area.

SECTION 2 RESOURCES

2.1 ENERGY CONSUMPTION

Accounting policies

Energy consumption is measured as both direct supply of energy (internally produced energy), which is energy Novo Nordisk produces from mainly biogas, natural gas and wood, and indirect supply of external energy (externally produced energy), which is electricity, steam and district heat. The consumption of fuel (internally produced energy) and externally produced energy is based on meter readings and invoices.

ENERGY CONSUMPTION IN 1,000 GJ	2016	2015	2014
Diabetes and obesity care	2,050	2,006	1,816
Biopharmaceuticals	460	322	316
Not allocated[1]	425	450	424
Total energy consumption	**2,935**	2,778	2,556

1. Not allocated consists of consumption that cannot be directly linked to the production of either Diabetes and obesity care or Biopharmaceuticals, ie office buildings and research activities.

In 2016, energy consumption increased by 6% compared with 2015, primarily due to the new biopharmaceutical production facility in New Hampshire, USA, which was included in the corporate reporting for the first time. In addition, production increased within some areas in both Diabetes and obesity care and Biopharmaceuticals.

2.2 WATER CONSUMPTION

Accounting policies

Water consumption is measured based on meter readings and invoices. It includes drinking water, industrial water and steam.

WATER CONSUMPTION IN 1,000 M^3	2016	2015	2014
Diabetes and obesity care	2,866	2,753	2,568
Biopharmaceuticals	260	213	209
Not allocated[1]	167	165	182
Total water consumption	**3,293**	3,131	2,959

1. Not allocated consists of consumption that cannot be directly linked to the production of either Diabetes and obesity care or Biopharmaceuticals, ie office buildings and research activities.

In 2016, water consumption increased by 5% compared with 2015, primarily due to increased production within some areas in both Diabetes and obesity care and Biopharmaceuticals, including a new biopharmaceuticals facility in New Hampshire, USA. More than half of the water is used at the production site in Kalundborg, Denmark.

Two facilities are located in regions subject to high water stress, consuming 6% of the total water used at Novo Nordisk sites. There have been no water shortage incidents and overall, water consumption at these facilities decreased in 2016.

SECTION 3 EMISSIONS, ORGANIC RESIDUES AND WASTE

3.1 CO_2 EMISSIONS

Accounting policies

Share of renewable power for production
Share of renewable power is reported according to the Greenhouse Gas (GHG) Protocol Scope 2 Guideline. It is calculated as the sum of electricity in each country that comes from 100% renewable sources, either sourced from the market or self-produced.

CO_2 emissions from energy consumption
The amount of CO_2 emissions from energy consumption covers consumption at production sites measured in metric tons. CO_2 emissions from energy consumption are calculated according to the GHG Protocol and based on emission factors from the previous year.

CO_2 emissions from transport (product distribution)
CO_2 emissions from product distribution are calculated by external transportation suppliers as the estimated emissions from product distribution in metric tons. CO_2 emissions are calculated as the worldwide distribution of semi-finished and finished products, raw materials and components by air, sea and road between production sites and from production sites to affiliates, direct customers and importing distributors. CO_2 emissions from product distribution from affiliates to pharmacies, hospitals and wholesalers are not included.

3.1 CO_2 EMISSIONS (CONTINUED)

CO_2 EMISSIONS IN 1,000 TONS	2016	2015	2014
Share of renewable power for production	78%	78%	73%
CO_2 emissions from energy consumption	92	107	120
– Diabetes and obesity care	78	88	94
– Biopharmaceuticals	11	6	10
– Not allocated[1]	3	13	16
CO_2 emissions from transport	38	43	57
Total CO_2 emissions	**130**	150	177

1. Not allocated consists of consumption that cannot be directly linked to the production of either Diabetes and obesity care or Biopharmaceuticals, ie office buildings and research activities.

The share of renewable electricity remained stable at 78% in 2016. Novo Nordisk has a target of reaching 100% electricity for production from renewable sources by 2020. Overall, 11 out of 16 production sites now use electricity exclusively from renewable sources.

While energy consumption increased in order to meet market demands, the overall CO_2 emissions from energy consumption for production decreased by 14% in 2016 compared with 2015. This is a result of the efforts to increase the use of renewable energy and the ongoing conversion to less CO_2 intensive energy sources.

Emissions from transport (product distribution) decreased by 12% compared with 2015, due to increased distribution by sea as opposed to air transport. 79% of the emissions from transport are from air transport. Distributing as many products as possible by sea remains a priority for Novo Nordisk, as sea transport reduces both CO_2 emissions and costs.

3.2 ORGANIC RESIDUES

Accounting policies

Organic residues consist of recycled biomass and ethanol from the production of the active pharmaceutical ingredients (API). The biomass is measured in m^3 and converted to tons. The amount of ethanol is calculated based on volume and concentration and then converted to tons. The residues are primarily used in biogas plants where energy is recovered. The digested slurry is then used as fertilizers on local farmland after it has been used in biogas production.

ORGANIC RESIDUES (TONS)	2016	2015	2014
Biomass	108,751	113,453	101,729
Recyclable ethanol	6,054	10,596	8,366
Total organic residues	**114,805**	124,049	110,095

The total amount of organic residues, a by-product of production of API, decreased by 7% due to changes in the product mix of API. Ethanol decreased by 43% from a relative high level in 2015 when impurities in the ethanol waste resulted in lower regeneration.

3.3 WASTE

Accounting policies

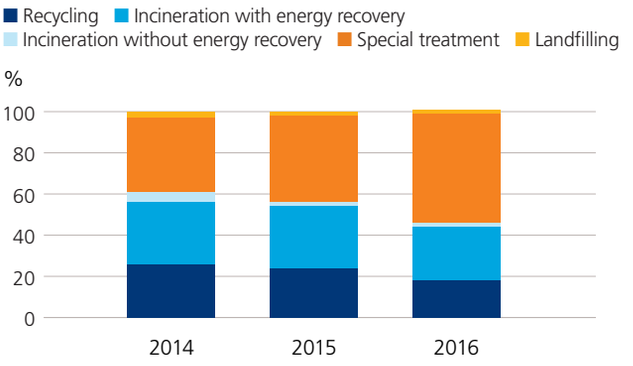
Waste is measured as the sum of non-hazardous and hazardous waste disposed of based on weight receipts.

Non-hazardous waste (ratio) is calculated as a percentage of the total amount of waste disposed of.

TONS OF WASTE	2016	2015	2014
Non-hazardous waste	13,077	14,500	15,492
Hazardous waste	24,863	20,215	15,228
Total waste	**37,940**	34,715	30,720
Non-hazardous waste (ratio)	34%	42%	50%

The total amount of waste increased by 9% compared with 2015. Non-hazardous waste decreased by 10% while hazardous waste increased by 23%. This is mainly due to higher pilot production at a multi purpose production plant in Denmark where regeneration of ethanol is not possible due to risk of contamination. The ethanol, not suitable for biogas, is categorised as hazardous waste and disposed of as 'special treatment'. It is transported to a third-party manufacturing plant that can reuse the ethanol. Reducing ethanol waste is a high priority for Novo Nordisk, and efficient regeneration plants at API sites enable repeated reuse of the ethanol.

WASTE DISPOSAL



3.4 BREACHES OF REGULATORY LIMIT VALUES

Accounting policies

Breaches of regulatory limit values cover all breaches reported to the environmental authorities.

Development

Incidents with breaches of regulatory limit values increased from 28 in 2015 to 42 in 2016. The majority of the breaches were related to wastewater, with minor impacts on the environment. As in 2015, most of the breaches are related to pH and COD/BOD at one facility. A new neutralisation plant is intended to solve the pH issue, and in relation to COD/BOD, a root cause analysis has been conducted and an action plan prepared.

STATEMENT BY THE BOARD OF DIRECTORS AND EXECUTIVE MANAGEMENT ON THE ANNUAL REPORT

Today, the Board of Directors and Executive Management approved the Annual Report of Novo Nordisk A/S for the year 2016. The Board of Directors and Executive Management are jointly responsible for ensuring the integrity and quality of the report.

The Annual Report has been prepared in accordance with the International Integrated Reporting Framework.

The Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act.

Further, the Financial statements of the parent company and Management's Review have been prepared in accordance with the Danish Financial Statements Act.

In our opinion, the Consolidated financial statements and the Financial statements of the parent company give a true and fair view of the financial position at 31 December 2016, the results of the Group's and parent company's operations, and consolidated cash flows for the financial year 2016. Furthermore, in our opinion, Management's Review includes a true and fair account of the development in the operations and financial circumstances, 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.

Novo Nordisk's Consolidated social and environmental statements have been prepared in accordance with the reporting principles of materiality, inclusivity and responsiveness of AA1000APS(2008) and social and environmental accounting policies. They give a true and fair account and a balanced and reasonable presentation of the organisation's social and environmental performance in accordance with these principles.

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

Bagsværd, 1 February 2017

Registered Executive Management

Lars Fruergaard Jørgensen
President and CEO

Jesper Brandgaard
CFO

Mads Krogsgaard Thomsen

Henrik Wulff

Board of Directors

Göran Ando
Chairman

Jeppe Christiansen
Vice chairman

Bruno Angelici

Brian Daniels

Sylvie Grégoire

Liz Hewitt

Liselotte Hyveled

Anne Marie Kverneland

Søren Thuesen Pedersen

Stig Strøbæk

Mary Szela

INDEPENDENT AUDITOR'S REPORT

To the shareholders of Novo Nordisk A/S

Our opinion

In our opinion, the Consolidated financial statements give a true and fair view of the Group's financial position at 31 December 2016 and of the results of the Group's operations and cash flows for the financial year 1 January to 31 December 2016 in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act.

Moreover, in our opinion, the Financial statements of the Parent Company give a true and fair view of the Parent Company's financial position at 31 December 2016 and of the results of the Parent Company's operations for the financial year 1 January to 31 December 2016 in accordance with the Danish Financial Statements Act.

What we have audited
Novo Nordisk A/S' Consolidated financial statements and the Financial statements of the parent company for the financial year 1 January to 31 December 2016, pp 57–96 and pp 114–118, comprise income statement, balance sheet, statement of changes in equity, and notes to the financial statements including summary of significant accounting policies for the Group as well as for the Parent Company and statement of comprehensive income and statement of cash flow for the Group. 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 ethical requirements that are relevant to our audit of the financial statements in Denmark. We have also fulfilled our other ethical responsibilities in accordance with the IESBA Code.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements for 2016. 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.

Key Audit Matter	How our audit addressed the Key Audit Matter
Revenue recognition relating to rebates and discounts in the US business The Group sells to various customers in the USA, which can fall under certain commercial and government mandated contracts and reimbursement arrangements, of which the most significant are Managed Care, Medicare, Medicaid and charge-backs to wholesalers. These arrangements result in deductions to gross sales in arriving at net sales and give rise to obligations for the Group to provide customers with rebates, discounts and allowances, which for unsettled amounts are recognised as an accrual. We have focused on this area as rebates, discounts and allowances are complex and because establishing an appropriate accrual requires significant judgement and estimation by Management. This judgement is particularly complex in a US healthcare environment in which competitive pricing pressure and product discounting are growing trends. Refer to Note 2.1.	We have tested relevant controls including applicable information systems and Management's review controls. We have obtained Management's calculations for accruals under applicable schemes and assessed the significance of assumptions applied by comparing them to the Group's stated commercial policies, the terms of the applicable contracts, third party data and historical levels of paid rebates and discounts in the US business. We have compared the assumptions to contracted prices, historical rebates, discounts, allowances and to current payment trends. We have also considered the historical accuracy of the Group's estimates in previous years. We have formed an independent assessment of the most significant elements of the accrual at 31 December 2016 using third party data and compared this expectation to the actual accrual recognised by the Group.
Litigations The pharmaceutical industry is heavily regulated, which increases inherent litigation risk, and litigation and contingent liabilities may arise from product-specific and general legal proceedings, from guarantees, marketing practices, unethical behaviour or government investigations connected with the Group's activities. We have focused on this area as the amounts involved are potentially material and the valuation of the provision is based on application of material judgement and estimation, and is therefore associated with uncertainty. Accordingly, unexpected adverse outcomes could significantly impact the Group's reported profit and statement of financial position. Refer to Note 3.6.	We have tested relevant controls regarding capture of data and completeness and how Management assesses the need for a provision. We have discussed the status of significant known actual and potential litigation with in-house legal counsel. We have obtained and substantively tested evidence to support the decisions and rationale for provisions held or decisions not to recognise provisions, including correspondence with legal counsel and other counter-parties to litigation and considered Management's assessment of the probability of defending any litigation and the reliability of estimating any provisions. We have developed an independent expectation of the litigation provision based on product litigation history and other available evidence to assess the valuation and completeness of the provisions recognised by the Group. We have obtained confirmations from external legal counsel to confirm our understanding of settled and outstanding litigation and asserted claims. We have evaluated significant adjustments to legal provisions recorded during the year to determine if they were indicative of management bias. We have tested the completeness of the external legal counsels from whom we have asked for direct confirmation by testing legal expenses on a sample basis and comparing to internal documents.

Uncertain tax positions
The Group operates in a complex multinational tax environment and there are open tax and transfer pricing cases with domestic and foreign tax authorities.

We have focused on this area as the amounts involved are potentially material and the valuation of tax assets and liabilities is associated with uncertainty and judgement.

Refer to Note 2.6.

We have tested relevant controls regarding capture of data and completeness and how Management assesses the need for a provision.

In understanding and evaluating Management's judgements, we have considered the status of recent and current tax authority audits and enquiries, the outcome of previous claims, judgemental positions taken in tax returns and current year estimates and developments in the tax environment.

In addition, we have used our own local and international tax specialists, evaluated the adequacy of Management's key assumptions and read correspondence with tax authorities to assess the valuation of tax assets and liabilities.

Statement on Management's Review

Management is responsible for Management's Review (pp 1–56 and p 97).

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 Financial statements of the Parent Company 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 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 the preparation of Financial statements of the Parent Company that give a true and fair view in accordance with 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 misstatements, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the Group's and 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 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 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 (the Board of Directors) 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.

Bagsværd, 1 February 2017

PricewaterhouseCoopers
Statsautoriseret Revisionspartnerselskab (CVR no. 3377 1231)

Mogens Nørgaard Mogensen
State Authorised Public Accountant

Torben Jensen
State Authorised Public Accountant

INDEPENDENT LIMITED ASSURANCE REPORT ON THE SOCIAL AND ENVIRONMENTAL REPORTING

To the Stakeholders of Novo Nordisk A/S

We have undertaken a limited assurance engagement of the consolidated social and environmental information of the Annual Report (the report) of Novo Nordisk A/S for 2016 which comprises parts of the Management's Review (pp 11–13, and 15) and the Consolidated social and environmental statements on pp 98–106. The assurance engagement have also covered the nature and extent of Novo Nordisk's adherence to the AA1000 AccountAbility Principles Standard (2008) (AA1000APS) principles (inclusivity, materiality and responsiveness) with respect to stakeholder dialogue.

Novo Nordisk's responsibility for the consolidated social and environmental information

Novo Nordisk's management is responsible for preparation of the consolidated social and environmental information (the information) in accordance with the accounting policies described on pp 99–106 and for the Novo Nordisk approach towards adherence to AA1000APS. This responsibility includes design, implementation and maintenance of internal controls relevant to ensure that data are free from material misstatements, whether due to fraud or error.

Our independence and quality control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other ethical requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. We also qualify as independent as defined by the AA1000 Assurance Standard (2008) (AA1000AS). The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. Our work was carried out by an independent multidisciplinary team with experience in sustainability reporting and assurance.

Our responsibility

Our responsibility is to express a limited assurance conclusion on the information in the report based on the procedures we have performed and the evidence we have obtained. Furthermore, our responsibility is, by applying the AA1000AS, to express a moderate assurance conclusion and make recommendations for the nature and extent of Novo Nordisk's adherence to the AA1000APS principles.

We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000, "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board. ISAE 3000 requires that we plan and perform this engagement to obtain limited assurance about whether the information are free from material misstatement.

A limited assurance engagement undertaken in accordance with ISAE 3000 involves assessing the suitability of Novo Nordisk's use of stated accounting policies as the basis for the preparation of the information. Furthermore, it involves assessing the risks of material misstatement of the information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Moreover, we have planned our work based on the AA1000AS to perform a Type 2 engagement and to obtain moderate assurance regarding the nature and extent of Novo Nordisk's adherence to the principles of inclusivity, materiality and responsiveness.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

We conducted interviews with members of Executive Management, Corporate Sustainability, Region North America and an external stakeholder engaged in the Cities Changing Diabetes programme in Houston, USA. We have assessed Novo Nordisk's adherence to the principles of inclusivity, materiality and responsiveness and confirmed the existence of systems and procedures to support Novo Nordisk's Triple Bottom Line governance and stakeholder relationships. Our work focused on how the UN Sustainable Development Goals (SDGs) are aligned with the business strategy and the Cities Changing Diabetes programme.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether Novo Nordisk's consolidated social and environmental information have been prepared, in all material respects, in accordance with the social and environmental accounting policies applied and stated on pp 99–106.

Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the consolidated social and environmental information presented in Novo Nordisk's 2016 annual report are not prepared, in all material aspects, in accordance with the social and environmental accounting policies as stated on pp 99–106.

Furthermore, nothing has come to our attention causing us to believe that Novo Nordisk does not adhere to the AA1000APS principles.

Observations and recommendations

According to AA1000AS, we are required to include observations and recommendations for improvements in relation to adherence to the AA1000APS principles. We have no significant recommendations regarding inclusivity, materiality and responsiveness.

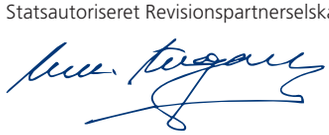
Regarding inclusivity
Novo Nordisk continues to demonstrate a strong commitment to accountability with systems and processes in place to support stakeholder engagement around sustainability issues. Stakeholder inclusivity is integrated across the business and in new initiatives. Novo Nordisk has continued to engage and include stakeholders in the initiatives to help citizens at risk of diabetes and people living with diabetes. Stakeholder engagement has also been extended to address the relevant SDGs.

Regarding materiality
Novo Nordisk continues to discuss, evaluate and determine material issues on an ongoing basis through a number of core business processes. The Social and Environmental Committee further strengthens the alignment of business strategy and the material societal challenges as set out in the SDGs. Work is ongoing to quantify the impacts of Novo Nordisk's activities and contribution to the delivery on the SDGs.

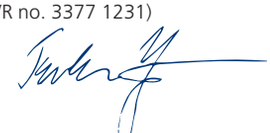
Regarding responsiveness
Novo Nordisk's commitment to being responsive to stakeholder needs and concerns is evident from the increasing involvement and focus, at both international, country and city level, on care and prevention of diabetes and other chronic diseases and also on responding to the SDGs. Novo Nordisk is considered to be understanding of and responsive to stakeholder concerns within the Cities Changing Diabetes programme and other strategic stakeholder engagement activities.

Bagsværd, 1 February 2017

PricewaterhouseCoopers
Statsautoriseret Revisionspartnerselskab (CVR no. 3377 1231)



Mogens Nørgaard Mogensen
State Authorised Public Accountant



Torben Jensen
State Authorised Public Accountant

PRODUCT OVERVIEW

A selection of Novo Nordisk's injection devices.

DIABETES CARE

NEW-GENERATION INSULIN AND COMBINATIONS
- Tresiba®, insulin degludec
- Ryzodeg®, insulin degludec/insulin aspart
- Xultophy®, insulin degludec/liraglutide

MODERN INSULIN
- Levemir®, insulin detemir
- NovoRapid®, insulin aspart
- NovoRapid® PumpCart®, pre-filled insulin pump cartridge
- NovoMix® 30, biphasic insulin aspart
- NovoMix® 50, biphasic insulin aspart
- NovoMix® 70, biphasic insulin aspart

HUMAN INSULIN
- Insulatard®, isophane (NPH) insulin
- Actrapid®, regular human insulin
- Mixtard® 30, biphasic human insulin
- Mixtard® 40, biphasic human insulin
- Mixtard® 50, biphasic human insulin

GLUCAGON-LIKE PEPTIDE-1
- Victoza®, liraglutide

OTHER PRE-FILLED INSULIN DELIVERY SYSTEMS
- FlexTouch®, U100, U200
- FlexPen®
- InnoLet®

OTHER INSULIN DELIVERY SYSTEMS
- PumpCart®, NovoRapid® cartridge to be used in pump
- Cartridge
- Vial

INSULIN PENS
- NovoPen® 5
- NovoPen® 4
- NovoPen® 3
- NovoPen Echo®, with memory function

NEEDLES
- NovoFine® Plus
- NovoFine®
- NovoTwist®
- NovoFine® AutoCover

ORAL ANTIDIABETIC AGENTS
- NovoNorm®, repaglinide

GLUCAGON
- GlucaGen®, glucagon for diagnostic use
- GlucaGen® Hypokit, glucagon emergency kit for severe hypoglycaemia

OBESITY CARE

GLUCAGON-LIKE PEPTIDE-1
- Saxenda®, liraglutide 3 mg

BIOPHARMACEUTICALS

HAEMOPHILIA
- NovoSeven®, recombinant factor VIIa, also available with pre-filled syringe in an increasing number of countries
- NovoEight®, recombinant factor VIII
- NovoThirteen®, recombinant factor XIII

HUMAN GROWTH HORMONE
- Norditropin®, somatropin (rDNA origin)
- Norditropin® FlexPro®, pre-filled multidose delivery system
- Norditropin® NordiFlex®, pre-filled multidose delivery system
- Norditropin® NordiLet®, pre-filled multidose delivery system
- Norditropin® SimpleXx®, durable multidose delivery system
- NordiPen®
- PenMate®, automatic needle inserter (for NordiPen® and NordiFlex®)

HORMONE REPLACEMENT THERAPY
- Vagifem®, estradiol hemihydrate
- Activelle®, estradiol/norethisterone acetate
- Kliogest®, estradiol/norethisterone acetate
- Novofem®, estradiol/norethisterone acetate
- Trisequens®, estradiol/norethisterone acetate
- Estrofem®, estradiol

The product overview on this page makes reference to our 2016 product offering. The names used are European product trade names with accompanying generic names. Trade and generic names may differ in other markets.

MORE INFORMATION AND REFERENCES

ADDITIONAL REPORTING

Novo Nordisk provides additional disclosure to satisfy legal requirements and stakeholder interests. Additional reports can be downloaded from novonordisk.com/annualreport.

MATERIALITY

Information deemed material for providers of financial capital in their decision-making is included in the Annual Report, ie of such relevance and importance that it could substantively influence their assessments of Novo Nordisk's ability to create value over the short, medium and long term.

ANNUAL REPORT

The full statutory Annual Report is available online at novonordisk.com/annualreport.

A printed extract excluding the financial statements of the parent company is available in English.

This Annual Report is prepared in accordance with the International Financial Reporting Standards and the Danish Financial Statements Act. Moreover, it meets the requirements of an integrated report, as per the International Integrated Reporting Framework.

An shortened, printed version, consisting of the Management review and excerpts from the consolidated statements, is available in Danish.

FORM 20-F

The Form 20-F is filed using a standardised reporting form so that investors can evaluate the company alongside US domestic equities. It is an annual reporting requirement by the US Securities and Exchange Commission (SEC) for foreign private issuers with equity shares listed on exchanges in the United States.

CORPORATE GOVERNANCE REPORT

The corporate governance report discloses Novo Nordisk's compliance with Danish Corporate Governance Recommendations to meet requirements of the Danish Financial Statements Act.

UNITED NATIONS GLOBAL COMPACT

The Communication on Progress to the UN Global Compact is a voluntary reporting on performance towards its 10 principles on human rights, labour rights, environment and anti-corruption and additional progress reporting on corporate sustainability leadership and UN goals. It complements the Annual Report to meet the requirements of the Danish Financial Statements Act, sections 99a and 99b, on corporate responsibility and gender diversity. It also adheres to the UN Guiding Principles Reporting Framework on respect of human rights.

NEWS AND UPDATES

FOR MORE NEWS FROM NOVO NORDISK, VISIT

novonordisk.com/investors
novonordisk.com/media
novonordisk.com/sustainability

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Market data on pp 16, 17 and 37 are from IMS MIDAS Health 2016.

Design and production: ADtomic Communications. **Accounts and notes:** Team2Graphics. **Printing:** Bording PRO as, February 2017. **Photography:** Yasuhiro Nakaoka, Jesper Edvardsen, Ulrik Jantzen, Jesper Westley Jørgensen, Tobias Selnæs Markussen, Gerardo Larios García, Thomas Larsen, Ted Fahn, Rob Taub, Jennifer Ludwig, Bruce McCarthy and Willi Hansen.

FINANCIAL CALENDAR 2017

23 MARCH 2017
Annual General Meeting 2017

24 MARCH 2017
Ex-dividend

27 MARCH 2017
Record date

28 MARCH 2017
Payment, B shares

4 APRIL 2017
Payment, ADRs

3 MAY 2017
Financial Statements for the first three months of 2017

9 AUGUST 2017
Financial Statements for the first six months of 2017

18 AUGUST 2017
Ex-dividend

21 AUGUST 2017
Record date

22 AUGUST 2017
Payment, B shares

29 AUGUST 2017
Payment, ADRs

1 NOVEMBER 2017
Financial Statements for the first nine months of 2017

FINANCIAL CALENDAR 2018

1 FEBRUARY 2018
Financial Statement for the full year 2017

FINANCIAL STATEMENTS OF THE PARENT COMPANY 2016

The following pages comprise the financial statements of the parent company, being the legal entity Novo Nordisk A/S. Apart from ownership of the subsidiaries in the Novo Nordisk Group, the activity within the parent company mainly comprises sales, research and development, production, corporate activities and support functions.

INCOME STATEMENT

FOR THE YEAR ENDED 31 DECEMBER

DKK million	Note	2016	2015
Sales	2	68,671	65,911
Cost of goods sold	3	11,496	11,974
Gross profit		57,175	53,937
Sales and distribution costs	3	19,768	14,528
Research and development costs	3	11,974	11,265
Administrative costs	3	1,736	1,686
Other operating income, net		1,861	3,644
Non-recurring income from the partial divestment of NNIT A/S		–	*1,732*
Operating profit		25,558	30,102
Profit in subsidiaries, net of tax	9	17,817	14,800
Financial income	4	192	554
Financial expenses	4	847	6,099
Profit before income taxes		42,720	39,357
Income taxes	5	4,929	4,734
Net profit for the year		**37,791**	34,623

BALANCE SHEET

AT 31 DECEMBER

DKK million	Note	2016	2015
ASSETS			
Intangible assets	7	1,775	1,918
Property, plant and equipment	8	20,825	17,797
Financial assets	9	22,166	16,057
Total fixed assets		**44,766**	35,772
Raw materials		1,809	1,541
Work in progress		7,284	6,503
Finished goods		2,090	1,524
Inventories		11,183	9,568
Trade receivables		1,648	1,729
Amounts owed by affiliated companies		13,112	10,752
Tax receivables		1,209	3,708
Other receivables		807	624
Receivables		16,776	16,813
Deferred income tax assets	6	268	1,668
Marketable securities		2,007	3,539
Derivative financial instruments		529	304
Cash at bank and on hand		17,560	15,493
Total current assets		**48,323**	47,385
Total assets		**93,089**	83,157
EQUITY AND LIABILITIES			
Share capital		510	520
Net revaluation reserve according to the equity method		8,948	4,977
Development costs reserve		962	860
Retained earnings		34,278	40,001
Total equity		**44,698**	46,358
Deferred income tax liabilities	6	–	15
Other provisions	10	800	717
Total provisions		**800**	732
Current debt		19	778
Derivative financial instruments		2,578	1,382
Trade payables		2,266	2,288
Amounts owed to affiliated companies		37,134	26,380
Tax payables		163	188
Other liabilities	10	5,431	5,051
Current liabilities		**47,591**	36,067
Total liabilities		**47,591**	36,067
Total equity and liabilities		**93,089**	83,157

STATEMENT OF CHANGES IN EQUITY

DKK million	Share capital	Net revaluation reserve	Development cost reserve	Retained earnings	2016	2015
Balance at the beginning of the year	520	4,977	860	40,001	46,358	40,294
Appropriated from Net profit for the year				14,772	14,772	21,443
Total dividend				19,048	19,048	16,230
Appropriated from Net profit for the year to Net revaluation reserve		3,971			3,971	(3,050)
Effect of cash flow hedges transferred to the Income statement				614	614	2,162
Fair value adjustments of cash flow hedges for the year				(1,742)	(1,742)	(614)
Interim dividends paid during the year				(7,600)	(7,600)	–
Dividends paid for previous year				(16,230)	(16,230)	(12,905)
Share-based payments (note 3)				163	163	246
Tax credit related to restricted stock units				102	102	9
Purchase of treasury shares				(15,057)	(15,057)	(17,229)
Sale of treasury shares				–	–	33
Reduction of the B share capital	(10)			10	–	–
Exchange rate adjustments of investments in subsidiaries				(7)	(7)	(669)
Development costs			102	(102)	–	–
Other adjustments				306	306	408
Balance at the end of the year	510	8,948	962	34,278	**44,698**	46,358
Proposed appropriation of net profit:						
Interim dividend for the year					7,600	–
Final dividend for the year					11,448	16,230
Appropriated to Net revaluation reserve					3,971	(3,050)
Transferred to Retained earnings					14,772	21,443
Distribution of net profit					**37,791**	34,623

Please refer to note 4.1 to the Consolidated financial statements regarding average number of shares, treasury shares and total number of A and B shares in Novo Nordisk A/S.

NOTES

1 ACCOUNTING POLICIES

The financial statements of the parent company have been prepared in accordance with the Danish Financial Statements Act (Class D) and other accounting regulations for companies listed on NASDAQ Copenhagen.

The accounting policies for the financial statements of the parent company are unchanged from the last financial year. The accounting policies are the same as for the Consolidated financial statements with the adjustments described below. For a description of the accounting policies of the Group, please refer to the Consolidated financial statements, pp 63–64.

No separate statement of cash flows has been prepared for the parent company; please refer to the Statement of cash flows for the Group on p 60.

SUPPLEMENTARY ACCOUNTING POLICIES FOR THE PARENT COMPANY

Financial assets

In the financial statements of the parent company, investments in subsidiaries are recorded under the equity method, using the respective share of the net asset values in subsidiaries. Net profit of subsidiaries less unrealised intra-Group profits is recorded in the Income statement of the parent company.

To the extent net profit exceeds declared dividends from such companies, net revaluation of investments in subsidiaries is transferred to Net revaluation reserve under Equity according to the equity method. Profits in subsidiaries are disclosed as profit after tax.

Fair value adjustments of financial assets categorised as 'Available for sale' are recognised in the Income statement.

Tax

For Danish tax purposes, the parent company is assessed jointly with its Danish subsidiaries. The Danish jointly taxed companies are included in a Danish on-account tax payment scheme for Danish corporate income tax. All current taxes under the scheme are recorded in the individual companies. Novo Nordisk A/S and its Danish subsidiaries are included in the joint taxation of the parent company, Novo A/S.

Novo Nordisk recognises deferred income tax assets if it is probable that sufficient taxable income will be available in the future against which the temporary differences can be utilised.

Equity

The new Danish Financial Statements Act effective from 1 January 2016 requires an equity reserve corresponding to capitalised development costs. The effect at the beginning of the year is DKK 860 million, which is the carrying amount of development costs prior to 1 January 2016.

2 SALES

DKK million	**2016**	2015
Sales by business segment		
Diabetes and obesity care	68,472	65,665
Biopharmaceuticals	199	246
Total sales	**68,671**	65,911
Sales by geographical segment		
USA	33,398	32,234
Europe	13,197	13,861
International Operations	9,609	9,184
Region China	7,234	6,316
Pacific	5,233	4,316
Total sales	**68,671**	65,911

Sales are attributed to geographical segment based on location of the customer. For definitions of segments, please refer to note 2.2 to the Consolidated financial statements.

3 EMPLOYEE COSTS

DKK million	**2016**	2015
Wages and salaries	11,032	10,012
Share-based payment costs	163	246
Pensions	996	902
Other social security contributions	230	216
Other employee costs	326	335
Total employee costs for the year	12,747	11,711
Employee costs capitalised as intangible assets and property, plant and equipment	(236)	(103)
Change in employee costs capitalised as inventories	(145)	(145)
Total employee costs in the Income statement	**12,366**	11,463

For information regarding remuneration to the Board of Directors and Executive Management, please refer to 'Remuneration' on pp 50–53 and note 2.4 to the Consolidated financial statements.

	2016	2015
Average number of full-time employees in Novo Nordisk A/S	**16,683**	15,437

4 FINANCIAL INCOME AND FINANCIAL EXPENSES

DKK million	**2016**	2015
Interest income relating to subsidiaries	111	88
Income from associate company	64	47
Other financial income	17	419
Total financial income	**192**	554
Interest expenses relating to subsidiaries	50	16
Foreign exchange loss (net)	324	648
Other financial expenses	473	5,435
Total financial expenses	**847**	6,099

5 INCOME TAXES

Uncertain tax positions are presented individually as part of Tax receivables/ Tax payables.

6 DEFERRED INCOME TAX ASSETS/(LIABILITIES)

DKK million	2016	2015
Net deferred tax asset/(liability) at 1 January	1,653	1,484
Income/(charge) to the Income statement	(1,375)	94
Income/(charge) to Equity	(10)	75
Net deferred tax asset/(liability) at 31 December	**268**	1,653

The Danish corporate tax rate was 22% in 2016 (23.5% in 2015). Deferred tax has been calculated based on expected realisation, reflecting the reduction in the Danish corporate tax rate. The effect of the change, DKK 0 million (DKK 102 million in 2015), is included in total deferred income tax.

7 INTANGIBLE ASSETS

DKK million	2016	2015
Cost at the beginning of the year	3,363	2,205
Additions during the year	414	1,158
Disposals during the year	–	–
Cost at the end of the year	3,777	3,363
Amortisation at the beginning of the year	1,445	1,081
Amortisation during the year	141	121
Impairment losses for the year	416	243
Amortisation and impairment losses reversed on disposals during the year	–	–
Amortisation at the end of the year	2,002	1,445
Carrying amount at the end of the year	**1,775**	1,918

Intangible assets primarily relate to patents and licences, internally developed software, and costs related to major IT projects.

8 PROPERTY, PLANT AND EQUIPMENT

DKK million	Land and buildings	Plant and machinery	Other equipment	Assets in course of construction	2016	2015
Cost at the beginning of the year	12,805	16,638	2,303	6,209	37,955	34,571
Additions during the year	1,217	161	234	3,172	4,784	3,856
Disposals during the year	(138)	(401)	(30)	–	(569)	(472)
Transfer from/(to) other items	611	884	209	(1,704)	–	–
Cost at the end of the year	14,495	17,282	2,716	7,677	42,170	37,955
Depreciation and impairment losses at the beginning of the year	5,715	12,871	1,572		20,158	18,885
Depreciation for the year	538	898	167		1,603	1,653
Impairment losses for the year	10	19	78		107	48
Depreciation reversed on disposals during the year	(127)	(369)	(27)		(523)	(428)
Depreciation and impairment losses at the end of the year	6,136	13,419	1,790	–	21,345	20,158
Carrying amount at the end of the year	8,359	3,863	926	7,677	**20,825**	17,797

9 FINANCIAL ASSETS

DKK million	Investments in subsidiaries	Amounts owed by affiliates	Investment in associated company	Other securities and investments	2016	2015
Cost at the beginning of the year	8,779	1,467	153	367	10,766	10,357
Investments during the year	75	2,592		50	2,717	1,354
Divestments during the year	–	(619)		(48)	(667)	(945)
Cost at the end of the year	8,854	3,440	153	369	12,816	10,766
Value adjustments at the beginning of the year	27,709	(106)	47	373	28,023	28,527
Profit/(loss) before tax	17,050				17,050	20,719
Share of result after tax in associated companies			64		64	47
Income taxes on profit for the year	(4,936)				(4,936)	(3,882)
Market value adjustment				(77)	(77)	351
Dividends received	(13,587)		(26)		(13,613)	(17,408)
Divestments during the year	–			38	38	(472)
Effect of exchange rate adjustment	(105)	90		(1)	(16)	(12)
Other adjustments	(252)				(252)	153
Value adjustments at the end of the year	25,879	(16)	85	333	26,281	28,023
Unrealised internal profit at the beginning of the year	(22,732)				(22,732)	(19,945)
Change for the year – charged to Income statement	5,703				5,703	(2,037)
Effect of exchange rate adjustment	98				98	(750)
Unrealised internal profit at the end of the year	(16,931)	–	–	–	(16,931)	(22,732)
Carrying amount at the end of the year	17,802	3,424	238	702	**22,166**	16,057

Carrying amount of investments in subsidiaries does not include capitalised goodwill at the end of the year. For a list of companies in the Novo Nordisk Group, please refer to note 5.6 to the Consolidated financial statements.

10 OTHER PROVISIONS

DKK million	2016	2015
Non-current	800	717
Current	241	277
Total other provisions	**1,041**	994

Provisions for pending litigations are recognised as Other provisions. Furthermore, as part of normal business Novo Nordisk issues credit notes for expired goods. Consequently, a provision for future returns is made, based on historical product return statistics.

For information on pending litigations, please refer to note 3.6 to the Consolidated financial statements.

11 RELATED PARTY TRANSACTIONS

For information on transactions with related parties, please refer to note 5.4 to the Consolidated financial statements.

12 FEE TO STATUTORY AUDITORS

DKK million	2016	2015
Statutory audit	8	8
Audit-related services	3	2
Tax advisory services	3	3
Other services	1	2
Total fee to statutory auditors	**15**	15

13 COMMITMENTS AND CONTINGENCIES

DKK million	2016	2015
Commitments		
Operating leases	1,303	1,255
Research and development obligations	3,406	2,457
Purchase obligations relating to investments in property, plant and equipment	818	893
Other purchase obligations	4,485	4,296
Guarantees given for subsidiaries	10,661	6,418
Other guarantees	192	227
Operating leases expiring within the following periods from the balance sheet date		
Within one year	228	209
Between one and five years	709	642
After five years	366	404
Total operating leases	**1,303**	1,255

The operating lease costs for 2016 and 2015 were DKK 327 million and DKK 293 million respectively.

Security for debt		
Land, buildings and equipment etc at carrying amount	64	74

Novo Nordisk A/S and its Danish subsidiaries are jointly taxed with the Danish companies in the Novo A/S Group. The joint taxation also covers withholding taxes in the form of dividend tax, royalty tax and interest tax. The Danish companies are jointly and individually liable for the joint taxation. Any subsequent adjustments to income taxes and withholding taxes may lead to a larger liability. The tax for the individual companies is allocated in full on the basis of the expected taxable income.

For information on pending litigation and other contingencies, please refer to notes 3.6 and 5.3 to the Consolidated financial statements.

Manato Ohara lives in Kanagawa, Japan, and has type 1 diabetes.

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