



novo nordisk – a focused healthcare company

Investor conference call
First half of 2016

Shanghai – part of Cities Changing Diabetes



novo nordisk®

Agenda

Highlights and key events

By Lars Rebien Sørensen, president and CEO

Sales update

By Lars Rebien Sørensen, president and CEO

R&D update

By Mads Krogsgaard Thomsen, CSO

Financials and outlook

By Jesper Brandgaard, CFO

Questions and answers session

Forward-looking statements

Novo Nordisk's reports filed with or furnished to the US Securities and Exchange Commission (SEC), including the company's Annual Report 2015 and Form 20-F, which are both filed with the SEC in February 2016 in continuation of the publication of the Annual Report 2015, and presentations made, 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 financials and other financial measures
- Statements regarding future economic performance, future actions and outcome of contingencies such as legal proceedings, and
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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 presentation, 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 recall, 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 'Managing risks' on p 42-43 of the Annual Report 2015.

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

Important drug information

- Victoza® (liraglutide 1.2 mg & 1.8 mg) is approved for the management of type 2 diabetes only
- Saxenda® (liraglutide 3 mg) is approved in the US and EU for the treatment of obesity only

Highlights – First half of 2016

Sales development

- Sales increased by 7% in local currencies and 5% in Danish kroner
 - USA grew by 7% in local currencies and accounted for 50% share of growth in local currencies
 - International Operations and Region China grew by 11% and 10% in local currencies, respectively
 - Victoza® increased by 14% in local currencies and accounted for 32% share of growth in local currencies
 - New-generation insulin now accounts for 28% share of growth in local currencies

Research and Development

- Victoza® statistically significantly reduced the risk of major adverse cardiovascular events in the LEADER trial by 13%
- Tresiba® showed significant lower variance in the glucose-lowering effect compared to glargine U300 in PK/PD trial
- IDegLira received positive 16-0 vote in favour of approval from FDA Advisory Committee
- Phase 2a trial with oral insulin OI338GT completed with generally encouraging results

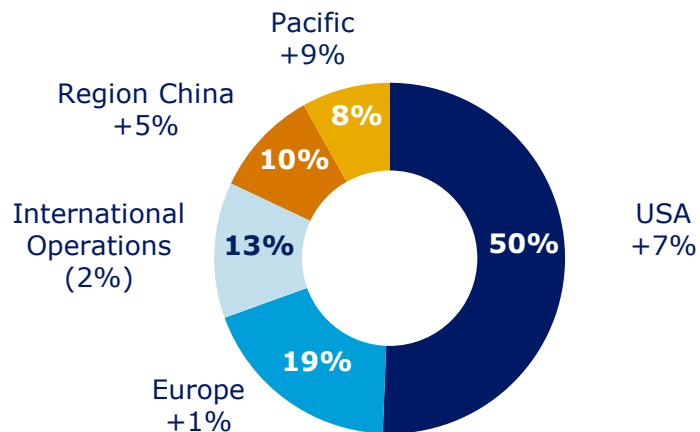
Financials

- Adjusted operating profit¹ increased by 8% in local currencies
- Diluted earnings per share increased by 9% to 7.63 DKK per share, adjusted for the partial divestment of NNIT it increased by 23%
- 2016 financial outlook:
 - Sales growth is now expected to be 5-7% measured in local currencies (around 2% lower in reported currencies)
 - Adjusted operating profit growth is still expected to be 5-8% measured in local currencies (around 3% lower in reported currencies)
- An interim dividend of DKK 3.00 per share of DKK 0.20 will be paid in August 2016

¹ Adjusted operating profit accounts for partial divestment of NNIT and out-licensing of assets for inflammatory disorders, both in 2015

All regions contribute to local sales currencies growth in the first half of 2016

Sales as reported – first half of 2016



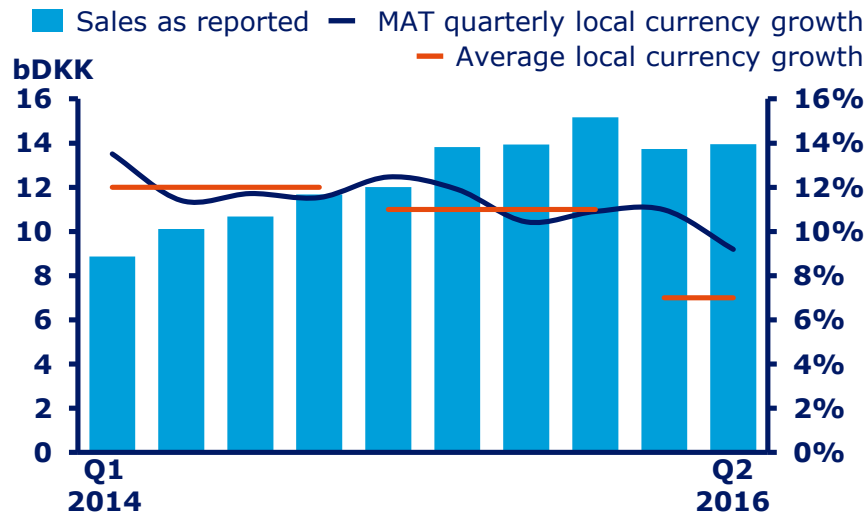
Sales of DKK 54,671 million (+5%)

Growth analysis – first half of 2016

Local currencies	Growth	Share of growth
USA	7%	50%
Europe	2%	7%
International Operations	11%	21%
Region China	10%	14%
Pacific	8%	8%
Total sales	7%	100%

Modest US sales growth in the second quarter reflects more challenging competitive environment

Modest sales growth in Q2 2016

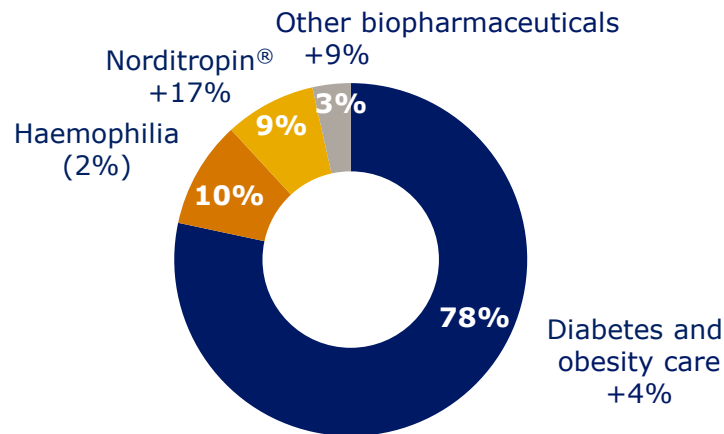


Key factors impacting growth

- Sales growth primarily driven by Tresiba®, Victoza® and Saxenda®
- Declining sales of modern insulin due to impact from
 - Wholesaler inventory management
 - NovoLog® contract loss
 - Lower impact from list price increases
 - Phasing of rebates
- Decline in sales of haemophilia products due to increasing competitive pressure and clinical trial activities

Sales growth is driven by Victoza® and new-generation insulin

Sales as reported – first half of 2016



Sales of DKK 54,671 million (+5%)

Note: Norditropin® sales growth in the first half of 2016 is derived primarily from the USA reflecting a positive non-recurring adjustment to rebates in the Medicaid patient segment

Growth analysis – first half of 2016

Local currencies	Growth	Share of growth
New-generation insulin ¹	174%	28%
Modern insulin	0%	2%
Human insulin	(1%)	(1%)
Victoza®	14%	32%
Other diabetes and obesity care ²	25%	15%
Diabetes and obesity care	7%	76%
Haemophilia ³	(1%)	(1%)
Norditropin®	19%	20%
Other biopharmaceuticals ⁴	10%	5%
Biopharmaceuticals	8%	24%
Total	7%	100%

¹ Comprises Tresiba®, Ryzodeg® and Xultophy®

² Primarily NovoNorm®, needles and Saxenda®

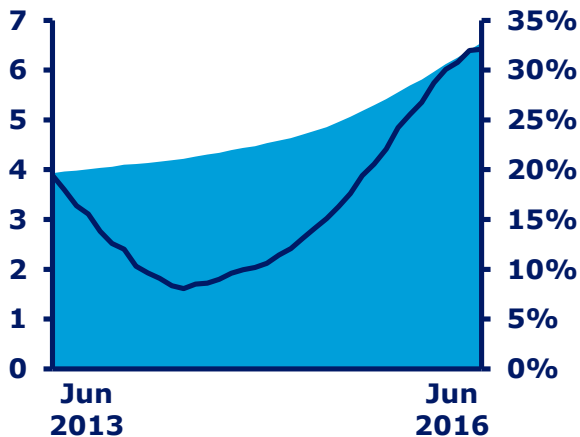
³ Comprises NovoSeven®, NovoEight® and NovoThirteen®

⁴ Primarily Vagifem® and Activelle®

Victoza® maintains leadership in the faster growing US GLP-1 market

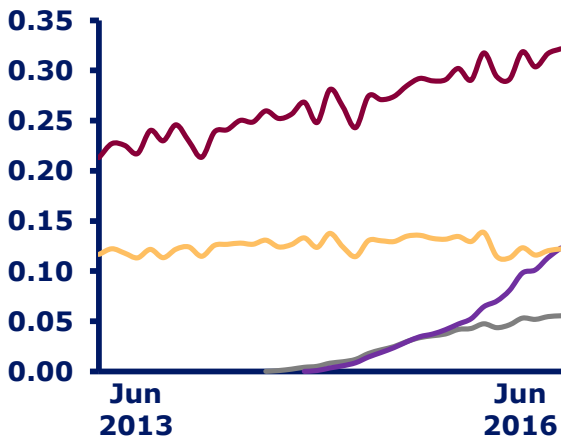
US GLP-1 market development

MAT ■ Total TRx **MAT volume**
GLP-1 TRx — Growth rate **growth rate**
 (million)



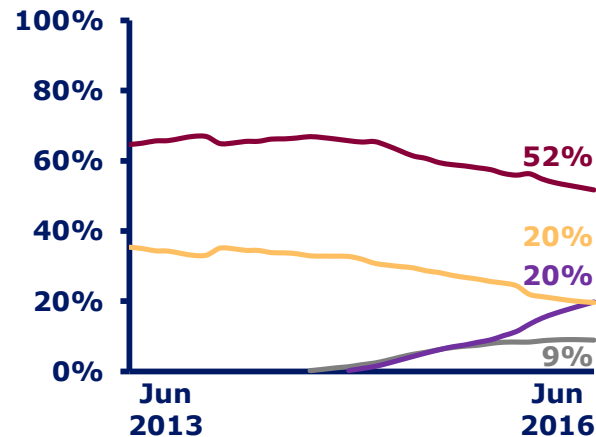
US GLP-1 market TRx volume

GLP-1 TRx — Victoza® — exenatide
volume — albiglutide — dulaglutide
 (million)



US GLP-1 market shares

GLP-1 TRx — Victoza® — exenatide
market — albiglutide — dulaglutide
share



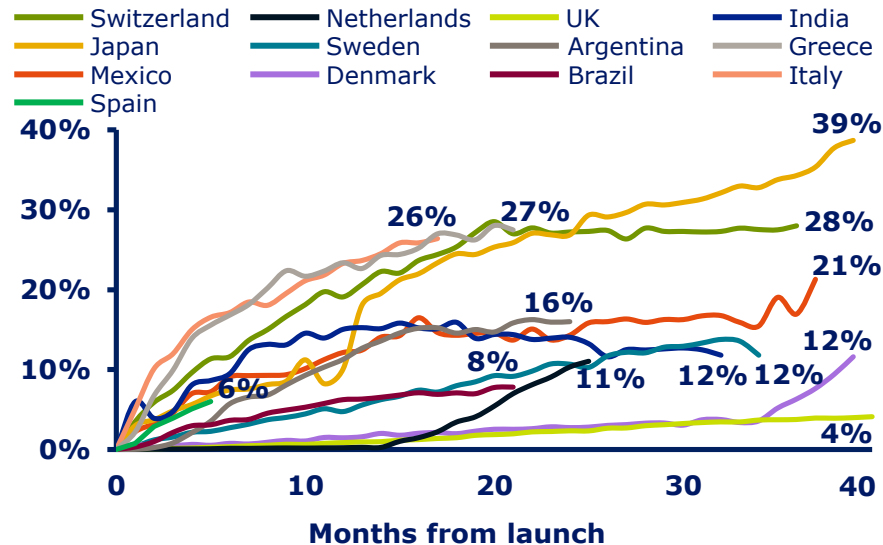
Source: IMS NPA MAT, June 2016

Roll-out of new-generation insulin portfolio is progressing

Key launch observations

- **Tresiba®** launched in 45 countries with solid penetration in markets with similar reimbursement as insulin glargine
- **Ryzodeg®** commercially launched in Mexico, India, Bangladesh, Japan, Russia and now Lebanon
- **Xultophy®** launched in Switzerland, Germany, the United Kingdom, Sweden, Hungary and now Greece

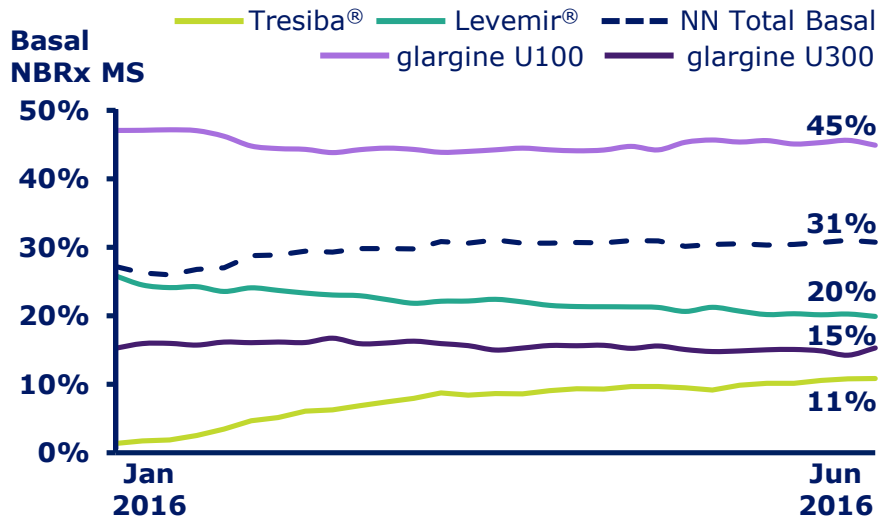
Tresiba® value share of basal insulin segment in selected countries, excl USA



Note: Limited IMS coverage in India
Source: IMS Monthly value figures, May 2016

Steady uptake of Tresiba® in the USA

Weekly US NBRx volume market shares



Note: The graph does not show NPH, which accounts for the residual market share
 Source: IMS weekly data, 15 July 2016, excludes Medicaid
 NBRx: New-to-brand prescriptions; MS: Market share

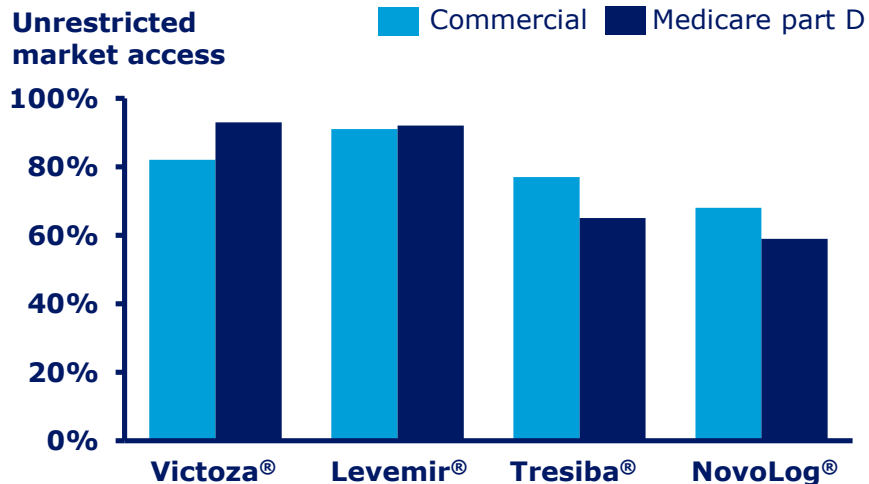
Tresiba® launched in the USA

- Full commercial launch in January 2016 following specialist engagement in Q4 2015
- Tresiba® volume market share has reached 2.9%
- Tresiba® U200 accounts for approximately 80% of total Tresiba® volume

Source: IMS weekly data, 15 July 2016, excludes Medicaid

Broad market access across the diabetes portfolio is expected to be maintained in the USA for 2017

Current level of unrestricted market access for key Novo Nordisk products in the USA



Source: FingerTip Formulary, June 2016

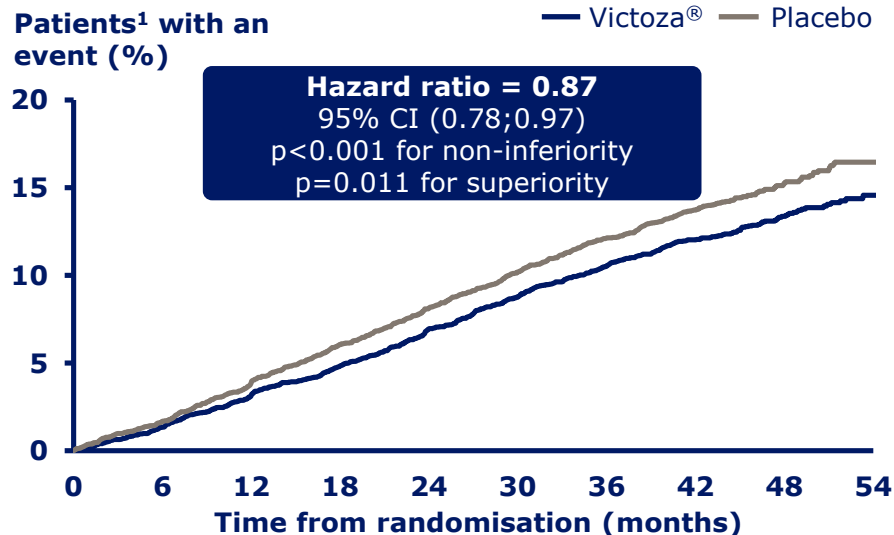
Note: Unrestricted access excludes prior authorisation, step edits and other restrictions

US formulary negotiations and 2017 pricing

- Majority of formulary negotiations for 2017 completed
- Market access anticipated to remain broad across the diabetes portfolio, at a level similar to 2016
- Tresiba® is expected to maintain more than 70% combined access for the patients in commercial channels and Medicare part D
- Based on the outcome of the formulary negotiations to date, net prices of the portfolio as a whole are expected to be moderately lower compared with the levels in 2016

Victoza[®] statistically significantly reduced the risk of major adverse cardiovascular events in the LEADER trial

**13% reduction in 3-point MACE
with Victoza[®] compared with placebo**



Key results and next step

- Superiority of Victoza[®] vs placebo was confirmed for time to first MACE in people with type 2 diabetes at high CV risk
- **Victoza[®] reduced the MACE risk by 13%** as well as CV and all-cause mortality by 22% and 15% respectively, compared with placebo when added to standard of care
- The result was consistent across sensitivity analyses
- Victoza[®] appeared to have a safe and well tolerated profile, generally consistent with previous studies for Victoza[®]
- **Next step:** Novo Nordisk will file for an inclusion of CV data in the label for Victoza[®] within the next three months

¹Inclusion criteria: Adults above 50 years with type 2 diabetes and established CV disease, above 60 years with multiple CV factors, HbA_{1c} ≥ 7.0%
MACE: major adverse cardiovascular events; 3-point MACE comprises cardiovascular death, non-fatal myocardial infarction and non-fatal stroke; CI: two-sided confidence interval

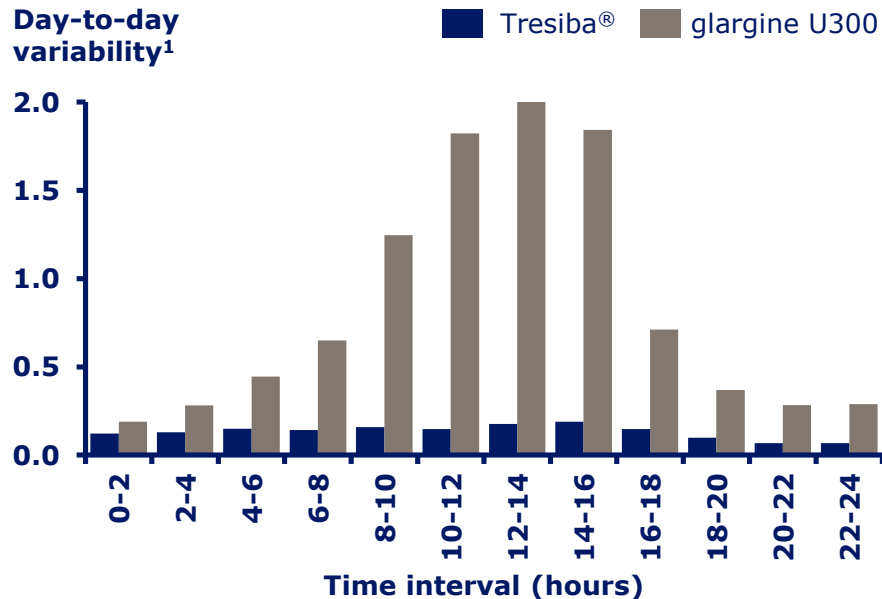
changing
diabetes[®]

Note: Indicated timeline as of financial release of first half of 2016 on 5 August 2016
CV: Cardiovascular



Tresiba® showed lower variability in the glucose-lowering effect compared to glargine U300 in PK/PD trial

Within-subject variability in steady state



¹ Day-to-day variability in 2-hours interval of AUC_{GIR} (variance)
 Note: 60 type 1 diabetic patients were enrolled and 57 completed the trial; Inclusion criteria: Age 18-65 years, diagnosis of type 1 diabetes, Fasting C-peptide <0.3 nmol/L, BMI: 18.5-29 kg/m², HbA_{1c}: <9%
 AUC_{GIR}: area under glucose infusion curve

Key results and next step

- The day-to-day **variability** in the glucose-lowering effect was approximately **four-times lower with Tresiba®** compared to glargine U300 when evaluated by within-subject variance
- Within-subject variability was consistently lower for Tresiba® than glargine U300 over the entire 24-hour period
- Glargine U300 showed a statistically significantly* lower potency compared to Tresiba® of approximately 30%
- **Next step:** Initiation of large 3b head-to-head trial study in type 2 diabetes to document clinical benefits including hypoglycaemia, with expected start in 2017

* p<0.001

Key development milestones

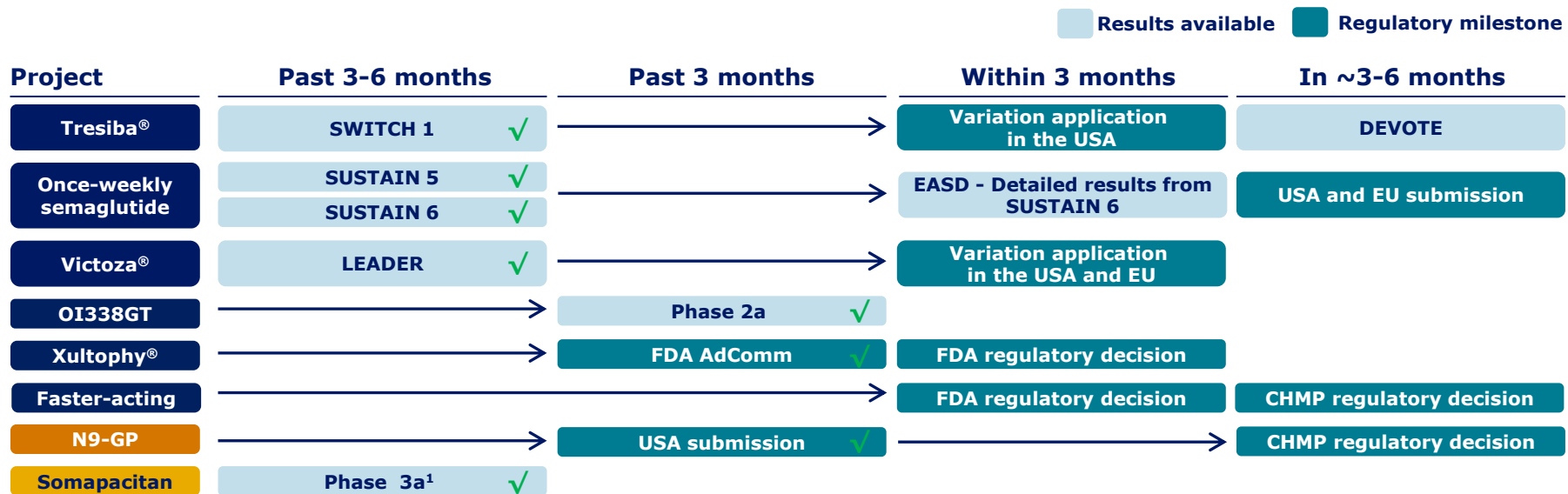
IDegLira (NN9068) received a positive 16-0 vote in favour of approval from the FDA Advisory Committee

Phase 2a trial with oral insulin OI338GT (NN1953) completed with generally encouraging results, while OI320GT (NN1957) was discontinued based on portfolio considerations

Proof-of-concept phase 2a study with the GLP-1/GIP dual-agonist NN9709 met the primary end-point but will be discontinued due to portfolio considerations

Long-acting factor IX (NN7999) filed for regulatory approval in the USA

R&D news flow with several regulatory decisions expected in the next six months



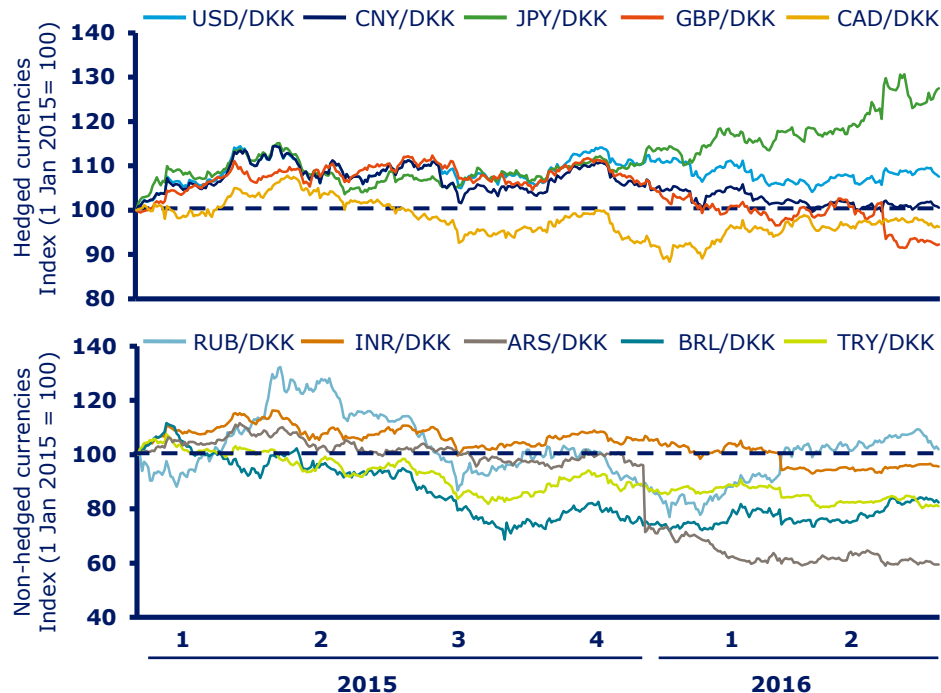
■ Diabetes ■ Haemophilia ■ Growth disorders

Note: Indicated timeline as of financial release of first half of 2016 on 5 August 2016; ¹ Study conducted in adult growth hormone disorder

Financial results – first half of 2016

DKK million	H1 2016	H1 2015	Change
Sales	54,671	52,259	5%
Gross profit	46,392	44,526	4%
<i>Gross margin</i>	84.9%	85.2%	
Sales and distribution costs	(13,608)	(13,322)	2%
<i>Percentage of sales</i>	24.9%	25.5%	
Research and development costs	(6,635)	(6,285)	6%
<i>Percentage of sales</i>	12.1%	12.0%	
Administration costs	(1,781)	(1,741)	2%
<i>Percentage of sales</i>	3.3%	3.3%	
Other operating income, net	438	3,161	N/A
<i>Non-recurring income¹</i>	-	2,825	
Operating profit	24,806	26,339	(6%)
<i>Operating profit adjusted for non-recurring income¹</i>	24,806	23,514	5%
Financial items (net)	(251)	(3,306)	N/A
Profit before income tax	24,555	23,033	7%
Tax	(5,132)	(4,814)	7%
<i>Effective tax rate</i>	20.9%	20.9%	
Net profit	19,423	18,219	7%
Diluted earnings per share (DKK)	7.63	7.02	9%
<i>Diluted earnings per share (DKK) adjusted for partial divestment of NNIT</i>	7.63	6.20	23%

Negative currency impact in 2016 driven by unfavourable development in both hedged and unhedged currencies



Hedged Currencies	2015 average	2016 average ²	Spot rate ²	Impact of a 5% move ³	Hedging (months)
USD ¹	673	669	665	2,000	12
CNY ¹	107.0	101.9	100.1	300	11 ⁴
JPY ¹	5.56	6.07	6.54	180	12
GBP ¹	1,028	946	880	80	12
CAD ¹	526	504	509	75	11

Non-hedged Currencies	2015 average	2016 average ²	Spot rate ²
RUB ¹	11.06	9.68	9.97
INR ¹	10.49	9.95	9.96
ARS ¹	0.73	0.46	0.44
BRL ¹	205	185	203
TRY ¹	248	228	222

¹ DKK per 100; ² As of 2 August 2016; ³ Operating profit in DKK million per annum; ⁴ Chinese Yuan traded offshore (CNH) and USD used as proxy

Note: Operating profit impact of one of the non-hedged currencies fluctuating 5% is in the range of DKK -15 to +30 million

Financial outlook for 2016

	Expectations 5 Aug 2016	Previous expectations 29 Apr 2016
Sales growth - local currencies	5-7%	5-9%
Sales growth - reported	Around 2 percentage points lower	Around 3 percentage point lower
Operating profit growth - local currencies	5-8%	5-9%
Operating profit growth - reported	Around 3 percentage points lower	Around 4 percentage point lower
Financial items (net)	Loss of around DKK 600 million	Loss of around DKK 200 million
Effective tax rate	20-22%	20-22%
Capital expenditure	Around DKK 7.0 billion	Around DKK 7.0 billion
Depreciation, amortisation and impairment losses	Around DKK 3.0 billion	Around DKK 3.0 billion
Free cash flow	Around DKK 38-41 billion	Around DKK 35-38 billion

The financial outlook is based on an assumption of a continuation of the current business environment and given the current scope of business activities and has been prepared assuming that currency exchange rates remain at the level as of 2 August 2016

Closing remarks

Solid market performance

- **≥10% annual diabetes care market growth driven by diabetes prevalence**
- **27% value market share in diabetes care and solid leadership position**
- **46% insulin volume market share with leadership position across all regions**
- **45% modern and new-generation insulin volume market share**
- **62% GLP-1 value market share with strong global leadership position**

Promising pipeline

- **The only company with a full portfolio of novel insulin products**
- **Semaglutide portfolio offers expansion opportunity with both injectable and oral administration**
- **Xultophy® supports promising outlook for insulin and GLP-1 combination therapy**
- **Saxenda® and multiple early stage development projects hold potential within obesity**
- **Broad pipeline within haemophilia and growth hormone disorders**

Source: IMS MAT May 2016 volume and value (DKK) figures

Investor contact information

Share information

Novo Nordisk's B shares are listed on the stock exchange in Copenhagen under the symbol 'NOVO B'. Its ADRs are listed on the New York Stock Exchange under the symbol 'NVO'. For further company information, visit Novo Nordisk on the internet at: novonordisk.com

Upcoming events

- 16 Sep 2016 Investor presentation at the European Association for the Study of Diabetes (EASD)
- 28 Oct 2016 Financial statement for the first nine months of 2016
- 02 Feb 2017 Financial statement for 2016

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