

## ANNUAL REPORT 1999

# SHARPENING OUR SENSES



Alertness and agility will be the principal criteria for success in the pharmaceutical and biotechnological business environments in the twenty-first century. To prosper as true leaders in our businesses, we must use our senses to their fullest extent – foreseeing any change, taking advantage of any opportunity, and listening closely to the needs of those who rely on us.

In early 1999, the management of Novo Nordisk decided to work towards a separation of our two main businesses, Health Care and Enzyme Business, into independent legal entities. This will make it possible for the two businesses to increase their operational freedom and focus on what they do best. Our aim is that Health Care and Enzyme Business will operate as two separate, listed companies around the turn of the year 2000/2001.

Today, our Health Care business accounts for more than 75% of Novo Nordisk's total sales. Health Care develops, manufactures and markets pharmaceutical products and services that provide significant benefits to patients, the medical profession and society. Health Care is the world leader in diabetes care and commands a strong position within other areas, such as hormone replacement therapy (HRT), coagulation disorders (NovoSeven<sup>®</sup>) and human growth hormone.

Our Enzyme Business develops, manufactures and markets enzymes that provide biological solutions to industrial problems. Enzyme Business is the world leader in industrial enzymes, with customers in a large variety of industries, the largest sectors being the detergent, starch and baking industries.

Establishing the new structure with two separate, listed companies is the most extensive organisational change we have undergone in our history. It impacts all our employees throughout the world and it represents an exciting opportunity for many, so the adrenalin is running high. Our senses are being sharpened in preparation for the future.

#### MANAGEMENT REPORT

"A very good and busy year for Novo Nordisk". In their report for 1999, the Board of Directors tell of a year with an unprecedented number of product launches and major changes initiated towards the creation of a new corporate structure. Mads Øvlisen, the present CEO of Novo Nordisk, provides a management perspective on the ongoing restructuring of the Group.

#### HEALTH CARE REPORT

Lars Rebien Sørensen, the future CEO of Health Care, provides his view on future challenges and opportunities for Novo Nordisk. We review key operational events of 1999 and analyse future perspectives based on markets, products and projects in the pipeline. Moreover, the vital goal of better diabetes management is explored in more detail.

#### ENZYME BUSINESS REPORT

Enzyme Business is preparing to become an independent enzyme company with the name Novozymes, and the future CEO, Steen Riisgaard, reviews the prospects and potential of the company. Key events and perspectives relating to the three segments of the enzyme market – the technical, food and feed segments – are also reviewed and analysed.

#### FINANCIAL REPORT

The management discusses the financial performance of Novo Nordisk in 1999, including the risk factors relevant to the company. Annual accounts include accounts for both the Novo Nordisk Group and Novo Nordisk A/S – the parent company. Financial performance over the last ten years is summarised on page 58-59.

## SHAREHOLDER INFORMATION

Here shareholders will find detailed information on Novo Nordisk's share performance and investor relations activities. Members of Novo Nordisk's Board of Directors and management are listed at the back of the report. Novo Nordisk is represented in 68 countries, which are listed inside the back cover. 3

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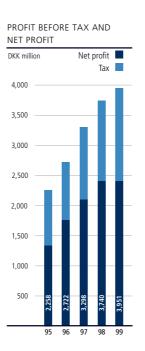
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## FINANCIAL HIGHLIGHTS

Operating profit and profit before tax increased by 19% and 6% respectively, to DKK 4,214 million and DKK 3,951 million. Net profit was DKK 2,411 million, at the level of 1998. Consolidated sales increased by 17% to DKK 20,924 million. Health Care sales increased by 20%. Enzyme Business sales increased by 6%. Capital expenditure (net) for property, plant and equipment amounted to DKK 1,831 million.

DKK million		inzym		iness	
22,500		Other	busine	esses	
20,000					
17,500					
15,000					
12,500	_				
10,000	_				
7,500	_				
5,000	_				
2,500	13,723	14,873	16,932	17,911	20,924

NET TURNOVER (DKK million)	1995	1996	1997	1998	1999	Change in % 98-99
Health Care	9,991	11,128	12,585	13,647	16,423	20.3%
Enzyme Business	3,388	3,745	4,347	4,264	4,501	5.6%
Other businesses	344	-		-	-	
Total net turnover	13,723	14,873	16,932	17,911	20,924	16.8%
OTHER KEY FIGURES (DKI	< million)					
Operating profit	2,090	2,487	3,041	3,536	4,214	19.2%
Profit before tax	2,258	2,722	, 3,298	3,740	3,951	5.6%
Net profit	1,342	, 1,759	2,097	2,409	2,411	0.1%
Shareholders' funds	14,781	16,343	18,240	17,972	18,535	3.1%
Total assets	22,682	24,048	27,171	27,342	31,013	13.4%
RATIOS (%)						
Operating profit margin	15.2	16.7	18.0	19.7	20.1	-
Pre-tax profit margin	16.5	18.3	19.5	20.9	18.9	-
Net profit margin	9.8	11.8	12.4	13.4	11.5	-
Return on shareholders' funds	9.4	11.3	12.1	13.3	13.2	-
PER SHARE OF DKK 10 (DK	K)					
Earnings (net profit)	18.03	23.63	28.17	32.47	33.72	3.8%
Cash flow	34.03	25.77	40.60	46.85	50.67	8.2%
Shareholders' funds	198.57	219.55	245.04	247.94	261.33	5.4%
Dividend	2.50	3.75	5.75	7.75	9.75	25.8%
US ACCOUNTING PRINC	IPLES					
Net profit (DKK million)	1,206	1,801	1,909	1,901	2,458	29.3%
Earnings (net profit) per share (D	кк) 16.20	24.18	25.65	25.62	34.37	34.2%
Shareholders' funds (DKK million)	15,214	16,872	18,696	18,478	19,311	4.5%
OPERATING PROFIT (DKK)	nillion)					
Health Care			1,823	2,270	3,150	38.8%
Enzyme Business			601	603	687	13.9%
Other			617	663	377	-43.1%
Total operating profit			3,041	3,536	4,214	19.2%
OPERATING PROFIT MAR	GIN (%)					
Health Care			14.5	16.6	19.2	-
ricular cure						
Enzyme Business			13.8	14.1	15.3	-





The new corporate structure will increase Novo Group companies' freedom to exploit business opportunities.

## SENSING OPPORTUNITIES

1999 was a very good and busy year for Novo Nordisk:

- We introduced an unprecedented number of new products in several key markets.
- The implementation of the new corporate structure, in which Health Care and Enzyme Business will operate as separate legal entities, progressed more quickly than originally expected.
- Operating profit (including one-off restructuring expenses) was DKK 4,214 million – an increase of 19%, which was significantly better than our own expectations at the beginning of the year.

## NEW PRODUCTS

Enzyme Business introduced nine new products in 1999 for applications in the starch, alcohol, textile, wine and food industries. In total, Enzyme Business has introduced more than 20 new products during the last three years.

Health Care introduced NovoRapid<sup>™</sup>, our new rapid-acting insulin analogue, into the first European markets, and launched Innovo<sup>®</sup>, a novel insulin delivery system. Introduction of our HRT product Activelle<sup>™</sup> and our new liquid growth hormone product Norditropin<sup>®</sup> SimpleXx<sup>™</sup> continued in Europe, and we introduced our haemophilia preparation NovoSeven<sup>®</sup> in the US. Introduction of Novo-Norm<sup>®</sup>, our oral treatment for Type 2 diabetes, continued in further key European markets.

Both of Novo Nordisk's main business segments are thus well placed to continue their growth in the coming years.

#### NEW CORPORATE STRUCTURE

The international pharmaceutical industry is currently experiencing massive changes, with mergers and mega-mergers being reported from all quarters. We are not convinced that all these mergers result in stronger companies.

We at Novo Nordisk believe that our focused business strategy is our strength. Therefore we want to continue as independent companies. However, if acquisitions, alliances and cooperative agreements fit into our strategy, improving our ability to reach our goals, we will naturally pursue such opportunities. This is the reason that we are working to establish a new corporate structure, initially with Health Care and Enzyme Business and, later, ZymoGenetics all as independently listed companies.

The objective of this new structure is to give each of the three companies as much operational freedom as possible – including the freedom for each to establish itself as the best in its business; a position that will build on living up to the basic beliefs and values that apply to all companies in the Novo Group.

We expect the new structure to increase motivation for both management and employees due to increased business focus and clearer understanding of strategic goals. We also expect these advantages to allow the new structure to create value for our many stakeholders, especially shareholders.

Health Care will retain the name Novo Nordisk A/S, which will thus be the continuing company, while Enzyme Business will be established as the Group's new independently listed company, Novozymes A/S. Both of these companies will have the same share capital and share structure as Novo Nordisk has today; all A shares in the two companies will thus be owned by Novo A/S, which is a wholly owned subsidiary of the Novo Nordisk Foundation. While the Novo Nordisk Foundation – and thus Novo A/S – cannot sell its A shares in Novo Nordisk A/S or Novozymes A/S, a change in the bylaws of the Novo Nordisk Foundation in 1999 allows it to reduce its influence from 'controlling' to 'significant'. However, according to the Novo Nordisk Foundation, this will not be considered unless at some future date it is regarded as serving the best interests of the Foundation and the individual companies.

The process of putting the new structure in place has progressed more quickly than anticipated. We expect the establishment of Novozymes A/S, the new enzyme company, to be adopted at an extraordinary general meeting of Novo Nordisk A/S around the turn of the year 2000/2001, to be applied retroactively as from 1 January 2000. For further information on the new corporate structure as viewed from a shareholder's perspective, see 'Shareholder information' on page 60.

# ANNUAL RETURN ON NOVO NORDISK B SHARES RELATIVE TO THE COPENHAGEN STOCK EXCHANGE TOTAL INDEX

Novo Nordis 1999	sk A/S* as of end-	ecember Copenhagen Stock Exchange total ir of end-December 1999			otal index as	
10 years	5 years	1 year		10 years	5 years	1 year
20%	28%	17%		8%	17%	22%

\* Before tax, but inclusive of dividend and value of subscription rights (1991)

## FINANCIAL RESULTS IN 1999

Our financial performance in 1999 exceeded our own forecasts made at the beginning of the year. This was primarily due to more favourable exchange rates than anticipated, especially JPY and USD against DKK, combined with the fact that the underlying business developed more favourably than expected.

Operating profit was DKK 4,214 million. Excluding one-off restructuring expenses of DKK 350 million, this was an increase of 29%. Operating profit for Health Care was DKK 3,150 million (excluding Seroxat<sup>®</sup> licence income), and operating profit for Enzyme Business was DKK 687 million. The operating profit margin rose to 20.1% from 19.7% in 1998. The profit margins for Health Care and Enzyme Business in 1999 were 19.2% (excluding Seroxat<sup>®</sup> licence income) and 15.3% respectively. Profit before tax rose by 6% to DKK 3,951 million, and net profit remained at the 1998 level at DKK 2,411 million. Consolidated sales in 1999 were DKK 20,924 million, an increase of 17% compared with 1998. Measured in local currencies, the increase was 12%. Health Care's sales rose by 20% compared with 1998, while Enzyme Business' sales rose by 6%.

For a detailed review of Novo Nordisk's results in 1999, see 'Financial discussion' on pages 23-27.

## HOLDING OF OWN SHARES

As of 31 December 1999, Novo Nordisk's holding of its own shares (treasury shares) was 4,514,059 B shares, representing 5.98% of the total number of shares. During the period 15 January 1999 - 12 April 1999 Novo Nordisk spent approximately DKK 0.9 billion on stock repurchase, thus finalising the programme initiated in 1998 to buy back a total of DKK 3 billion worth of shares. During the period 8 November 1999 - 31 December 1999 the company spent approximately DKK 0.5 billion on stock repurchase as part of the new programme announced on 3 November 1999 to buy back up to DKK 2 billion worth of shares.

#### DIVIDEND

At the annual general meeting on 23 March 2000, the Board of Directors will propose to raise the dividend for 1999 by 26% to DKK 9.75 (DKK 4.88 per ADS) per share of DKK 10 from DKK 7.75 (DKK 3.88 per ADS) in 1998. Thus the payout ratio for 1999 will be 29%, compared with 23% in 1998. No dividend will be paid on the company's holding of own shares.

## OUTLOOK FOR THE YEAR 2000

In 2000, Novo Nordisk will continue to introduce new Health Care products in new geographical markets, and Enzyme Business will introduce a number of new products for selected industry segments. Against this background, and based on expectations of continued rising sales of the Group's existing products, we expect a satisfactory development in sales of the company's products in 2000 relative to 1999.

At the end of 1999, Novo Nordisk's licence agreement with Smith-Kline Beecham regarding Seroxat<sup>®</sup>/Paxil<sup>®</sup> expired in practically all countries. As a result, licence income from this product in 2000 will be DKK 660-700 million lower than in 1999. In spite of this, and assuming that currency exchange rates remain at current levels for the rest of the year, we expect an increase in operating profit at the level of 10%. Adjusted for Seroxat<sup>®</sup> licence income and restructuring costs in 1999, the increase is expected to be at the level of 20%.

As per our announcement on 1 February 2000, Novo Nordisk has settled various patent disputes with Eli Lilly. Under the terms of the settlement, Novo Nordisk will receive a one-off payment, which will have a positive impact on operating profit. This is reflected in the forecasts of the year's results.

The development of Novo Nordisk's key invoicing currencies and continued introduction of recent products will be significant factors in relation to the fulfilment of our corporate financial goals for 2000. The free cash flow for 2000 is expected to develop satisfactorily. Assuming that current exchange rate levels remain unchanged for the rest of 2000, the impact from net financials is expected to be neutral. The effective tax rate is expected to be at the level of 37. Novo Nordisk's capital expenditure for property, plant and equipment is expected to be at the level of DKK 2 billion.

## MAJOR SHAREHOLDERS

Novo A/S, which is a wholly owned subsidiary of the Novo Nordisk Foundation, holds all Novo Nordisk's A shares and 13% of the B shares. Holding 25.1% of the total share capital, Novo A/S controls 69.0% of the total number of votes. For further information, see 'Shareholder information' on page 60.

## FORWARD-LOOKING STATEMENTS

The above section 'Outlook for the year 2000', the Health Care and Enzyme Business reports and Financial Discussion contain forwardlooking statements as the term is defined in the US Private Securities Litigation Reform Act of 1995.

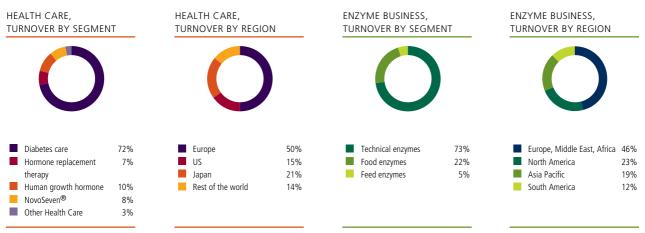
Such forward-looking statements are subject to risk and uncertainties that may cause actual results to differ materially from expectations, including unexpected developments in the international currency exchange and securities markets, government-mandated or market-driven price decreases for Novo Nordisk's products in the company's major markets and the introduction of competing products within Novo Nordisk's core businesses.

These and other risks and uncertainties are further described in reports filed with the US Securities and Exchange Commission (SEC) by Novo Nordisk and readily available to the public, including the company's Form 20-F, which was filed on 29 June 1999.

In addition to the risk factors described in the company's Form 20-F, the economic situation in Asia, Russia and Latin America could have an adverse impact on unit sales and/or prices, including currency exchange rates, in 2000. The total Group sales in Asia (excluding Japan), Russia and Latin America were approximately DKK 2 billion in 1999 corresponding to 10% of total Group sales.

## NOVO NORDISK AT-A-GLANCE

## NET TURNOVER BY BUSINESS SEGMENTS AND REGIONS IN 1999



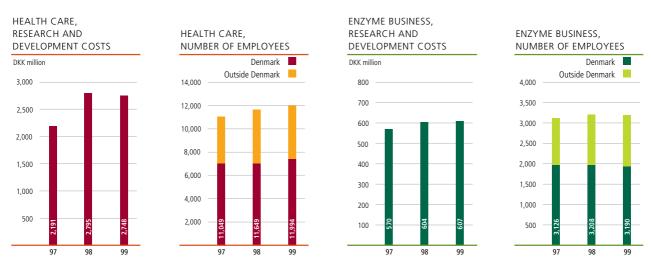
## DEVELOPMENT IN TURNOVER AND PRICES, VOLUME/MIX AND CURRENCY

#### HEALTH CARE NET TURNOVER

IILALIII CARL R					
DKK million	95	96	97	98	99
Net turnover	9,991	11,128	12,585	13,647	16,423
Prices	0%	0%	- 2%	0%	0%
Volume/mix	+14%	+ 13%	+ 11%	+ 11%	+ 15%
Currency	- 6%	- 2%	+ 4%	- 3%	+ 5%
Total growth	+ 8%	+ 11%	+ 13%	+ 8%	+ 20%

DKK million	95	96	97	98	99
Net turnover	3,388	3,745	4,347	4,264	4,501
Prices	- 2%	0%	0%	0%	- 1%
Volume/mix	+ 8%	+ 9%	+ 9%	- 1%	+ 3%
Currency	- 8%	+ 2%	+ 7%	- 1%	+ 4%

## RESEARCH AND DEVELOPMENT COSTS AND EMPLOYEES BY COMPANY





MADS ØVLISEN

President and CEO Novo Nordisk

## THE TIME IS RIGHT

Five years ago, when we introduced our focused business strategy, we set ourselves a very ambitious goal – that we would double the value of our company before 2000. Throughout Novo Nordisk the challenge was taken up and, as can be seen from the share price today, we succeeded. Despite tough circumstances, we have managed to change in a way that nobody thought possible and we have delivered the results we promised – financially as well as on environmental and social bottom lines.

So why 'split' the company now, just as we are demonstrating the strength of being a focused, independent player? The answer is very straightforward: we believe it makes business sense and the timing is right.

Our company has never been stronger in terms of product development, in terms of people skills, in terms of finances. We are doing this right now because we can do it at our own pace, with our own agenda.

Our businesses are well equipped for this new venture. Health Care, which has undergone a period of intense changes, is now in excellent shape financially and has developed its position in diabetes care into one of true leadership – including an unmatched project pipeline and product portfolio. In addition, NovoSeven<sup>®</sup>, our product for treatment of haemophilia, demonstrates the potential of our strategic work on therapeutic proteins.

Enzyme Business continues to achieve growth despite the adverse market and economic conditions of the last two years. In 1999 Enzyme Business became the market leader in all segments of the industrial enzymes market, including animal feed. This undisputed position has been attained through hard work, a determined effort to improve productivity, and a strong record of innovation.

Finally, ZymoGenetics, our US discovery company, has obtained a large number of proprietary rights in the field of genomics and bioinformatics with possibilities for creating many exciting new drugs.

We intend to continue in the same way as we have before: by combining our objective to be the best in our business with our commitment to continuously revitalise and live up to our values, in a strong corporate culture making Novo Nordisk a challenging place to work. It is these two characteristics that have made us the company we are today: the emphasis on business results in areas where we can compete and be the best, and the emphasis on how we conduct our business so we can be proud of our achievements.

Everything we have achieved during the last few years has been thanks to Novo Nordisk people who were ready to work towards a higher standard and who were willing to accept change. This confirmed our basic belief that in the long run, Novo Nordisk will only be able to stay ahead if our people show an ability to learn faster and adapt to change faster than the competition. Our sustainable competitive edge is built around personal qualities such as inventiveness, enthusiasm, motivation, the ability to communicate, and the ability to consistently identify the smartest solution.

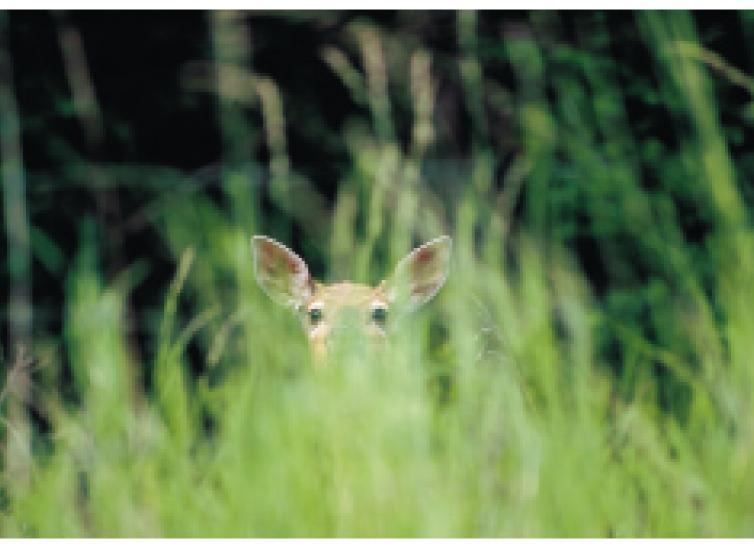
There are many different opinions about the ideal size of a company. Our history of development shows that know-how, insight and a will to succeed can flourish in any size of company. That is one of the reasons, of course, why we dare to split our company into smaller units at a time when everybody else seems to be getting bigger. We believe that flexibility and manoeuvrability, speed and agility will be key factors for success in the future.

We have decided not to break up our company ties, but to create a family of companies consisting of – if you will – a fleet of ships, each captained independently but sharing common values of what Novo Nordisk is all about.

We are a company built on a very simple premise: respect for and belief in the individual. This will not change with a new corporate structure. Our values will live on – not just as words expressed in a mission statement – but in the way every one of us conducts business every day at Novo Nordisk.

We have a worthwhile purpose as a company: to improve the way people live and work. People rely on us for an improved quality of life. They rely on us for straight answers, for honesty. They rely on us for business results achieved in a spirit of good citizenship.

That is what Novo Nordisk stands for. That is the promise of Novo Nordisk. That is how we will maintain our position as we go forward into the twenty-first century.



Being there, listening to and supporting patients and health professionals is what will continue to characterise Health Care.

# PREPARED TO LISTEN



## LARS REBIEN SØRENSEN

Corporate executive vice president Novo Nordisk Health Care

1999 was a good year for our Health Care business. Sales grew by 20% to DKK 16,423 million from DKK 13,647 million in 1998, primarily as a result of volume increase and product mix improvements. All our therapy areas contributed to the growth, with our diabetes care business and our haemophilia product NovoSeven<sup>®</sup> showing the strongest performance. On this basis, operating profit increased by 39% to DKK 3,150 million.

During 1999, we have been preparing for the new corporate structure of Novo Nordisk by re-examining our current strategies and checking to see that we are equipped to deal with the health care systems of tomorrow.

Allow me to present our conclusions. Our strategy is not one of size. We believe in concentrating our attention and resources on areas in which we can achieve and maintain a leading position, a strategy that has served us well in the past. We intend to stay independent and then form alliances and partnerships whenever necessary to serve our business purposes.

In diabetes, our largest business area, we – as well as the societies we operate in – still face many challenges. For example, it will be some time before treatment has reached an acceptable level (see article on pages 12-13). Novo Nordisk's broad range of insulin products and devices and NovoNorm<sup>®</sup>, our oral hypoglycaemic agent, put us in a strong position to meet this challenge. Furthermore, our pipeline fields the industry's broadest range of diabetes discovery and development projects.

We have a long-standing history of being there for our customers, that is, supporting patients and health professionals in achieving better treatment outcomes. From meetings I have had with patients, doctors, nurses and policy makers around the world I have learned that our support is needed more than ever. Some maintain that in the short term, the most significant improvements will probably occur through greater awareness about diabetes, education and improving deficiencies in the health care system. I believe that is right. Therefore, in addition to increasing our efforts to identify better pharmaceuticals for diabetes, we are committed to promoting collaboration with all parties who share the common goal of defeating diabetes. Outside the field of diabetes, we have leading products for growth disorders, hormone replacement therapy and haemophilia. But do we have the capacity to remain in these areas at the same time as we increase our efforts within diabetes? The answer is yes. Although these areas are unlikely to become such broad, multi-product franchises, our products are of great benefit to patients and provide a competitive return on our investments.

Novo Nordisk's Board of Directors have decided to appoint me president and CEO of the new, independent, health care company in the Novo Group. To be entrusted with such a task is a great honour and responsibility. Our products are designed to treat patients with serious, sometimes life-threatening, diseases; it is my intention to take on this responsibility in a manner that will benefit our customers and other stakeholders.

In Health Care we are continually striving to balance competitiveness with compassion, the short term with the long term, self and commitment to colleagues and society, work and family life.

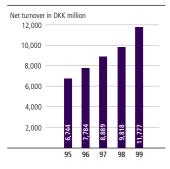
The history of our company tells us it can be done.

## REVIEW OF HEALTH CARE OPERATIONS

PROFILE

## NET TURNOVER

## DIABETES CARE



With sales of DKK 11.8 billion, Novo Nordisk is the world leader in diabetes care.

Our strong position in this market is the result of a long-standing commitment to innovation within diabetes care, as shown by our broad product line.

Novo Nordisk deploys more R&D resources in the area of diabetes than any other company. Underpinning all our efforts is a deep understanding of the disease as well as the needs of people with diabetes and those who help them manage their disease. Over time this has led to a number of significant innovations within diabetes care, including human insulin and pen-type delivery systems.

### MAJOR PRODUCTS

Selected brands of human and animal source insulin: Actrapid<sup>®</sup>, Insulatard<sup>®</sup>, Monotard<sup>®</sup>, Ultratard<sup>®</sup>, Velosulin<sup>®</sup>, Novolin<sup>®</sup>, and Mixtard<sup>®</sup> (premixed insulins).

NovoRapid<sup>™</sup> – rapid-acting insulin analogue.

NovoPen® - durable injection system.

NovoLet<sup>®</sup> – disposable prefilled syringe.

Innovo® – insulin doser.

NovoFine<sup>®</sup> – needles.

NovoNorm®/Prandin<sup>TM</sup> – oral prandial glucose regulator for Type 2 diabetes.

 $\mathsf{PenMate}^{\circledast}$  – a device for people with diabetes who suffer from needlephobia.

 $\mathsf{GlucaGen}^{\textcircled{\sc 0}}$  – a recombinant glucagon for countering hypoglycaemic attacks.

#### HORMONE REPLACEMENT THERAPY Novo Nordisk is one of the Activelle<sup>™</sup> – low-dose continuous combined hormone therapy for postmenopausal women. world's largest manufacturers Net turnover in DKK million 1,200 of hormone replacement therapy (HRT) products. Kliogest® - oral hormone therapy for postmenopausal women. 1,000 HRT products are used for the Trisequens® – oral hormone therapy for perimenopausal women. 800 treatment of symptoms in con-600 nection with the menopause Estrofem® - oral hormone therapy for women who have undergone and prevention of osteoporosis a hysterectomy. 400 (a disease which causes bones 200 to become fragile due to loss Vagifem® – hormone therapy for intra-vaginal treatment of vaginal of bone mineral density). drvness 95 HUMAN GROWTH HORMONE In terms of sales, Novo Nordisk is Norditropin<sup>®</sup> SimpleXx<sup>™</sup> – liquid growth hormone. Net turnover in DKK million among the world's largest pro-2,000 ducers of human growth hormone. NordiPen<sup>™</sup> – injection system Human growth hormone has Norditropin® - recombinant human growth hormone. 1.500 traditionally been used for treating growth hormone insuf-Nordiject<sup>®</sup> - injection system. 1.000 ficiency. NordiFine<sup>®</sup> – needles. In recent years, human growth hormone has been proven 500 effective for a number of other PenMate® – a device for people with growth disorders who suffer indications. from needlephobia. 97 95 96 98 99 FACTOR VIIa (NOVOSEVEN®) NovoSeven<sup>®</sup> is a genetically NovoSeven® - indicated for the treatment of bleeding episodes in Net turnover in DKK million engineered blood clotting haemophilia A and B patients with inhibitors (antibodies) to coagulation 1,400 factors VIII or IX. protein that plays an important role in the sequence of events 1.200 that normally leads to the for-1,000 mation of a clot in an injured



blood vessel

800

600 400 200

97

98 99

95 96

#### SIGNIFICANT EVENTS IN THE PAST YEAR

Sales of diabetes care products increased by 20% during 1999, principally due to increased insulin volumes, improved product mix and the launch of NovoNorm<sup>®</sup> in a number of markets.

In volume terms, the worldwide insulin market grew by 6%, but with significant variations from market to market. For example, in the US, the market grew 1%, while in Japan the market growth was 10% (3rd quarter 1999 figures).

Novo Nordisk's share of the industrialised insulin market was 44% in 1999 (3rd guarter 1999 figures).

In July 1999, Novo Nordisk launched a novel innovative insulin delivery system called Innovo<sup>®</sup>. These insulin dosers are the first of a new generation of insulin injection systems, with electronic features to help people with diabetes to manage their daily insulin doses.

NovoRapid<sup>™</sup> (insulin aspart), a new rapid-acting insulin analogue, was launched in September in some European countries. In long-term, large-scale clinical trials, NovoRapid<sup>™</sup> significantly improved glycaemic control compared with soluble human insulin and significantly reduced the risk of major nocturnal hypoglycaemia.

NovoNorm<sup>®</sup> was launched in a number of key European markets, including Poland and Spain. Penetration of the US market has been slower than anticipated.

In August, Novo Nordisk and Takeda Chemical Industries Ltd announced an agreement to jointly promote in Japan Takeda's insulin sensitiser pioglitazone (Actos<sup>®</sup>) and NovoNorm<sup>®</sup>. Actos<sup>®</sup> was launched in December, and Novo-Norm<sup>®</sup> is currently in Phase 3 clinical trials in Japan.

In February 2000, Novo Nordisk accepted an out-of-court settlement offer from Eli Lilly and Company that will end all litigations worldwide relating to insulin analogues, insulin delivery systems and human growth hormone.

Sales of hormone replacement therapy (HRT) products increased by 3%, primarily driven by growth in sales and the introduction of Activelle<sup>TM</sup> – a new generation of period-free hormone replacement therapy for postmenopausal women.

In October 1999, Activelle™ was approved in Europe for the prevention of osteoporosis.

In July 1999, American Home Products filed a lawsuit against Novo Nordisk at the US District Court of New Jersey claiming that Novo Nordisk infringes a specified patent by preparing to market Activelle<sup>™</sup> in the US. It is Novo Nordisk's belief that the patent in question is neither infringed, nor valid.

In January 2000, Novo Nordisk announced a licence agreement under which Pharmacia & Upjohn will market Novo Nordisk's portfolio of HRT products in the US.

Sales of Norditropin<sup>®</sup> human growth hormone products, were positively affected by the strengthened Japanese yen and increased by 15% compared with 1998, which had been adversely affected by the repurchase of inventory in Japan in the first quarter of 1998. However, revenues in Japan in 1999 were adversely affected by price reductions and by stricter reimbursement criteria.

Norditropin<sup>®</sup> SimpleXx<sup>™</sup> (liquid Norditropin<sup>®</sup>) was approved by the European health authorities and was launched in several European markets.

In 1999, an application for regulatory approval of Norditropin<sup>®</sup> SimpleXx<sup>™</sup> was filed both in Japan and with the US Food and Drug Administration (FDA).

2000 AND BEYOND

NovoRapid<sup>™</sup> will be launched in a number of key markets in 2000 and will contribute to the overall growth of Novo Nordisk's diabetes business.

New data on NovoNorm<sup>®</sup>/ Prandin™, which was released in 1999, is likely to promote product sales in 2000. Moreover, NovoNorm<sup>®</sup> will be

introduced in new countries in 2000.

Innovo® has been very well received by those markets in which it has been launched so far. It will be introduced in several other major markets in 2000.

The fastest growing segment of the HRT market is oral 'continuous combined' therapy, which offers women a period-free therapy through a combination of oestrogen and progestogen in a continuous regimen.

With Activelle™ now launched in several major markets, except the US and Japan, Novo Nordisk is well positioned in this segment.

Norditropin<sup>®</sup> SimpleXx<sup>™</sup>, which comes with a dedicated pen system, NordiPen<sup>™</sup>, will be launched in a number of markets in 2000.

This product will help establish Novo Nordisk as the logical first choice for hospitals and doctors treating growth hormone related disorders.

We expect the growth of Novo-

Seven<sup>®</sup> sales to continue in 2000.

Sales of NovoSeven<sup>®</sup> grew by 128%. This large sales increase is partly attributable to its introduction into the US market in April, and partly due to continued strong growth in Europe.

In June 1999 Novo Nordisk submitted an application for regulatory approval to the Japanese health authorities.

NovoSeven<sup>®</sup> entered Phase 3 clinical trials for the indication of liver-related disorders in February 2000.

## IMPROVING DIABETES CARE - A VITAL GOAL

Consider the paradox: despite the fact that more than 75 years have passed since the discovery of insulin; despite the explosion of innovative pharmaceuticals; despite the efforts of health care organisations the world over to set guidelines for the treatment of diabetes, and despite the commitment of patient organisations, clinicians and leading pharmaceutical companies ... diabetes is on the increase at a frightening rate.

According to a report by the World Health Organisation (WHO), more than 135 million people throughout the world have diabetes. Alarmingly, despite the seriousness of the disease, only half know it. By the year 2025, 300 million people are expected to have the disease. The WHO report also predicts that developing countries will bear the brunt of the epidemic in the 21st century.

Diabetes spares no group. Men, women, children, the elderly and people from all ethnic backgrounds are exposed to the disease. The explosive growth of the disease, however, is primarily due to an increase in adult-onset diabetes (commonly known as Type 2 diabetes), which is usually a disease of the over-50's and the overweight. Diabetes affects virtually every tissue of the body causing long-term severe damage (see box on the facing page).

In some parts of the world diabetes is the sixth most common cause of death due to illness, and in some ethnic groups it is the third most common cause. Even without the mortality risk, the cost in human suffering is very high. Both are reflected in the staggering economic impact of diabetes.

While global estimates are wide-ranging, and not always accurate, it is accepted that, in general, it costs two or three times more to treat someone with diabetes compared to a person who is not suffering from the disease. Calculations of indirect costs – loss of opportunity and severe impairment of the quality of life – though less tangible, significantly increase the total cost.

The epidemiological forecasts paint even grimmer pictures for people with diabetes, for the professionals involved in their care, and for the authorities managing the health care budgets. If action is not taken now, we will all be faced with more difficult economic and ethical dilemmas in 10 to 15 years.

## THE OPTIONS

Given this daunting challenge there are only a few options:

- Early detection
- Early intervention with the hope of prevention
- Aggressive management to control micro- and macrovascular complications
- Ongoing support, education and behavioural modification.

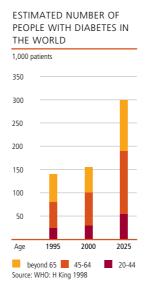
Fortunately, reliable scientific evidence from the landmark United Kingdom Prospective Diabetes Study (UKPDS), published at the end of 1998, supports these strategies with clear indications of positive results. The study lasted for 20 years and involved over 5,000 newly diagnosed persons with Type 2 diabetes. It demonstrated that more intensive management using existing treatments could reduce the life-threatening complications of the disease.

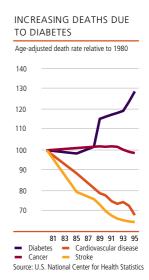
UKPDS showed that better blood glucose control reduces progression of eye disease by a quarter and early kidney damage by a third. Better blood pressure control reduces death from long-term complications by a third, strokes are reduced by more than a third and, likewise, serious deterioration of vision is reduced by more than a third.

An analysis of patient records showed that cost savings from the reduction of diabetic complications outweighed the cost of the additional medications.

## THE POSSIBILITIES

The four strategic options outlined above are an urgent call to action to make diabetes a national and global health care priority.





By changing our attitudes and actions towards this complex and debilitating disease, it is within our power to minimise its worldwide impact. But it will require a joint effort from a number of key stakeholders.

- Policy makers must initiate prevention and early detection campaigns. National investments into the research of the causes of the disease and into new methods of treatment and prevention must be given a higher priority.
- Health professionals of many disciplines must coordinate their statistics and research. Specialists in diabetes must encourage the development of shared treatment protocols with those specialising in cardiology, obesity, and the diseases of old age. All must develop better channels to the primary care team who battle in the front lines of early detection and ongoing treatment.
- Above all, the patient community must be alerted to the dangers and possible late complications, especially among the high-risk groups in different societies. This will require a heavy commitment from many sources – pharmaceutical companies, governments and NGOs such as patient organisations – to develop innovative and specialised campaigns that not only create awareness, but also encourage people to consult a doctor early on and to become responsible for the long-term management of their condition.

At present there is no cure for diabetes. We can only reduce its devastating effects on people and society. To fight diabetes requires much more than the most innovative drugs. We must take a broad integrated approach covering all the parties involved. We must create new ways to organise care by developing alliances and working in partnership towards a common and urgent goal.

## A STRATEGY OF PARTNERSHIPS

Novo Nordisk is ready to act on this challenge. We will assume our share of responsibility for people with diabetes as well as their doctors and nurses. This commitment will extend through our present products to collaborative investments in the promotion of public awareness to the disease, its impact, the strategies for management, and the strategies for maintaining the quality of life of people with diabetes. Our investments in research and development will increase. We will intensify and expand our partnerships with world-renowned institutions, such as the Oxford Centre for Diabetes, Endocrinology and Metabolism in the UK and the Mayo Clinic in the US.

We aim to become the acknowledged champions of the disease in the forums of government, medical opinion and people with diabetes.

This is a sound business strategy to achieve performance and growth. It is also true to the values of our company and our people. It is our response to a critical social need.

# COMPLICATIONS ASSOCIATED WITH DIABETES

- Heart disease cardiovascular diseases are 2 to 4 times more prevalent in people with diabetes relative to the general population.
- Stroke people with diabetes run 2.5 times the risk of having a stroke.
- High blood pressure 60-65% of people with diabetes suffer from hypertension.
- Blindness diabetes is the primary cause of new cases of blindness in adults over 20.
- Kidney disease diabetes is the leading cause of endstage renal disease. It accounts for 36% of new cases.
- Nerve disease about 60-70% of people with diabetes have mild to severe forms of nerve disease. It is a major contributing cause of amputations of the lower limbs

## SELECTED DEVELOPMENT PROJECTS

PHASE 1	PHASE 2	PHASE 3
The substance is tested in healthy human volunteers.	The first administration of the sub- stance takes place in patients for evaluation of efficacy and tolerance in short-term treatment.	The substance is tested in a large number of patients for evaluation of efficacy and adverse effects in long-term treatment.

#### NN2344

A very potent insulin sensitiser that increases glucose uptake in peripheral tissue. The sensitiser is licensed from Dr Reddy's Research Foundation.

#### NN622

A second generation insulin sensitiser discovered in collaboration with Dr Reddy's Research Foundation. In addition to lowering blood glucose, NN622 is interesting due to its favourable effects on lipid profile.

#### NN2211 (GLP-1)

A stable analogue of the natural hormone, GLP-1, that glucosedependently stimulates insulin production. The compound decreases the level of the anti-insulin hormone glucagon.

Furthermore, the potential effect of GLP-1 on appetite regulation is being studied.

LABI

LABI is a long-acting, basal insulin formulation for injection of human insulin for Type 1 and Type 2 diabetes based on a controlled delivery system.

LABI is licensed from Flamel Technologies.

#### NN4201

A new compound for the treatment of Type 2 diabetes which acts by reducing glucose output from the liver.

#### NN1998 (AERx)

A pulmonary delivery system for the administration of insulin by inhalation. NN1998 is being developed for the treatment of diabetes in collaboration with Aradigm Corporation.

#### NNC 05-1869

A novel agent in the treatment of painful diabetic neuropathy and chronic pain. Out-licensing of NNC 05-1869 is currently being pursued.

#### NN703

An orally active growth hormone secretagogue. The company is seeking a partner to exploit the potential of NN703.

ASIS (rFVIIai restenosis)

An inactivated form of recombinant Factor VIIa which prevents activation of the coagulation cascade and may be used in the prevention of thrombosis and/or restenosis following vascular surgery.

#### NN304

Soluble, neutral, basal insulin analogue with a novel protraction principle based on albumin binding within the subcutis and bloodstream. NN304 is expected to provide an improved basal insulin profile without peak effect and with less day-to-day variation than conventional NPH insulin preparations.

NN304 can be used for treatment of Type 1 and insulin-dependent Type 2 diabetes.

■ NovoMix<sup>™</sup> (other mixes)

A series of premixed formulations which combine the rapid-acting insulin analogue with our intermediate-acting insulin analogue. The NovoMix<sup>™</sup> series combines the simplicity of premixed insulin with modern insulin analogue technology.

NN007 (rFVIIa liver)

Initial clinical investigations have shown that NovoSeven<sup>®</sup> can normalise coagulation time in patients with liver disease.

## SUBMITTED FOR REGISTRATION

If the clinical trials have gone well, applications for registration are submitted to the authorities in the countries where marketing approval is sought. The average time for the authorities to review an application for registration is between one year and three years.

#### ■ NovoRapid<sup>™</sup>

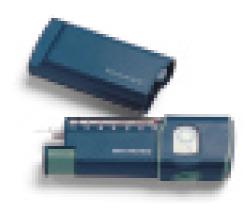
A novel, rapid-acting insulin analogue – the first in a series of insulin analogues that Novo Nordisk is developing. NovoRapid™ is administered at mealtimes and leads to improved control of blood glucose levels. The improvements are due to a fast onset and the short duration of action. In 1999, NovoRapid™ was approved and launched in the EU and submitted for registration in the US under the name NovoLog™.

## NovoMix™30

A 30/70 premixed formulation that combines the rapid-acting insulin analogue with our intermediateacting insulinanalogue. NovoMix™30 was submitted for approval in the EU and the US in 1999.

## ■ Norditropin<sup>®</sup> SimpleXx<sup>™</sup>

A soluble human growth hormone formulation delivered in an advanced pen system, NordiPen™. Norditropin<sup>®</sup> SimpleXx™ is marketed in a number of countries and awaits approval in the US and Japan.



Innovo<sup>®</sup>, a completely new insulin injection system, was launched in July 1999.



NovoRapid<sup>™</sup>, our new rapidacting insulin analogue, was introduced in September 1999.



Norditropin<sup>®</sup> SimpleXx™ (liquid Norditropin<sup>®</sup>) was launched in a number of European markets in 1999.

## DIABETES CARE

HUMAN GROWTH HORMONE

OTHER HEALTH CARE



A new enzyme for biological scouring of cotton was introduced in 1999 as a result of Enzyme Business' deep insight in the textile industry.

## STEEN RIISGAARD

Corporate executive vice president Novo Nordisk Enzyme Business



In spite of adverse external circumstances in 1999 Enzyme Business sales grew by 6% to DKK 4,501 million, supported by favourable foreign exchange rates. The financial recessions in Brazil and in Central and Eastern Europe adversely affected our sales, especially in the first half of the year. Sales in Asia, however, recovered from the 1998 recession and increased substantially.

The most significant advance in 1999 was made within the field of enzymes for animal feed. On that basis, we are proud to announce that in 1999 we became the largest supplier to all three of the major segments that make up the industrial enzyme market: technical enzymes, food enzymes and feed enzymes (see pages 18-19 for a review of these segments).

# IN TOUCH WITH THE MARKET

It was also a year of improvements and innovations. Improved production efficiency enabled us to increase operating profit by 14% to DKK 687 million. Progress in research and development enabled us to launch a significant number of new products for applications within the starch, alcohol, textile, wine and food industries. On the customer relations side, we launched our 'eVenture' project enabling customers to interact with us via the Internet. Initially, 300 of our customers in North America and Scandinavia were given access to this new online enzyme information and ordering service.

In the forthcoming years we expect continued sales growth. The potential is there in the market and we have some promising products in the pipeline. As environmental issues continue to move higher up corporate agendas around the world, there will be an increased demand for alternative sustainable technology to replace traditional chemicals and thereby reduce pollution. As an example, one of our new products, BioPrep<sup>™</sup> for basic textile processing, is described in more detail on page 21.

The year 2000 will present an exciting challenge for Enzyme Business as we prepare to become a separately listed company. We will acquire operational freedom and we intend to capitalise on the advantages of being small and independent: speed, innovation, greater customer and market orientation. We aim to communicate these advantages clearly to our customers and other stakeholders as part of the lead-up to the eventual listing on the stock market.

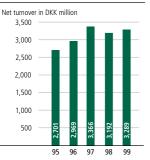
In future, we will still be a part of the Novo family, sharing important basic values and management principles. As the designated president and CEO of the new company Novozymes, I believe that we will have 'the best of both worlds'. We will be independent but will still benefit from our family ties. I personally have high expectations for the future and we are well prepared for the challenges ahead.

## REVIEW OF ENZYME BUSINESS OPERATIONS

Novo Nordisk regards the market for industrial enzymes as divided into three distinctive segments: technical, food and feed. Novo Nordisk is present in all three segments giving us the advantage that products and technology developed for one segment can be transferred to other segments as well. The goal of Enzyme Business is to be the outright market leader in all segments.

#### NET TURNOVER

## TECHNICAL ENZYMES



## INDUSTRIAL APPLICATIONS

## Detergent industry

Degradation of protein, starch and fatty stains on laundry. Colour clarification and softening of cotton laundry.

#### *Leather industry* Soaking of hides and skins, unhairing, bating and defatting.

## *Personal care industry* Enzymes for personal care products: contact lens cleaners, toothpaste.

## Pulp and paper industry

Control of pitch problems caused by the use of mechanical pulps. Reduction of chlorine consumption in pulp-bleaching processes. Viscosity control in starch-based coatings.

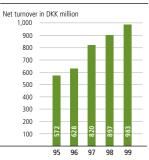
## Starch industry

Production of dextrose, fructose and speciality syrups for the baking, confectionery and soft drink and fermentation industries.

### Textile industry

Stonewashing and bleaching of denim garments. Removal of starch from woven fabrics. BioPreparation and BioPolishing of cotton fabrics. Peroxide removal in fabric processing. Finishing of wool and silk.

### FOOD ENZYMES



#### *Alcohol industry* Degradation of starch into sugars that are converted into alcohol through fermentation.

## Baking industry

Starch, pentosan and protein modification in flour to improve its baking properties. Anti-staling of bread.

### Brewing industry

Degradation of starch, protein and glucan when brewing with a combination of malt and unmalted raw materials. Faster maturation of beer.

## Dairy industry

Conversion of lactose in milk and whey to sweeter, more digestible sugars. Flavour development.

## Fats and oils industry

Modification of lecithin and hydrolysis of fats and esters. Synthesis of speciality fats.

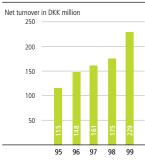
### Protein industry

Improvement of nutritional and functional properties of animal and vegetable proteins. Protein-based flavour bases. Process optimisation, eg energy saving by lowering of viscosity.

### Wine and juice industry

Degradation of pectins during the manufacturing of fruit juices, wine, etc, in order to improve yield, capacity and quality.

## FEED ENZYMES



#### Animal feed

Degradation of feed components for improvement of feed utilisation and nutrient digestion.

Reduction of nitrogen and phosphorus discharged to the environment from animal production.

PROFILE	SIGNIFICANT EVENTS IN THE PAST YEAR	2000 AND BEYOND
Novo Nordisk is the largest supplier of enzymes to the technical segment.	Sales of technical enzymes increased by 3%, though they were adversely affected by the financial situation in Brazil and the continued reduced	Modest growth is expected in 2000.
The segment is characterised by a	demand for enzymes for denim finishing.	Increased usage of enzymes in value brand detergents.
short development and approval	Apart from the textile industry, prices were stable.	5
time for new products (1-2 years).	BioPrep™ for the preparation of cotton fabric was launched. The product	Advanced applications of enzymes will be developed in partnership
Moreover, the development of new products is often made in partner-	is an alternative to traditional chemicals used in the scouring process. For further information, see page 21.	with major detergent manufacturers
ship with large customers in the		The level of competition in the
appropriate industries.	New and improved products for starch liquefaction and saccharification were introduced, and enabled us to maintain our strong position within this market.	starch and fuel alcohol industries is expected to increase even further.
Novo Nordisk is the largest supplier of enzymes to the food and beverage industries.	Sales of food enzymes increased by 10%, mainly due to increased sales to the baking industry.	The market is expected to continue to increase.
The segment is characterised by	Pectinex <sup>®</sup> SMASH, introduced in 1997, made very good progress in the juice segment as a new generation mash enzyme.	We will continue to enter into colla-
longer development and approval	the juice segment as a new generation mash enzyme.	borations in order to improve our understanding of the market and
time for new products (4-5 years).	NovoShape™, a pectin esterase, was introduced for preservation of fruit texture, eq in dairy products.	products, to gain valuable patent and other rights, and to secure a
Moreover, the food enzyme seg- ment contains many differentiated sub-segments.		high success rate for new products.

In 1999, Novo Nordisk became the largest supplier of enzymes to the animal feed industry.

The segment is characterised by longer development and approval time for new products (4-5 years).

Expertise in nutrition is the crucial factor in the animal feed segment.

Sales of feed enzymes increased by around 30%.

The introduction of Bio-Feed  $^{\otimes}$  Phytase in the EU was delayed due to regulatory process delays.

The market is expected to continue to increase and this will result in high growth rates.

## PREPARED FOR EXPANSION

The use of Novo Nordisk enzymes for the washing of blue denim jeans has in recent years accounted for most of the company's sales to the textile industry. However, this application has been at the mercy of rapid changes in fashion. Now Novo Nordisk is becoming more actively involved in the basic processing of fabrics. BioPreparation is one example and there are other basic applications in the pipeline.

One application has led to another in the textile industry and the innovations continue. This is an enzyme market with large potential for expansion.

## THE STONEWASHED LOOK

Until 1987, the only major application for textile enzymes was desizing (the removal of starch). Then Novo Nordisk's textile experts found a major enzyme application within treatment of denim jeans: a cellulase that removed some of the indigo dye from denim and gave the fabric a worn look. The same effect was traditionally achieved with a wash using pumice stones. Within three years, cellulases were being used at most denim finishing laundries around the world to partially or completely replace stones. Enzymes abrade jeans gently and cause less damage to garments and laundry machines. This application was the reason for the growth of textiles into a major market for industrial enzymes.

The jeans market is highly sensitive to changing fashion. As a result of a recent downturn in sales of denim jeans and a trend towards darker shades, sales of cellulases have also suffered. However, it should be noted that some 1.8 billion pairs of jeans are still sold each year and usually receive some kind of wash treatment with either amylases, cellulases or both.

Novo Nordisk continues to bring innovation to this market. For example, sales of an improved laccase for denim decolorisation have been made in the US and Central America since it was introduced in October 1999. The enzyme is called DeniLite<sup>®</sup> II and it has attracted a great deal of interest. So far, almost all major jeans manufacturers in the US have tested it.

## BIOPOLISHING REMOVES FUZZ

Novo Nordisk has developed other textile concepts based on enzyme technology. In 1986, our Japanese enzyme office launched an application for cellulases called BioPolishing. One of the main benefits is the removal of fuzz from cotton and other cellulosic fabrics. Fuzz is the name in the textile trade for the microfibrils protruding from the surface of the yarn.

This led to a further application in 1991 featuring a catalase called Terminox<sup>®</sup>. In a dyehouse, a great deal of water is used to rinse away hydrogen peroxide prior to dyeing.

#### MAIN MATERIAL AND PROCESS STAGES

RAW MATERIAL	<ol> <li>The only example of cleaning a raw material with enzymes is silk degumming. The long threads of raw silk are treated with proteases to remove a gum-like substance called sericin.</li> </ol>
FIBRE	<ol> <li>In 1999, BioPrep<sup>™</sup> was launched as an alternative to</li></ol>
Spinning	chemical scouring. See page 21
YARN	<ul> <li>3) The size is a protective layer applied to the yarn to prepare</li></ul>
Sizing	it for the rigours of mechanical weaving. Novo Nordisk of-
Weaving	fers a range of amylases for removing sizes based on starch. <li>4) In 1993, a new enzyme was launched for 'Bleach cleanup'.</li>
CRUDE FABRIC	It is a catalase that neutralises the hydrogen peroxide
Singeing Scouring <sup>2)</sup>	bleach and reduces the rinsing necessary to remove
Desizing <sup>3)</sup> Bleaching <sup>4)</sup>	bleach. <li>5) An enzymatic treatment at the dyeing stage known as</li>
Dyeing <sup>5)</sup>	BioPolishing has mainly been used for cotton fabrics so
FINISHED FABRIC	far. The tendency for pilling is reduced, softness increases
Sewing	and the handle improves. <li>6) Enzymes are widely used to modify the shade of denim</li>
GARMENT	garments. Selected cellulases remove fibrils from the
Fashion wash <sup>6)</sup>	surface of the denim yarn and at the same time remove
FINISHED GARMENT	particles of dye.

Catalases are ideal for breaking down this bleaching agent and thereby save substantial amounts of water.

## COMPLETELY NEW ENZYMES

1999 saw the launch of BioPrep<sup>TM</sup> – a promising new enzyme for the scouring of cotton (see opposite page). In future, the desizing and scouring of fabrics, which previously required two separate steps, may be combined into one.

Novo Nordisk is also looking at new enzymes that can be applied at the dyeing stage. Laccase can be used for the polymerisation of dye precursors so that dye can be created *in situ*. This application is being developed in association with an American company.

In addition, the use of peroxidases for the removal of excess dyestuffs will soon be made commercially available through an exclusive distribution agreement with a major chemical company. This application will dramatically reduce the consumption of water that is traditionally used to rinse away dyestuffs. It should be noted that this will be the first industrial application of a peroxidase, a completely new type of enzyme based on years of development work at Novo Nordisk.

## BIOPREPARATION - MILD ON COTTON AND THE ENVIRONMENT

The textile industry is one of the largest markets for industrial enzymes. Novo Nordisk sees great potential for enzyme applications to replace many of the auxiliary chemicals used in the textile industry. The latest example is BioPreparation or enzymatic scouring.

Scouring is the complete or partial removal of the non-cellulosic components found in native cotton as well as impurities such as machinery and size lubricants. Scouring gives a fabric a high and even wettability so it can be bleached and dyed successfully.

Today, highly aggressive chemicals such as sodium hydroxide (caustic soda) are used for scouring. The market for traditional scouring is estimated to be USD 100 million a year. Chemical treatments not only remove the impurities but also attack the cellulose leading to a reduction in fabric strength and weight. Furthermore, the resulting waste water has a high COD (chemical oxygen demand), BOD (biological oxygen demand) and salt content.

## BIOLOGICAL ALTERNATIVE

Now there is a biological alternative. In April 1999, Novo Nordisk introduced a new alkaline pectinase, BioPrep<sup>™</sup> 3000 L, that will reduce environmental impact and, in most cases, be more economical to use.

Instead of extremes of pH and temperature, pectinase scouring or BioPreparation, as Novo Nordisk calls the process, runs under moderate conditions. Rinsing water is reduced by as much as 50% depending on the equipment used. In addition, in those cases where hot rinsing water is used this means that considerable amounts of energy will be saved as well.

### TRIALS UNDERWAY

China is the largest cotton producer in the world and BioPrep<sup>™</sup> 3000 L was introduced here in the second quarter of 1999. Fullscale trials have been conducted at many mills. One of these trials was at WeiXin Dyeing and Bleaching Factory in Wuxi near Lake Tai Hu. Five million metres of woven fabric are produced a month at this plant making this one of the biggest mills in China. Environmental considerations are very important because of strict regulations. To avoid further pollution to Lake Tai Hu, mills must operate within the defined discharge limits or risk being closed down by the authorities.

BioPrep<sup>TM</sup> 3000 L trials at the mill have shown that BOD and COD can be reduced by 30% and 40% respectively compared to the traditional process using sodium hydroxide. The fabric also felt softer and weight loss was reduced.

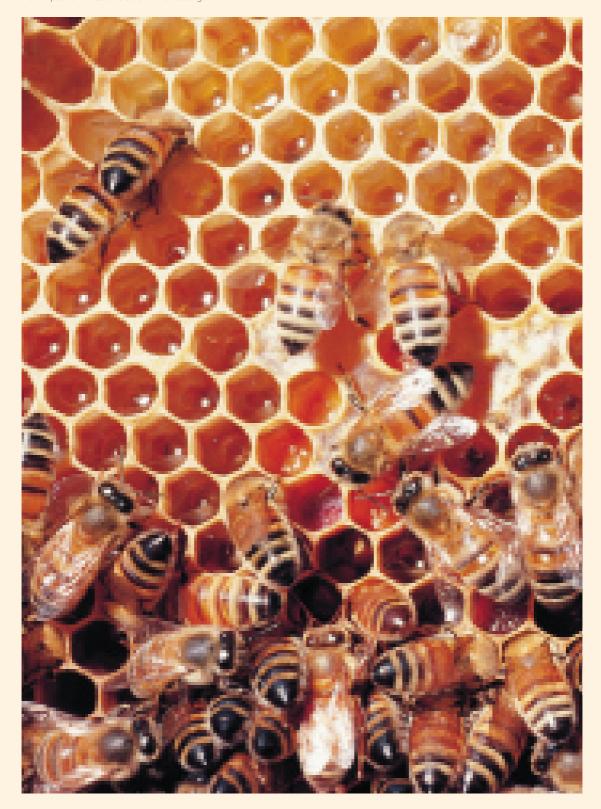


Now the impurities can be removed biologically from cotton. A new process called BioPreparation reduces environmental impact, saves both energy and water, and does not damage the cotton.

"We want to increase our contacts and expand in the sector of the textile industry where wet processing takes place. BioPrep<sup>™</sup> gives us a very good entry into this large market," says Yan Wang, Novo Nordisk's marketing and technical service representative for the textile industry in China. The textile industry is currently the third largest market for enzymes in China after detergents and starch processing.

Another important cotton-producing country is India where Bio-Prep<sup>™</sup> 3000 L was introduced at two seminars held in Mumbai (Bombay) and Tiruppur in June 1999. Judging by the response, manufacturers of yarn, knitted fabrics and woven fabrics are interested in trying the new BioPreparation process.

Although some chemicals are still needed, scouring with enzymes is more environmentally responsible. Novo Nordisk has succeeded in developing a pure enzyme requiring low dosages; a factor that ensures an acceptable cost. The indications are that once customers have learnt how to use BioPrep<sup>™</sup> 3000 L, it will become a commercial success.



Novo Nordisk is embarking on the new corporate structure from a position of considerable financial strength.

# FINANCIAL DISCUSSION

1999 was a successful year for the Novo Nordisk Group. Operating profit lived up to the Group's long-term growth target of at least 15% and exceeded our own expectations in February 1999 when we announced Novo Nordisk's financial results for 1998. This was primarily due to more favourable exchange rates than anticipated in February 1999, especially JPY and USD against DKK, combined with the fact that the underlying business developed better than expected.

Operating profit rose by 19% to DKK 4,214 million despite significant marketing costs as well as realised and accrued restructuring expenses totalling DKK 350 million in connection with the establishment of Enzyme Business as an independent company.

Profit before tax and net profit were DKK 3,951 million and DKK 2,411 million respectively, equal to an increase of 6% before tax, while net profit remained at the 1998 level. Earnings per share of DKK 10 rose to DKK 33.72 (or DKK 16.86 per ADS), up 4% compared to 1998.

Besides fulfilling the corporate growth target for operating profit, Novo Nordisk also achieved increases in returns on sales and on invested capital. Thus the operating profit margin for 1999 rose to 20.1% from 19.7% in 1998. The return on non-financial assets (RONFA) rose to 18.5% from 16.1% in 1998.

Adjusted for Seroxat<sup>®</sup> licence income and restructuring expenses, the Group's operating profit increased by 34% compared to 1998, and the operating profit margin rose from 16.0% to 18.3%.

The free cash flow was positive, at DKK 1,763 million.

Major factors behind the successful results in 1999 included a 17% increase in turnover, a continued favourable development in production economy and an improved product mix, generating an increase in the Group's gross margin for 1999 to 69.1% from 67.3% in 1998. Costs not related to production rose by 9% excluding costs relating to the restructuring of Novo Nordisk.

Novo Nordisk has not experienced any significant additional customer demand (hoarding) prior to the turn of the year 1999/2000. A minor negative effect on sales in the first quarter of 2000 is foreseen.

## SEGMENTED DATA

For the two business segments, Health Care and Enzyme Business, operating profit was DKK 3,150 million and DKK 687 million respectively, increases of 39% and 14% compared to 1998. The return on sales for Health Care was 19.2% and for Enzyme Business 15.3%, compared with 16.6% and 14.1% respectively in 1998.

The reason behind the growth in Health Care's operating profit was a 20% increase in sales, and this generated an improvement in operating margin of just under 3 percentage points. Health Care's performance should be viewed in the context of increased costs in connection with introduction of products such as NovoNorm<sup>®</sup>, NovoSeven<sup>®</sup>, Activelle<sup>™</sup>, Norditropin<sup>®</sup> SimpleXx<sup>™</sup> and Novo-Rapid<sup>™</sup>. Research and development costs remained at the 1998 level, representing 16.7% of sales in 1999 compared with 20.5% in 1998. Health Care's investments in fixed assets were DKK 1.4 billion compared with DKK 1.8 billion in 1998.

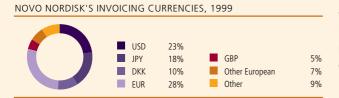
1999 was a good year for Enzyme Business. One of the reasons behind the 14% growth in operating profit was a 6% increase in sales. This performance was supported by improvements in production efficiency and by the fact that other costs grew at lower rates than sales. Research and development costs in Enzyme Business remained at the 1998 level, representing 13.5% of sales compared with 14.2% in 1998. Total investments rose from DKK 403 million to DKK 567 million in 1999.

## SALES DEVELOPMENT

Consolidated sales increased by 17% to DKK 20,924 million from DKK 17,911 million in 1998. The sales increase was primarily caused by volume gains and improved product mix, and a favourable development of the Group's key invoicing currencies.

Measured in local currencies, sales increased by 12% compared with 1998. The value, measured in DKK, of Novo Nordisk's invoicing currencies was nearly 5% higher in 1999 than in 1998 reflecting an appreciation of the Group's key invoicing currencies, especially JPY and USD. The value of JPY, one of Novo Nordisk's most important foreign currencies, thus increased by approximately 20%, while USD increased by approximately 4%.

Health Care sales rose by 20% to DKK 16,423 million in 1999 from



DKK 13,647 million in 1998. Sales were favourably affected by an increase in the average value of Health Care's invoicing currencies of nearly 5%. Volume and product mix improvements had a favourable impact on sales of 15%, primarily due to increases within diabetes care and NovoSeven<sup>®</sup>.

Sales of diabetes care products rose by 20% to DKK 11,777 million in 1999. The increase primarily reflects increased sales of Penfill<sup>®</sup> 3ml and NovoLet<sup>®</sup> 3ml, supported by considerably increased sales of NovoNorm<sup>®</sup>/Prandin<sup>™</sup>. Sales in the fourth quarter were adversely affected by repurchase of products in connection with changes at the distributor level. Sales of insulin products in the US market, which account for 11% of Novo Nordisk's total insulin sales, increased by 23%. Measured in USD, sales rose by 18% compared to 1998. The favourable development was due to improved product mix, price increases and a general volume increase in the market.

In 1999, Novo Nordisk's rapid-acting insulin analogue NovoRapid<sup>™</sup> was approved for marketing in the EU. Introduction of Novo-Rapid<sup>™</sup> is proceeding satisfactorily. The product was introduced in seven European countries during 1999.

Sales of NovoNorm<sup>®</sup>/Prandin<sup>™</sup> rose to DKK 728 million from DKK 240 million in 1998 due to developments in the US market and the introduction in Europe. The European introduction is still proceeding satisfactorily, although reimbursement for NovoNorm<sup>®</sup> is still pending in a number of countries.

Sales of HRT products (hormone replacement therapy) rose by 3% to DKK 1,130 million, and this was due to volume growth and the introduction of Activelle<sup>™</sup>. Sales were adversely affected by stock adjustments at the distributor level in the fourth quarter.

As per our announcement on 12 January 2000, Novo Nordisk A/S

and Pharmacia & Upjohn Company have signed a licence agreement under which Pharmacia & Upjohn will market Novo Nordisk's portfolio of HRT products in the United States. The agreement covers the three drugs Activelle<sup>™</sup>, Vagifem<sup>®</sup> and Innofem<sup>™</sup>.

Sales of human growth hormone products (Norditropin<sup>®</sup>) were DKK 1,721 million, 15% higher than in 1998. Even though the total Japanese market demand for growth hormone was lower than in 1998, Novo Nordisk's sales rose compared with 1998. The reason is that sales in 1998 were adversely affected by the repurchase of products from a former distributor. In addition, sales were favourably affected by the strengthened JPY against DKK.

In 1999 Norditropin<sup>®</sup> SimpleXx<sup>™</sup> (liquid growth hormone) received EU approval, and sales are developing in line with expectations.

Sales of NovoSeven<sup>®</sup> more than doubled in 1999 to DKK 1,313 million from DKK 576 million in 1998. The large sales increase is attributable to the introduction into the US and to continued strong growth in other markets.

Sales of other Health Care products dropped by 27% to DKK 482 million due to the discontinued Nordic sales of Seroxat<sup>®</sup>, which was sold to SmithKline Beecham in 1998.

Enzyme Business sales rose by 6% to DKK 4,501 million. Measured in local currencies, sales rose by approximately 2% compared to 1998 due to volume and product mix improvements, counteracted by slightly falling prices.

Sales of technical enzymes rose by 3% compared to 1998 despite falling sales to the textile industry. Enzymes for the food and feed industries are showing good growth rates, especially sales to the feed industry, which increased significantly by around 30%.

Asia, which in 1998 was badly hit by the economic crisis, developed favourably in 1999 with sales growing significantly compared with 1998.

The world market for industrial enzymes in 1999, and hence also Enzyme Business' sales, was adversely affected by the economic situation in Latin America and Central and Eastern Europe.



# LICENCE FEES AND OTHER OPERATING

Novo Nordisk's licence fees and other operating income decreased by 35% to DKK 959 million in 1999 from DKK 1,469 million in 1998. Licence fees and other operating income for 1998 included several non-recurrent events. Licence income from Seroxat<sup>®</sup>/Paxil<sup>®</sup> rose to DKK 726 million in 1999 from DKK 663 million in 1998, an increase of 10%.

## COST DEVELOPMENT

Total costs, excluding financial expenses and tax, rose by 12% over 1998 to DKK 17,669 million in 1999. The rise reflects increased sales and distribution costs relating to product launches. In addition, the total costs in 1999 include total restructuring expenses of DKK 350 million.

Production costs rose by 11% to DKK 6,473 million. This increase should be viewed in the context of a 17% increase in Novo Nordisk's turnover. The lower rate of increase in production costs primarily reflects better production yields, especially in Enzyme Business, and a better product mix in Health Care.

Sales and distribution costs rose by 17% to DKK 5,307 million, primarily reflecting an increase in costs relating to the launch of products such as NovoNorm<sup>®</sup>, NovoSeven<sup>®</sup>, Activelle<sup>™</sup>, Norditropin<sup>®</sup> SimpleXx<sup>™</sup> and NovoRapid<sup>™</sup>.

Research and development costs decreased by 1% to DKK 3,355 million. The decrease mainly reflects that this item in 1998 included one-off costs relating to the termination of a development project, and that part of the one-off income (net) received in 1998 was spent on strengthening a number of selected development projects.

Administrative expenses increased by 6% to DKK 2,184 million.

Total employee costs rose by 9% to DKK 6,562 million. At the end of 1999, the number of employees was 15,184, an increase of 2% compared with 1998.

Total depreciation, which is included in the respective cost items, decreased by 3% to DKK 1,422 million. The decrease is primarily attributable to extra amortisation of goodwill in 1998 in connection with, among other things, the sale of Seroxat<sup>®</sup> rights in the Nordic countries.

## NET FINANCIALS AND TAX

Novo Nordisk's net financials for 1999 showed a net loss of DKK 263 million compared with net income of DKK 204 million for 1998.

The Group posted a foreign exchange loss of DKK 359 million in 1999 compared with a foreign exchange gain of DKK 27 million in 1998. The net foreign exchange loss is primarily due to realised and unrealised losses on hedging of Novo Nordisk's currency exposure with respect to JPY and USD.

Net interest income decreased from DKK 173 million in 1998 to DKK 114 million in 1999. The decrease is primarily attributable to lower average net interest-bearing assets in 1999 than in 1998, mainly reflecting Novo Nordisk's purchase of own shares in 1998 and 1999.

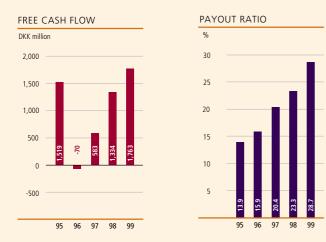
The total net gain on marketable securities in 1999 was DKK 3 million compared with DKK 55 million in 1998.

Other financial expenses decreased from DKK 25 million in 1998 to DKK 23 million in 1999.

Taxes expensed in 1999 were DKK 1,540 million, of which DKK 85 million relates to local taxes in connection with the demerger. The effective tax rate has been calculated at 39.0. Adjusted for these local taxes, the tax rate was 36.8 compared with 35.7 in 1998.

## CAPITAL EXPENDITURE

Total capital expenditure (net) for property, plant and equipment in 1999 was DKK 1,831 million, compared with DKK 2,020 million in 1998.



## CASH FLOW AND FINANCIAL RESERVES

Novo Nordisk had a positive cash flow of DKK 1,763 million in 1999 compared with DKK 1,334 million in 1998. The improvement of the free cash flow results primarily from cash generated from the sale of Seroxat<sup>®</sup> marketing rights in the Nordic countries and an increase in cash flow from operations.

The Group's financial resources at the end of 1999 were DKK 3,418 million compared with DKK 1,851 million at the end of 1998. The increase in financial resources reflects, in addition to the positive cash flow, a loan of DKK 1.8 billion in connection with the demerger, counteracted by purchase of own shares worth a total of DKK 1.4 billion.

## SHAREHOLDERS' FUNDS

Shareholders' funds were DKK 18,535 million at the end of 1999, equal to 60% of total assets, compared with 66% in 1998.

In 1999, shareholders' funds increased by net profit but were reduced by repurchase of shares and proposed dividends, equal to a net increase of DKK 272 million. Furthermore, adjustment of investments in subsidiary companies etc, primarily due to currency movements, had a positive effect on shareholders' funds of DKK 291 million. The net impact of these events on shareholders' funds is an increase of DKK 563 million.

The Board of Directors will propose to raise the dividend for 1999 by 26% to DKK 9.75 (DKK 4.88 per ADS) per share of DKK 10, from DKK 7.75 (DKK 3.88 per ADS) in 1998. Thus the payout ratio for 1999 will be 29%, compared with 23% in 1998. No dividend will be paid on the company's holding of own shares.

## HOLDING OF OWN SHARES

As of 31 December 1999, Novo Nordisk's holding of its own shares (treasury shares) was 4,514,059 B shares, representing 5.98% of the total number of shares. During the period 15 January 1999 - 12 April 1999 Novo Nordisk spent approximately DKK 0.9 billion on stock repurchase, thus finalising the programme initiated in 1998 to buy back a total of DKK 3 billion worth of shares. During the period 8 November 1999 - 31 December 1999 the company spent approximately DKK 0.5 billion on stock repurchase as part of the new programme announced on 3 November 1999 to buy back up to DKK 2 billion worth of shares.

### THE YEAR 2000 ISSUE

In compliance with regulatory requirements, including those from the US Securities and Exchange Commission, various aspects of the Year 2000 or Y2K issue are reviewed below.

## STATE OF READINESS

Novo Nordisk (the Company) initiated a Year 2000 Project in August 1996. The Company made an assessment of all potential significant problems in all internal IT and non-IT (eg embedded chips) systems, and remediation and final testing was completed by 30 September 1999. As a result of the millennium change, the company has not experienced any significant Year 2000 problems related to its systems.

The Company also identified its critical partners and had a formal correspondence with these parties to determine their Year 2000 status and any probable impact on Novo Nordisk. These critical partners stated that they were or would be ready by 1 January 2000 and as of the date of this report the Company's critical partners have not reported any disturbances related to the year 2000.

## COSTS TO ADDRESS YEAR 2000 ISSUES

Costs incurred by the Company to modify or replace non-compliant systems have not been material. The main components of such costs have been the acceleration of system migrations and application projects.

## RISKS OF YEAR 2000 ISSUES

The most reasonably likely worst case Year 2000 scenarios were as follows: (1) disruption of non-IT production systems, and/or (2) temporary interruption in the delivery of supplies and services from sole source vendors to Novo Nordisk (eg water and electricity). No significant issues have until now been experienced.

A Year 2000 Risk Analysis of all business critical processes including possible impact from critical partners was done. Y2K contingency plans were developed and plans and procedures for surveillance of critical IT and non-IT systems at the turn of the millennium were in place. Detailed verification of critical components after New Year has not revealed any Year 2000 issues.

The Company evaluated the potential additional patient demand for the Company's products in 1999 and developed several contingency plans. One of the Company's contingency plans was to ensure sufficient stock levels to meet a potential additional patient demand for products. The Company increased production volumes and carefully monitored sales patterns. Although some additional patient demand could be detected in a few markets, the impact on sales and stock level has been limited.

Due to the possible risk of a short disruption in utilities (electricity, water etc) supplied by third parties, contingency plans were developed for production plants. As a part of this plan plants were temporarily shut down around the turn of the millennium.

## FINANCIAL RISK FACTORS

The most important financial risks can be divided into three categories: currency, interest rate and counterparty exposure.

Currency exposure arises partly because there is no balance between income and expenses in the individual currency, and partly because the Group has net assets in a number of foreign companies.

Net expenses occur in DKK and net income occurs in virtually all other currencies. The exposure is, in decreasing order, greatest against EUR, JPY, USD and GBP.

A 5% movement in the JPY, USD and GBP rates respectively, would – other things being equal – produce an annual change in operating profit of approximately DKK 140 million, DKK 110 million and DKK 40 million.

It is Novo Nordisk's policy to hedge primarily JPY, USD and GBP several months ahead through a combination of loans, forward contracts and options. Other currencies are hedged to a lesser extent. The transactions are made on the basis of the Group's expectations for the future currency exchange rate development. Translation exposure relating to the results and shareholders' funds of foreign companies is only hedged in certain cases where the foreign level of interest is lower than the Danish level, eg in Switzerland and Japan.

Interest rate exposure arises in relation to interest-bearing assets and liabilities. A change of one percentage point in the interest rate of the Group's fixed-interest bond portfolio would produce an effect on profit before tax of approximately DKK 45 million.

The use of financial instruments is regulated by an elaborate code of practice which defines, among other things, approved instruments and risk limits. Financial instruments may only be contracted with a view to securing existing assets, liabilities or future net cash flows.

Counterparty exposure is managed by dealing only in financial instruments and placing deposits with banks that have been awarded a satisfactory long-term credit rating by international credit-rating agencies. The consolidated accounts of the Group and the annual accounts of the parent company, Novo Nordisk A/S ('the Company') have been prepared in accordance with the Danish Company Accounts Act and the accounting regulations (including Danish Accounting Guidelines) for companies listed on the Copenhagen Stock Exchange. The consolidated accounts and the accounts of the parent company have been prepared in accordance with the accompanying accounting policies. The accounting policies have not been changed since 1998.

As disclosed in Novo Nordisk's Annual Report for 1998 the annual accounts for 1999 include segmented financial figures for Health Care and Enzyme Business respectively.

The segmented figures have been prepared according to the organisational structure prevailing 31 December 1999. The disclosure of the segmented figures has been prepared based on American requirements (US GAAP) for segmented figures.

The segmented figures are disclosed in Note 1 in the consolidated accounts and include among other figures, net turnover, operating profit, research and development costs and investments divided into the two businesses.

As mentioned previously Novo Nordisk has during 1999 worked towards a demerger of the Novo Nordisk Group into two independent listed companies. Employees, assets, companies etc have been prepared for a split into Health Care and Enzyme Business. The cost of the split has been computed to amount to DKK 350m. The cost has been charged to the profit and loss account in 1999 as 'Restructuring costs'. Operating profit rose in 1999 by 19% to DKK 4,214m. Operating profit before restructuring costs amounts to DKK 4,564m - an increase of 29% compared to operating profit for 1998.

In relation to the restructuring DKK 85m relating to corporation taxes outside Denmark has been expensed.









## ACCOUNTING POLICIES

#### **Basis of consolidation**

The consolidated accounts include the accounts of Novo Nordisk A/S (the Company) and all the companies in which the Group owns more than 50% of the voting rights or in some other way has a controlling influence (subsidiaries).

The consolidated accounts are based on accounts for the Company and for the subsidiaries and are prepared by combining items of a uniform nature and eliminating intercompany transactions, shareholdings and balances, unrealised intercompany profits in stocks and tangible fixed assets held at year-end. All accounts used for consolidation are prepared by applying the accounting policies of the Group.

On acquisition of new companies, the purchase method is applied. Thus, the new company's assets and liabilities are restated at fair value at the time of acquisition. Cost of shares in excess of net assets after revaluation is capitalised as goodwill and amortised over the expected economic life.

Companies which are not subsidiaries, but in which the Group holds 20% or more of the voting rights or in some other way has a significant influence on the operational and financial management, are considered as associated companies.

Newly acquired and divested companies are included in the profit and loss account for the period of ownership. Comparative figures are not adjusted for companies disposed of or newly acquired.

## Translation of foreign currencies

Assets and liabilities in foreign currencies are translated into Danish kroner at the rates of exchange ruling at the balance sheet date.

Accounts of foreign subsidiary companies are translated using exchange rates ruling at the balance sheet date for assets and liabilities and average exchange rates for profit and loss items.

All exchange adjustments relating to the Company and the subsidiary companies are recognised in the profit and loss account with the exception of exchange gains and losses arising from:

- translation of foreign subsidiaries' net assets at 1 January at closing rates at 31 December of the same year,
- translation of foreign subsidiaries' profit and loss accounts from average exchange rates to exchange rates ruling at the balance sheet date,
- translation of long-term intercompany loans which are considered as the equivalent of shareholders' funds in the subsidiaries,

- translation of currency swaps contracted to hedge investments in subsidiary companies,
- translation of participating interests in associated companies,

which are taken directly to other comprehensive income under shareholders' funds.

For subsidiaries in countries with high inflation, non-monetary items and shareholders' funds are translated at historical exchange rates and all exchange gains and losses are taken to the profit and loss account.

## **Financial instruments**

Forward exchange contracts and currency options hedging receivables and debt in foreign currency are recorded at market value at the balance sheet date and value adjustment is recognised in the profit and loss account under investment income and expenditure.

Forward exchange contracts and currency options hedging future income and expenses are not recognised in the balance sheet, but are deferred until the hedged income and expenses are realised.

Currency swaps are used to hedge net investments in subsidiaries. Currency swaps are recorded based on the difference between the swap rate and the exchange rate at the balance sheet date and the value adjustment is recorded in shareholders' funds. Forward Rate Agreements (FRA) are used to hedge the interest risk on financial assets and liabilities and are valued at market value. All value adjustments are recorded in the profit and loss account under investment income and expenditure.

#### **Corporation tax**

The Company has chosen to be assessed jointly with certain of its foreign and domestic subsidiary companies for Danish tax purposes. The Company provides for the aggregate Danish tax payable on taxable income of Danish subsidiaries, and for deferred tax. The jointly assessed companies are included in the scheme for on account payment of tax.

Tax payable for the year with addition of the change in deferred tax for the year is charged to the profit and loss account in the Company and the Group. Tax payable for the year comprises the tax on the expected taxable income and corrections to tax payable for previous years.

Deferred tax is provided under the liability method and covers all temporary differences between the accounting and tax values of the assets and liabilities except from goodwill in cases where amortisation of goodwill is not allowed for tax purposes. Further deferred tax is provided for retaxation of losses realised in foreign companies, when the retaxation is considered to be realised by the company's departure from the joint taxation. Tax losses carried forward will be set off against deferred tax liabilities to the extent that the tax losses are expected to be utilised in the future.

Deferred tax is provided at the current tax rate. Deferred tax at year-end 1999 is provided at 32%.

#### Pensions

Costs related to defined contribution plans are expensed in the profit and loss account as incurred and deferred pension costs are booked under other debt. Costs related to various benefit plans are accrued over the expected working life of the employee. Present value of unfinanced plans is provided under provisions. The change in the provisions for the year is expensed in the profit and loss account.

#### Leasing and rental agreements

Operational leasing costs and rental costs are expensed in the profit and loss over the term. The total commitment for the non cancellable lease period has been disclosed in the notes to the annual accounts.

## Profit and loss account

#### Net turnover

Net turnover represents amounts invoiced excluding value added tax and after deduction of goods returned, trade discounts and allowances. Sales are recognised at the time of risk transfer related to the goods sold.

## Production costs

Production costs are acquisition or cost price for goods sold during the year and comprise both direct and indirect production costs. The cost price comprises material, energy, wages, salaries and depreciation etc. Further, production costs include writedowns on stocks.

#### Sales and distribution costs

Sales and distribution costs comprise costs incurred on the distribution, sale and marketing of the products of the Group, including salaries and depreciation, as well as write-downs for losses and realised losses on trade debtors.

### Research and development costs

Research and development costs include costs attributable to the research and development activities, including clinical trials, registration and maintenance of patents, depreciations and salaries. All research and development costs are taken to the profit and loss account as incurred.

#### Administrative expenses

Administrative expenses comprise the costs of the administrative functions, including salaries and depreciation.

#### Licence fees and Other operating income (net)

Licence fees and Other operating income (net) comprise licence fees and income (net) of a secondary nature in relation to the main activities of the Group. The item also includes one-off income items (net) in respect of outlicensing etc.

#### Restructuring costs

Restructuring costs are costs related to the split of Novo Nordisk into two separate, listed companies - a health care and an enzyme company.

#### Investment revenue and expenditure

Investment revenue and expenditure comprise interest receivable and interest payable, realised and unrealised gains and losses from foreign exchange, short-term investments and the main part of other financial instruments (see above) and other financial income and expenses. Interest for the period is included in the profit and loss account irrespective of payment terms.

## **Balance sheet**

### Intangible fixed assets

Intangible fixed assets are stated at cost less accumulated amortisation. Amortisation is provided under the straight-line method over the expected useful life of the asset. The expected useful lives are stated in Note 9 for the Group and Note 9 for the Company.

## Tangible fixed assets

Tangible fixed assets are stated at cost less accumulated depreciation. Cost includes direct costs for engineering work carried out by group companies. Capitalised interest in respect of construction of major investments are also included in the cost of the assets. Costs of major IT projects regarding development of software for internal use are capitalised under 'Other equipment'. Depreciation is provided under the straight-line method over the estimated useful lives of the assets. The expected useful lives are stated in Note 10 for the Group and Note 10 for the Company.

#### Fixed asset investments

In the annual accounts participating interests in subsidiaries and associated companies are recorded under the equity method, ie at the respective share of the subsidiaries' or associated companies' net assets. Any cost in excess of net assets in the acquired company is capitalised in the Company under 'Fixed asset investments' as 'Goodwill'. In the Consolidated accounts goodwill is recorded as 'Goodwill' under 'Intangible fixed assets' (subsidiaries) or as 'Fixed asset investments' (associated companies). For amortisation of goodwill, see 'Intangible fixed assets'.

Net profit of subsidiaries less unrealised profit in stocks is recorded in the profit and loss account. If shareholders' funds of subsidiary companies are negative, receivables from the subsidiary company will be set off against the Company's share of the negative equity. To the extent it exceeds dividends received from such companies, net revaluation of participating interests in subsidiaries and associated companies is transferred to revaluation reserve for investments in subsidiaries under shareholders' funds.

Other securities and participating interests are stated at cost less write-downs for permanent reductions in value.

The holding of own B shares is perceived as a de facto capital write-down and therefore the costs of acquisition are deducted directly from shareholders' funds. A smaller part of the Company's own shareholdings is held as security for approved share options.

## Stocks

Raw materials and consumables are stated at cost determined on the first-in first-out basis.

Work in progress and finished goods are stated at cost determined on the first-in first-out basis. Cost comprises direct production costs such as raw materials and consumables including energy and labour, and indirect production costs such as depreciation, maintenance etc.

Goods, where the expected sales price less completion costs and costs to execute the sales (net realisable value) is lower than the cost price, are written down to net realisable value.

#### Debtors

Debtors are stated at nominal value less write-down for losses on doubtful debts. The write-down is based on an individual assessment of each debtor which also includes an evaluation of payment difficulties associated with individual countries.

## Current asset investments

Current asset investments are stated at market value at the balance sheet date. Realised and unrealised gains and losses (net) are included in financial income/financial expense. If the total market value at the balance sheet date exceeds the cost price, the difference is included as a separate component ('Revaluation reserve') under shareholders' funds.

### Provision for returned products

Provision for returned products comprises expected lost contribution because of expected future returns. The provision has been calculated based on historical statistic calculations.

## Consolidated statement of cash flows and financial resources

The consolidated statement of cash flows and financial resources is presented in accordance with the indirect method commencing with net profit. The statement shows cash flows for the year, the net change in cash and cash equivalents for the year and the cash and cash equivalents at the beginning and the end of the year.

#### Cash flow from operating activities

Cash flow from operating activities comprises net profit adjusted for non cash operating items, interest received, interest paid, income taxes paid, and changes in working capital. Working capital consists of current assets less current liabilities, excluding those items which are included in cash and cash equivalents.

#### Cash flow from investing activities

Cash flow from investing activities comprises the acquisition and sale of intangible and tangible fixed assets and fixed asset investments.

On the acquisition or sale of companies and activities, cash flow is adjusted for additions and disposals of assets and liabilities. The purchase price is recorded as the value of the assets acquired including any goodwill and acquisition costs. The sales price is recorded after deduction of trade costs.

### Cash flow from financing activities

Cash flow from financing activities comprises the proceeds from and the repayment of principal on mortgage loans, other longterm debt, dividends, the proceeds from share issues and purchase of own shares.

## Financial resources

Financial resources comprise cash at bank and in hand and current asset investments less short-term bank loans due on demand. Undrawn committed credit facilities expiring in more than one year are also included in financial resources.

## Segmented data

Novo Nordisk is divided into a health care business and an enzyme business. Segmented data for the two businesses are disclosed in Note 1. The segmented figures are prepared by applying the accounting policies of the Group.

#### **United States Generally Accepted Accounting Principles**

As a result of the registration of American Depositary Shares (ADSs) with the United States Securities and Exchange Commission, the Company prepares a reconciliation of the effect on shareholders' funds and profit and loss account of the application of US Generally Accepted Accounting Principles in lieu of Danish principles. Note 23 for the Group discloses US GAAP reconciliations.

## STATEMENT OF THE BOARD OF DIRECTORS AND THE MANAGEMENT

The Board of Directors and the Management have today approved the consolidated accounts and the annual accounts of Novo Nordisk A/S for the year 1999. The accounts have been prepared in accordance with the prevailing accounting provisions. In our opinion the accounting policies applied are appropriate and the accounts for the Group and the parent company give a true and fair view of the Group's and the Company's assets and liabilities, financial position and profit for the year.

Gladsaxe, 17 February 2000

Management:		
Mads Øvlisen	Kurt Anker Nielsen	
President & CEO	CFO & deputy CEO	
Henrik Gürtler	Steen Riisgaard	Lars Rebien Sørensen
Board of Directors:		
Vagn Andersen	Palle Marcus	Gert Almind
Chairman	Vice chairman	
Tove Funder-Nielsen	Ulf J Johansson	Ulla Morin
Morten Munk	Jaromir Ruzicka	Ole Scherfig
Stig Strøbæk	Hans Werdelin	Mads Øvlisen

## AUDITORS' REPORT

We have audited the consolidated accounts and annual accounts of Novo Nordisk A/S as presented by the Board of Directors and the Management for the year 1999.

#### **Basis of opinion**

We have planned and conducted our audit in accordance with generally accepted auditing standards as applied in Denmark to obtain reasonable assurance that the accounts are free from material misstatement. Based on an evaluation of materiality and risk, we have tested the basis and documentation for the amounts and disclosures in the accounts. Our audit includes an assessment of the accounting policies applied and the accounting estimates made by the Board of Directors and the Management. In addition, we have evaluated the overall adequacy of the presentation in the accounts.

Our audit did not give rise to any qualification.

#### Opinion

In our opinion, the consolidated accounts and annual accounts have been presented in accordance with the accounting provisions of Danish legislation and give a true and fair view of the Company's and the Group's assets and liabilities, financial position and profit for the year.

Gladsaxe, 17 February 2000

PricewaterhouseCoopers

Morten Iversen Danish State-Authorised Public Accountant

Lars Holtug Danish State-Authorised Public Accountant Ernst & Young Statsautoriseret Revisionsaktieselskab

John Lundin Danish State-Authorised Public Accountant

## THE NOVO NORDISK GROUP PROFIT AND LOSS ACCOUNT

	NOTE	T 1999 DKK million	1998 DKK million	1997 DKK million
Net turnover	1	20,924	17,911	16,932
Production costs	2, 3	6,473	5,856	5,771
Gross profit	2, 5	14,451	12,055	11,161
		1-1,-131	12,055	11,101
Sales and distribution costs	2, 3	5,307	4,536	3,976
Research and development costs	1, 2, 3	3,355	3,399	2,761
Administrative expenses	2, 3	2,184	2,053	2,111
Restructuring expenses	4	350	_	-
Licence fees and Other operating income (net)	3, 5	959	1,469	728
Operating profit	1	4,214	3,536	3,041
Share of profit before tax in associated companies	3	2	(26)	(25)
Financial income	6	262	412	507
Financial expenses	7	527	182	225
Profit before taxation		3,951	3,740	3,298
Corporation tax	8	1,455	1,337	1,201
Corporation taxes outside Denmark in relation to restructuring	4, 8	85	-	-
Profit incl minority interests		2,411	2,403	2,097
Equity minority interests		_	6	-
Net profit		2,411	2,409	2,097

## CHANGE IN SHAREHOLDERS' FUNDS

	DKK million	1998 DKK million	1997 DKK million
	47.070	10.240	16 2 42
Shareholders' funds at the beginning of the year	17,972	18,240	16,343
Effect of changes in accounting policies	-	-	53
Share issue	-	30	-
Net profit for the year	2,411	2,409	2,097
Dividends	(691)	(562)	(428)
Purchase of own shares	(1,448)	(1,970)	-
Currency adjustment of participating interests in subsidiaries	270	(143)	191
Other adjustments	21	(32)	(16)
Shareholders' funds at the end of the year	18,535	17,972	18,240

	NOTE	▼ 31 Dec 1999 DKK million	31 Dec 1998 DKK million
ASSETS			
Goodwill		103	146
Patents and licences		71	91
Intangible fixed assets	1, 9	174	237
Land and buildings		7,278	6,867
Plant and machinery		3,934	3,652
Other equipment		1,206	1,081
Payments on account and assets in course of construction		2,271	2,231
Tangible fixed assets	1, 10	14,689	13,831
Participating interests in associated companies		128	124
Other securities and participating interests		104	86
Fixed asset investments	11	232	210
Total fixed assets		15,095	14,278
		15,095	14,270
Raw materials and consumables		620	627
Work in progress		2,352	2,347
Finished goods		1,908	1,668
Stocks	1	4,880	4,642
Trade debtors	1, 12	3,655	3,401
Tax receivable	8	450	339
Other debtors	13	2,419	1,965
Debtors		6,524	5,705
Current asset investments	14	2,545	1,918
Cash at bank and in hand		1,969	799
Total current assets		15,918	13,064
Total assets		31,013	27,342
		-	-

# THE NOVO NORDISK GROUP

		▼ 31 Dec 1999	31 Dec 1998
	NOTE	DKK million	DKK million
LIABILITIES AND SHAREHOLDERS' FUNDS			
Share capital		754	754
Share premium account		2,565	2,565
Revaluation reserve		171	113
Retained earnings		14,672	14,458
Other comprehensive income		373	82
Total shareholders' funds	15	18,535	17,972
Minority interests		75	65
Provisions for pension commitments and similar obligations		238	191
Provisions for returned products		208	166
Provision for deferred tax (net)	8, 16	1,590	1,554
Other provisions		76	73
Total provisions		2,112	1,984
Banks and other credit institutions	17	3,732	1,835
Total long-term debt	17	3,732	1,835
		5,752	1,055
Bank loans	18	1,143	923
Trade creditors		1,004	768
Tax payable	8	284	220
Employee costs payable		1,034	828
Other taxes and duties payable		457	530
Other creditors		1,946	1,655
Proposed dividends		691	562
Total current liabilities		6,559	5,486
Total long-term debt and current liabilities		10,291	7,321
Total liabilities and shareholders' funds		31,013	27,342
			-
Notes regarding:			
Foreign currencies in the consolidated balance sheet	19		
Financial instruments in the Group	20		
Contingent liabilities and pending litigation	21		
Related party transactions	22		

United States Generally Accepted Accounting Principles

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# THE NOVO NORDISK GROUP CASH FLOW AND FINANCIAL RESERVES

	NOTE	T1999 DKK million	1998 DKK million	1997 DKK million
Net profit		2,411	2,409	2,097
Reversals with no effect on cash flow	А	2,718	2,914	2,307
Corporation tax paid		(1,431)	(1,802)	(793)
Interest received		247	374	293
Interest paid		(150)	(183)	(119)
Cash flow before change in working capital		3,795	3,712	3,785
Change in working capital:				
(Increase)/decrease in trade debtors and other debtors		(770)	(973)	(274)
(Increase)/decrease in stocks		(194)	(155)	(247)
Increase/(decrease) in trade creditors and other creditors		792	892	(137)
Cash flow from operating activities		3,623	3,476	3,127
Investments: Sale of fixed asset investments			1 つ	20
Purchase of intangible fixed assets and fixed asset investments		(29)	13 (135)	30 (28)
Sale of tangible fixed assets and fixed asset investments		97	119	133
Purchase of tangible fixed assets		(1,928)	(2,139)	(2,679)
Cash flow from investing activities		(1,928)	(2,139)	(2,679) (2,544)
cash now nom investing activities		(1,000)	(2,142)	(2,344)
Free cash flow		1,763	1,334	583
Financing:				
New long-term loans		1,943	124	873
Repayment of long-term loans		(247)	(48)	(79)
Net proceeds from employee share issue		10	30	_
Purchase of own shares		(1,448)	(1,970)	_
Dividends paid		(562)	(428)	(279)
Cash flow from financing activities		(304)	(2,292)	515
		4.450	(050)	4 000
Net cash flow		1,459	(958)	1,098
Unrealised gain/(loss) on currencies and current asset investments				
included in financial resources		108	20	122
Net change in financial resources		1,567	(938)	1,220
Financial resources at the beginning of the year		1,851	2,789	1,569
Financial resources at the end of the year	В	3,418	1,851	2,789
Undrawn committed credit facilities	С	5,439	4,832	6,278
Financial reserves at the end of the year		8,857	6,683	9,067
		5,657	0,000	5,007

## THE NOVO NORDISK GROUP NOTES - CASH FLOW AND FINANCIAL RESERVES

NOTE A	T 1999 DKK million	1998 DKK million	1997 DKK million
REVERSALS WITH NO EFFECT ON CASH FLOW			
Loss from sale of tangible fixed assets	77	31	28
Write-down for doubtful debtors	125	120	191
Taxation	1,540	1,337	1,201
Depreciation and amortisation	1,422	1,469	1,308
Exchange gain on investments etc (net)	(3)	(55)	(203)
Unrealised foreign exchange (gain)/loss	(434)	145	(55)
Interest receivable and interest payable	(114)	(173)	(199)
Other	105	40	36
Reversals with no effect on cash flow	2,718	2,914	2,307

#### NOTE B

#### FINANCIAL RESOURCES

Financial resources consist of cash, current asset investments and short-term bank loans.

	T 1999 DKK million	1998 DKK million	1997 DKK million
Total current asset investments at the beginning of the year	1,918	2,922	1,888
Receipts from marketable securities	(7,005)	(8,700)	(7,913)
Outlays for marketable securities	7,579	7,685	8,759
Unrealised gain/(loss) on marketable securities	58	(3)	116
Currency translation adjustments	(5)	14	72
Current asset investments at the end of the year	2,545	1,918	2,922
Short-term bank loans at the end of the year	(1,096)	(866)	(1,253)
Cash at the end of the year	1,969	799	1,120
Financial resources at the end of the year	3,418	1,851	2,789
Current asset investments with remaining term to maturity exceeding three months at the end of the year	2,529	1,908	2,897
exceeding thee months at the end of the year	2,529	1,906	2,097
Cash and cash equivalents at the end of the year	1,985	809	1,145

#### NOTE C

#### EXPIRATION DATE FOR UNDRAWN COMMITTED FACILITIES

The current maturity of the undrawn committed facilities exceeds one year.

#### NOTE 1

#### SEGMENT INFORMATION

Below figures for the Novo Nordisk Group have been segmented into figures for Health Care and Enzyme Business, the two segments Novo Nordisk is doing business in. The split into the two segments is based on an allocation of costs for the Group. The main part of staff and service costs has been split between the two segments based on a specific allocation and the rest of the staff and service costs are split based on Activity Based Costing.

Health Care is the largest of the two business segments. Health Care develops, manufactures and markets pharmaceutical products and services. Health Care is the world leader in diabetes care and commands a strong position within other areas such as hormone replacement therapy (HRT), coagulation disorders (NovoSeven®) and human growth hormone.

Enzyme Business develops, manufactures and markets enzymes that provide biological solutions to industrial problems. Enzyme Business is the world leader in industrial enzymes, with customers in a large variety of industries, the largest sectors being the detergent, starch and baking industries.

In 1999 approximately 32% of net turnover in Enzyme Business are with two major customers.

'Other' comprises restructuring costs and licence fees related to Seroxat®.

The segmented data has been prepared in accordance with the accounting policies for the Group.

#### Segmented figures on business segments

	T 1999 DKK million	1998 DKK million	1997 DKK million		T 1999 DKK million	1998 DKK million	1997 DKK million
Net turnover				Operating profit			
Health Care	16,423	13,647	12,585	Health Care	3,150	2,270	1,823
Enzyme Business	4,501	4,264	4,347	Enzyme Business	687	603	601
Total for the Group	20,924	17,911	16,932	Other	377	663	617
				Total for the Group	4,214	3,536	3,041
Health Care net turnover							
Diabetes care	11,777	9,818	8,889	Operating profit margin			
Hormone replacement therapy	1,130	1,094	1,012	Health Care	19.2%	16.6%	14.5%
Humane growth hormone	1,721	1,498	1,569	Enzyme Business	15.3%	14.1%	13.8%
Factor VIIa (NovoSeven®)	1,313	576	369	The Group	20.1%	19.7%	18.0%
Other turnover	482	661	746				
Total Health Care	16,423	13,647	12,585				
				Research and development costs			
				Health Care	2,748	2,795	2,191
Health Care net turnover, by geography				Enzyme Business	607	604	570
Europe	8,286	7,880	7,191	Total for the Group	3,355	3,399	2,761
US	2,427	1,310	892				
Japan	3,404	2,546	2,716				
Rest of the world	2,306	1,911	1,786				
Total Health Care	16,423	13,647	12,585				
				Research and development costs			
				in per cent of net turnover			
				Health Care	16.7%	20.5%	17.4%
				Enzyme Business	13.5%	14.2%	13.1%
Enzyme Business net turnover				The Group	16.0%	19.0%	16.3%
Technical enzymes	3,289	3,192	3,366				
Food enzymes	983	897	820				
Animal feed enzymes	229	175	161				
Total Enzyme Business	4,501	4,264	4,347		▼ 1999	1998	1997
				Number of employees			
				Health Care	11,994	11,649	11,049
Enzyme Business net turnover,				Enzyme Business	3,190	3,208	3,126
by geography	2 001	2 077	2.055	Total for the Group	15,184	14,857	14,175
Europe, Middle East, Africa North America	2,091	2,077 999	2,055 945				
Asia Pacific	1,039 847	669	945 756				
South America	524	519	756 591				
	524 <b>4,501</b>	4,264	4,347				
Total Enzyme Business	4,501	4,204	4,547				

#### NOTE 1 (continued)

#### SEGMENT INFORMATION

Segmented figures on business segments (continued)

Segmented figures on geographic segments

	DKK million	1998 DKK million	1997 DKK million	
Intangible and tangible fixed assets				Net turnover Group
Health Care	10,284	9,870	9,244	Europe
Enzyme Business	4,579	4,198	4,367	North America
Total for the Group	14,863	14,068	13,611	Japan
				Rest of the world
				Total for the Group
Depreciations on intangible and				
tangible fixed assets				
Health Care	939	974	852	Tangible fixed assets
Enzyme Business	479	483	433	Denmark
Total for the Group	1,418	1,457	1,285	US
				China
				Japan
				Rest of the world
				Total for the Group
Investments in intangible and				
tangible fixed assets				
Health Care	1,362	1,767	1,950	
Enzyme Business	567	403	732	
Total for the Group	1,929	2,170	2,682	
Stocks and trade debtors				
Health Care	6,496	6,044	5,982	
Enzyme Business	2,039	1,999	2,091	
Total for the Group	8,535	8,043	8,073	

Tangible fixed assets			
Denmark	10,273	9,603	9,119
US	1,918	1,858	2,001
China	765	690	623
Japan	597	514	487
Rest of the world	1,136	1,166	990
Total for the Group	14.689	13.831	13.220

▼ 1999 1998 1997 DKK million DKK million DKK million

9,749

2,578

2,779

2,805

17,911

9,060

2,075

2,942

2,855

16,932

10,071

3,816

3,697

3,340

20,924

# THE NOVO NORDISK GROUP

NOTE 2	▼ 1999 DKK million	1998 DKK million	1997 DKK million
EMPLOYEE COSTS			
Wages and salaries	5,544	5,064	4,670
Pensions	300	262	304
Other contributions to social security	391	351	311
Other employee costs	327 6.562	337 6,014	319 5,604
	0,502	6,014	5,604
Included in the profit and loss account under the following headings:			
Production costs	2,099	1,889	1,810
Sales and distribution costs	1,643	1,430	1,321
Research and development costs	1,470	1,455	1,311
Administrative expenses	1,132	1,025	967
	6,344	5,799	5,409
Included in the balance sheet as: Capitalised employee costs related to assets in course of construction	205	179	171
Change in employee costs included in stocks	13	36	24
IT SLOCKS	6.562	6.014	5.604
	0,002	0,011	5,001
Total remuneration to the Management	20	18	19
Total remuneration to the Board of Directors	4	4	4
	- 4000	1000	4007
	▼ 1999	1998	1997
Average number of employees in the Novo Nordisk Group	15,021	14,516	13,785

#### Share options

In 1998 Novo Nordisk set up a share option plan for Corporate Management, Corporate Vice Presidents and in 1999 also for other managers. In 1998 a total of 28,200 options were issued. The date of issue for these options was 19 February 1998 and the quoted price was 1,045 per share of DKK 10. In 1999 further 94,400 options were issued. The date of issue for the 1999 options was 25 March 1999 and the quoted price at that date was 690 per share of DKK 10. The term of the options is eight years and after three years each option allows the holder to buy one share - nom DKK 10 - for an amount equal to the quoted price of the Company's shares at the time of issue of the option.

NOTE 3	DKK million	DKK million	DKK million	
DEPRECIATION AND AMORTISATION				
Included in the profit and loss account under the following headings:				
Production costs	943	885	781	
Sales and distribution costs	99	164	109	
Research and development costs	222	202	206	
Administrative expenses	154	160	189	
Licence fees and				
Other operating income (net)	-	46	-	
Goodwill related to				
associated companies	4	12	23	

▼ 1999 1998 1997

1,469

1,308

1,422

#### NOTE 4

NOTES

#### RESTRUCTURING

#### **Restructuring expenses**

Restructuring expenses are costs incurred in connection with the split of the Group into two separate listed companies. The costs comprise costs of split of IT systems and costs for advisors, consultants, misc duties etc. Further value adjustments which have been nessesary in connection with the restructuring are included.

#### Corporation taxes outside Denmark in relation to restructuring

Corporation taxes in relation to restructuring comprise corporation taxes outside Denmark realised directly as a consequence of the restructuring.

NOTE 5	T 1999 DKK million	1998 DKK million	1997 DKK million
LICENCE FEES AND OTHER OPERATING INCOME (NET)			
Licence fees related to Seroxat®	726	663	617
Other licence fees	159	146	59
Other operating income	74	59	52
One-off income, net	-	601	-
	959	1,469	728

One-off income, net in 1998 relates primarily to outlicensing of Gabitril®, sale of Seroxat® rights in the Nordic countries and costs in relation to settlement with Genentech, Inc.

NOTE 6	1999 DKK million	1998 DKK million	1997 DKK million
FINANCIAL INCOME			
Interest receivable Exchange gain on investments etc (net) Foreign exchange gain (net)	259 3 -	330 55 27 <b>412</b>	304 203 - <b>507</b>
	262	412	507

NOTE 7	T1999 DKK million	1998 DKK million	1997 DKK million
FINANCIAL EXPENSES			
Interest payable	145	157	105
Foreign exchange loss (net)	359	-	86
Other financial expenses	23	25	34
	527	182	225

Interest payable was DKK 201m in 1999. Of this DKK 56m has been capitalised as financing interest under tangible fixed assets. For 1998 interest payable was DKK 224m and capitalised interest DKK 67m, and for 1997 interest payable was DKK 210m and capitalised interest DKK 105m.

NOTE 8	DKK million	DKK million	DKK million
ТАХ	Tax in the profit and loss account	Tax payable/ (tax receivable)	Deferred tax/ (deferred tax receivable)
At the beginning of the year	-	(119)	1,554
Currency adjustment	-	8	(58)
Adjustment relating to previous years	5	(27)	20
Tax on postings on equity	-	(68)	-
Tax on profit for the year	(1,460)	1,456	4
	(1,455)	1,250	1,520
Corporation taxes outside Denmark in relation to restructuring	(85)	15	70
	(1,540)	1,265	1,590
		(	
Paid on account for 1999	-	(1,345)	-
Paid relating to previous years	-	(86)	-
Paid in 1999	-	(1,431)	-
	(1 5 1 0)	(155)	4 500
Tax at the end of the year	(1,540)	(166)	1,590
Tax receivable		(450)	
	_	284	-
Tax payable	_	(166)	-

Taxes paid in 1998 and 1997 amounted to DKK 1,802m and DKK 793m respectively.

	▼ 1999	1998	1997
Computation of effective tax rate:			
Statutory corporation tax rate in Denmark	32.0%	34.0%	34.0%
Non-tax deductible expenses less non-taxable income	0.6%	1.0%	(1.3%)
Effect of Danish tax relief for foreign income	(0.3%)	-	(0.5%)
Deviation in foreign subsidiaries' tax rates higher/(lower) than 32% (net)	4.4%	2.1%	1.9%
Effect of change in tax rate from 34% in 1998 to 32% in 1999	-	(2.0%)	-
Other	0.1%	0.6%	2.3%
Effective tax rate	36.8%	35.7%	36.4%
Effect of corporation taxes outside Denmark in relation to restructuring	2.2%	-	-
	39.0%	35.7%	36.4%

NOTE 9	DKK million	DKK million	▼ DKK million
INTANGIBLE FIXED ASSETS	Goodwill	Patents and licences	Total
Cost at the beginning of the year	415	172	587
Currency adjustment	-	2	2
Additions during the year	-	1	1
Disposals during the year	-	(1)	(1)
Transfer from/(to) other items	-	(2)	(2)
Cost at the end of the year	415	172	587
Amortisation at the beginning of the year	269	81	350
Currency adjustment	1	1	2
Amortisation for the year	42	20	62
Amortisation eliminated on disposals during the year	-	(1)	(1)
Amortisation at the end of the year	312	101	413
Book value at the end of the year	103	71	174

Amortisation is provided under the straight-line method over the expected economic lives as follows:

- Patents and licences are amortised over their duration. Booked patents and licences are amortised over periods of up to 10 years

- Goodwill is amortised over the expected ecomomic life, not exceeding 40 years. Booked goodwill is amortised over 5-15 years

NOTE 10	DKK million	DKK million	DKK million	DKK million	▼ DKK million
TANGIBLE FIXED ASSETS	Land and buildings	Plant and machinery	Other equipment	Payments on account and assets in course of construction	Total
Cost at the beginning of the year	8,883	7,389	3,074	2,231	21,577
Currency adjustment	342	171	118	20	651
Additions during the year	132	126	252	1,418	1,928
Disposals during the year	(130)	(129)	(371)	(1)	(631)
Transfer from/(to) other items	431	757	211	(1,397)	2
Cost at the end of the year	9,658	8,314	3,284	2,271	23,527
Depreciation at the beginning of the year	2,016	3,737	1,993	-	7,746
Currency adjustment	63	59	71	-	193
Depreciation for the year	319	707	330	-	1,356
Depreciation eliminated on disposals during the year	(18)	(123)	(316)	-	(457)
Depreciation at the end of the year	2,380	4,380	2,078	-	8,838
Book value at the end of the year	7,278	3,934	1,206	2,271	14,689

Depreciation is provided under the straight-line method over the following expected useful lives: - Buildings, 12-50 years - Plant and machinery, 5-16 years - Other equipment, 3-16 years - Minor fixed assets below DKK 50,000 and fixed assets with a limited expected useful life are charged to the profit and loss account in the year of acquisition

NOTE 11	DKK million	DKK million	▼ DKK million
FIXED ASSET INVESTMENTS	Participating interests in associated companies	Other securities and participating interests	Total
Cost at the beginning of the year	99	283	382
Additions during the year	1	27	28
Disposals during the year	-	(69)	(69)
Cost at the end of the year	100	241	341
Revaluation reserve at the beginning of the year	25	(197)	(172)
Profit/(loss) before tax	8	-	8
Other adjustments	(5)	60	55
Revaluation reserve at the end of the year	28	(137)	(109)
Book value at the end of the year	128	104	232

Book value of participating interests in associated companies includes net capitalised goodwill, DKK 30m at 31 December 1999. As of 31 December 1998 the amount was DKK 34m (net). Amortisation of goodwill for the year was DKK 4m. There were no additions to goodwill during 1999.

- Goodwill is amortised over the expected economic life, not exceeding 40 years. Booked goodwill is amortised over 15 years

NOTE 12	DKK million	DKK million	DKK million	DKK million
TRADE DEBTORS	Balance at the beginning of the period	Additions charged to the profit and loss account	Deductions	Balance at end of the period
Year ended 31 December 1997 Provision for bad debts	294	191	54	431
Year ended 31 December 1998 Provision for bad debts	431	120	(43)	594
Year ended 31 December 1999 Provision for bad debts	594	125	55	664

Total trade debtors (before provision for bad debts) in the Group are equal to an average credit period of 75 days (81 days in 1998 and 86 days in 1997).

NOTE 13	1999 DKK million	1998 DKK million
OTHER DEBTORS		
Prepayments to authorities	750	250
Accrued licence fee income	380	356
Prepayments and accrued income	342	255
Interest receivable	58	46
Assets for sale including land and buildings	-	127
Other debtors	889	931
	2,419	1,965

NOTE 14	1999 DKK million	1998 DKK million
CURRENT ASSET INVESTMENTS		
Bonds Unit trusts and shares	2,150 395	1,647 271
	2,545	1,918
At original acquisition cost Duration of the Group's bond portfolio:	2,374	1,805
Year-end 1999: 2.4 years, year-end 1998: 2.6 years		
Effective rate of interest of the Group's bond portfolio: Year-end 1999: 5.2%, year-end 1998: 4.1%		

# The novo nordisk group NOTES

NOTE 15	1999 DKK million	1998 DKK million	1997 DKK million
SHAREHOLDERS' FUNDS			
Share capital			
A share capital	107	107	107
B share capital at the beginning of the year Additions to B share capital during the year	647	643 4	643 _
At the end of the year	754	754	750
Share premium account			
At the beginning of the year Additions during the year	2,565	2,539 26	2,539
At the end of the year	2,565	2,565	2,539
Revaluation reserve			
At the beginning of the year Change for the year	113 58	116 (3)	- 116
At the end of the year	171	113	116
Retained earnings			
At the beginning of the year Effect of changes in accounting policies	14,458 _	14,578 -	12,972 53
Net profit for the year Dividends	2,411 (691)	2,409 (562)	2,097 (428)
Transfer (to)/from revaluation reserve Purchase of own shares	(58) (1,448)	3 (1,970)	(116)
At the end of the year	14,672	14,458	14,578
Other comprehensive income			
Currency adjustment of participating interests in subsidiaries:			
At the beginning of the year	130	273	82
Change for the year	270	(143)	191
At the end of the year	400	130	273
Other adjustments:			
At the beginning of the year	(48)	(16)	-
Change for the year	21	(32)	(16)
At the end of the year At the end of the year	(27) <b>373</b>	(48) <b>82</b>	(16) <b>257</b>
At the chu of the year	575	52	257
Total shareholders' funds			
at the end of the year	18,535	17,972	18,240

Weighted average number of A and B shares outstanding during 1999 (excl holding of own B shares): 71,508,657 shares.

At the beginning of the year holding of own shares amounted to 2,952,679 shares at DKK 10 each. The shares had been acquired for the sum of DKK 2,080m. During the year Novo Nordisk continued repurchasing own shares according to a plan initiated in 1998. 1,742,500 shares have been bought during the year for a total of DKK 1,448m. During 1999 a small part of own shares has been used for employee share issue for employees abroad. At yearend 1999 Novo Nordisk therefore holds 4,514,059 own shares, equal to 5,98% of the share capital. Total cost of own shares at year-end 1999 was DKK 3,392m, and total market capitalisation was DKK 4,424m. Of own shares 122,600 shares are placed as security for the options issued.

NOTE 16	DKK million	1998 DKK million
PROVISION FOR DEFERRED TAX (NET)		
Tangible fixed assets	1,733	1,743
Unrealised profit in intercompany stocks	(758)	(455)
Indirect production costs	607	408
Provision for bad debts	(157)	(141)
Other	165	(1)
	1,590	1,554

NOTE 17	1999 DKK million	1998 DKK million
BANKS AND OTHER CREDIT INSTITUTIONS		
Mortgage debt and other secured loans with terms between 2006-2009 and interest rates at 4.2%-10.0%, excl amounts falling due within one year (DKK 0,5m in 1999 and DKK 20m in 1998)	178	261
Unsecured loans and other long-term loans with terms between 2001-2013 and interest rates at 0.5%-6.3%, excl amounts falling due within		
one year (DKK 47m in 1999 and DKK 37m in 1998)	3,554	1,574
	3,732	1,835
The debt is payable within the following periods as from the balance sheet date:		
Between one and two years	1,897	58
Between two and three years	47	59
Between three and four years	48	61
Between four and five years	909	62
After five years	831	1,595
	3,732	1,835
The debt is denominated in the following currencies:		
DKK	4	793
USD	296	255
EUR	2,844	284
JPY	567	477
CHF	21	26
	3,732	1,835

Revaluation of the above loans to market value at year-end 1999 would mean a cost of DKK 2m.

NOTE 18	<ul> <li>1999</li> <li>DKK million</li> </ul>	1998 DKK million	
BANK LOANS			
Bank loans and overdrafts	1,096	866	At year-end the Group had undrawn committed credit facilities with severa
Long-term debt, amounts falling due within a year	47	57	financial institutions in certain countries where the Group is doing business. Th
	1,143	923	undrawn part of these credit lines amounted to DKK 5,439m at year-end. 829
The debt is denominated in the following currencies: DKK CNY EUR JPY USD Other currencies	59 160 680 49 128 67 <b>1,143</b>	43 105 528 80 56 111 <b>923</b>	of these were in foreign currencies.

#### NOTE 19

#### FOREIGN CURRENCIES IN THE CONSOLIDATED BALANCE SHEET

#### Hedging of assets and liabilities in foreign currency

Million	Assets in DKK	Liabilities in DKK	Assets less liabilities in DKK	Contracted financial instruments in DKK	Net assets with trans- action risk in DKK	Net assets with trans- action risk in currency	Exchange rate at 31 Dec 1999 (for 100 units)
USD	1,425	712	713	(713)	_	_	739.88
JPY	583	297	286	(286)	-	-	7.23
EUR	1,211	3,001	(1,790)	-	(1,790)	(240)	744.32
GBP	551	6	545	(545)	-	-	1,194.16
CHF	(795)	169	(964)	-	(964)	(208)	463.52
Other	265	(461)	726	-	726	-	-
	3,240	3,724	(484)	(1,544)	(2,028)		

Transaction risk is the possibility/risk of gains/losses on transactions which are open at the balance sheet date, due to subsequent exchange rate changes. The gains/losses will be included in the profit and loss account.

#### Hedging of net investments in foreign subsidiaries

Million	Net investment in foreign subsidiaries in DKK	Contracted currency swaps in DKK	Net assets with trans- lation risk in DKK	Net assets with trans- lation risk in currency	Exchange rate at 31 Dec 1999 (for 100 units)
USD	1,752	-	1,752	237	739.88
JPY	1,155	(650)	505	6,985	7.23
EUR	455	(301)	154	21	744.32
GBP	117	-	117	10	1,194.16
CHF	1,126	(927)	199	43	463.52
CNY	700	-	700	780	89.75
SEK	120	_	120	138	86.95
Other	584	-	584	_	-
	6,009	(1,878)	4,131		

Translation risk is the possibility/risk of gains/losses arising from translation of net assets in subsidiaries due to subsequent exchange rate changes. The gains/losses will be included directly in 'Other comprehensive income' under shareholders' funds.

#### NOTE 20

#### FINANCIAL INSTRUMENTS IN THE GROUP

DKK million	Contract amount based on agreed rates	Gain/(loss) in revaluation to market value at 31 Dec 1999	Gain/(loss) included in 1999 profit and loss account	Gain/(loss) charged directly to unappro- priated retained earnings at 31 Dec 1999	Deferred gain/ (loss)	Interest margin p a	Maturity periods
Forward exchange contracts,							
net sales	4.442	(4.4)	(4.4)				
GBP	1,143	(11)	(11)	-	-		Jan/Apr 2000
JPY	1,002	(17)	(17)	-	-		Jan/May 2000
USD	1,630	(11)	(11)	-	-		Jan/Apr 2000
	3,775	(39)	(39)	-	-		
Currency and interest rate swaps							
CHF/DKK	925	(18)	3	(2)	(19)	2.3%/1.7%	Dec 2000/Sep 2008
JPY/DKK	475	(196)	5	(175)	(26)	4.4%/2.7%	May 2000/Dec 2008
EUR/DKK	302	8	2	1	5	0.8%	May 2006
	1,702	(206)	10	(176)	(40)	0.070	.vidy 2000
	.,	(===)		(	()		
	5,477	(245)	(29)	(176)	(40)		

The Group's expected future cash flow in major currencies is contracted as follows:

Currency	In case of decrease - month	In case of increase - month
JPY	3	3
USD	4	4
GBP	4	4

As the financial instruments are primarily made 'Over-The-Counter' with major, creditworthy banks (minimum A1 rating), they are not considered to be subject to significant credit risk.

NOTE 21	1999 DKK million	1998 DKK million
CONTINGENT LIABILITIES AND PENDING LITIGATION		
Contingent liabilities		
Rental and lease commitments expiring within the following periods as from the balance sheet date:		
Within a year	163	149
Between one and two years	128	104
Between two and three years	105	77
Between three and four years	80	65
Between four and five years	74	55
After five years	320	228
	870	678
The above rental and lease commitments are related to non-cancellable operating lease contracts. Financial lease contracts are immaterial. Approximately 69% of the commitments are related to contracts outside Denmark. The rental/lease costs for 1999, 1998 and 1997 were DKK 336m, DKK 312m and DKK 263m respectively.		
Contractual obligations relating to investments in tangible fixed assets	241	178
Contractual obligations related to research and development projects	451	360
Other guarantees and commitments	1,087	644
Security for debt Land, buildings and equipment etc at net book value	645	756

#### **Pending litigation**

The Novo Nordisk Group is engaged in certain litigation proceedings. In the opinion of Management, settlement or continuation of these proceedings will not have a material negative effect on the financial position of the Group.

#### NOTE 22

#### RELATED PARTY TRANSACTIONS

During the year the companies in the Group have not had any major transactions with related parties.

In connection with the establishment of Novo A/S 39 employees have been transferred to the company and a few tangible fixed assets have been sold to the company.

#### NOTE 23

# UNITED STATES GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

A description of the Company's accounting policies is set out on pages 29-31. The accounting principles generally accepted in the United States differ in a few areas from the Company's policies. The areas for which the generally accepted accounting principles (GAAP) in the United States differ can be summarised as follows:

- a) Employee shares according to Danish GAAP employee share issue at a favourable price is posted to shareholders' funds irrespective of the favourable price. According to US GAAP the difference between market price and the favourable price is employee costs and is taken to the profit and loss account.
- b) Dividends according to Danish GAAP dividends are recorded in the accounting period they relate to. According to US GAAP dividends are recorded in the period in which they are declared.
- c) Financial instruments according to Danish GAAP recording of foreign exchange contracts and options hedging future income and expenses are deferred. Under US GAAP such contracts are valued at market value and value adjustment recorded in the profit and loss account.
- d) Restructuring costs under Danish GAAP costs in connection with the restructuring have been taken to the profit and loss account. Under US GAAP such costs can only be charged to the profit and loss account when the costs have been incurred. According to US GAAP the part of the restructuring costs not yet incurred has been reversed and will be charged to the profit and loss account when paid.
- e) In the statement of cash flow and financial reserves on page 36 financial resources comprise current investments, cash and short-term bank loans. According to US GAAP cash and cash equivalents consist of cash and current asset investments with remaining term to maturity less than three months. Current asset investments with remaining term to maturity exceeding three months are presented as investing activities and short-term bank loans are presented as financing activities.

In 1997 the method for calculation of indirect production overheads (IPO) was improved by using Activity Based Costing. The accumulated effect of the change in method was included in the profit and loss account for 1997 according to US GAAP.

# THE NOVO NORDISK GROUP

NOTE 23 (continued)	▼ 1999 DKK million	1998 DKK million	1997 DKK million
UNITED STATES GENERALLY ACCEPTED ACCOUNTING PRINCIPLES	)		
The application of the described accounting principles generally accepted in the United States would have adjusted net profit calculated on a Danish basis as follows:			
Net profit in accordance with Danish accounting principles	2,411	2,409	2,097
Employee share issue	(117)	(424)	-
Financial instruments	83	(126)	31
Stocks	-	-	(315)
Restructuring	125	-	-
Tax on the difference between Danish and US GAAP:			
Employee share issue	23	-	-
Financial instruments	(27)	42	(11)
Stocks	-	-	107
Restructuring	(40)	-	-
Net profit in accordance with the US generally accepted			
accounting principles	2,458	1,901	1,909
Net profit per share in accordance with the US generally accepted accounting principles	34.37	25.62	25.65
Net profit per share (diluted) in accordance with the US generally accepted accounting principles	34.33	25.62	25.65
Net profit per share in accordance with Danish accounting principles	33.72	32.47	28.17

NOTE 23 (continued)	▼ 1999 DKK million	1998 DKK million	1997 DKK million
UNITED STATES GENERALLY ACCEPTED ACCOUNTING PRINCIPLES	)		
The application of the described accounting principles generally accepted in the United States would have resulted in an adjustment of shareholders' funds calculated on a Danish basis as follows:			
Shareholders' funds in accordance with Danish accounting principles:	18,535	17,972	18,240
Dividends	691	562	428
Financial instruments	-	(83)	43
Restructuring	125	-	-
Tax arising from the difference between Danish and US GAAP:			
Financial instruments	-	27	(15
Restructuring	(40)	-	-
Shareholders' funds in accordance with the US generally accepted	19,311	18,478	18,696
accounting principles	19,311	18,478	18,696
The following is a listing of the balance sheet items affected as shown in the consolidated financial statements and adjusted to the accounting principles generally accepted in the United States:			
According to Danish accounting principles:			
Debtors	6,524	5,705	4,802
Current liabilities	(6,559)	(5,486)	(5,298
Deferred tax	(1,590)	(1,554)	(1,387
Adjusted to the US generally accepted accounting principles:			
Debtors	6,524	5,622	4,845
Current liabilities	(5,783)	(4,924)	(4,870

(1,590) (1,527) (1,402)

Deferred tax

## NOVO NORDISK A/S PROFIT AND LOSS ACCOUNT

	NOTE	T1999 DKK million	1998 DKK million	1997 DKK million
Net turnover	1	15,199	12,620	12,304
Production costs	2	6,137	5,367	5,173
Gross profit		9,062	7,253	7,131
Sales and distribution costs	2	3,033	2,405	2,045
Research and development costs	2	2,581	2,742	2,176
Administrative expenses	2, 3	1,075	1,153	1,195
Restructuring expenses	4	350	-	-
Licence fees and Other operating income (net)	5	1,416	1,885	898
Operating profit		3,439	2,838	2,613
Profit before tax in subsidiaries		875	770	547
Share of profit before tax in associated companies		-	(26)	(26)
Financial income	6	181	313	352
Financial expenses	7	544	149	188
Profit before taxation		3,951	3,746	3,298
Corporation tax	8	1,455	1,337	1,201
Corporation taxes outside Denmark in relation to restructuring	4, 8	85	-	-
Net profit		2,411	2,409	2,097
Proposed appropriation of net profit:				
Dividends		691	562	428
Transfer to shareholders' funds:		0.51	502	120
Net revaluation reserve according to the equity method		_	174	404
Revaluation reserve		20	_	31
Retained earnings		1,700	1,673	1,234
		2,411	2,409	2,097
		_,	_,	_,

## NOVO NORDISK A/S BALANCE SHEET

	NOTE	▼ 31 Dec 1999 DKK million	31 Dec 1998 DKK million
ASSETS			
Goodwill		34	52
Patents and licences		65	84
Intangible fixed assets	9	99	136
Land and buildings		5,182	4,946
Plant and machinery		2,766	2,933
Other equipment		694	685
Payments on account and assets in course of construction		2,097	1,734
Tangible fixed assets	10	10,739	10,298
Beneficial and the second state of the state		4.250	F 201
Participating interests in subsidiaries		4,256 5	5,391 4
Amounts owed by subsidiaries Participating interests in associated companies		5 127	4 124
Other securities and participating interests		90	78
Fixed asset investments	11	4,478	5,597
		.,	-,
Total fixed assets		15,316	16,031
Raw materials and consumables		502	497
Work in progress		2,173	2,115
Finished goods		1,012	817
Stocks		3,687	3,429
Trade debtors		999	1,112
Amounts owed by subsidiaries Tax receivable		3,584 193	2,731 112
Other debtors	12	1,890	1,603
Debtors	12	6,666	5,558
		0,000	5,550
Current asset investments	13	2,130	779
Cash at bank and in hand		1,562	290
		1,502	250
Total current assets		14,045	10,056
Total assets		29,361	26,087

## NOVO NORDISK A/S BALANCE SHEET

	NOTE	▼ 31 Dec 1999 DKK million	31 Dec 1998 DKK million
LIABILITIES AND SHAREHOLDERS' FUNDS			
Share capital		754	754
Share premium account		2,565	2,565
Revaluation reserve		32	12
Net revaluation reserve according to the equity method		1,036	1,473
Retained earnings		14,148	13,168
Total shareholders' funds	14	18,535	17,972
Provisions for returned products		206	164
Provision for deferred tax (net)		1,513	1,509
Other provisions		63	60
Total provisions		1,782	1,733
Banks and other credit institutions	15	2,860	949
Amounts owed to subsidiaries		565	503
Total long-term debt		3,425	1,452
		42	12
Bank loans		13	43
Trade creditors		621	457
Amounts owed to subsidiaries		2,316	1,988
Employee costs payable		508	553
Other taxes and duties payable		458	487
Other creditors		1,012	840
Proposed dividends Total current liabilities		691	562
		5,619	4,930
Total long-term debt and current liabilities		9,044	6,382

Total liabilities and shareholders' funds	29,361	26,087
Notes regarding:		
Contingent liabilities and pending litigation 16		
Related party transactions 17		

# NOVO NORDISK A/S

		DKK million	DKK million
NET TURNOVER			
By business segments:			
Health Care	12,250	9,927	9,336
Enzyme Business	2,949	2,693	2,968
	15,199	12,620	12,304
By geographical area:			
Europe	8,497	8,217	7,795
North America	1,942	683	751
Japan	2,445	1,850	1,832
South America	354	286	302
Rest of the world	1,961	1,584	1,624
	15,199	12,620	12,304

#### NOTE 4

#### RESTRUCTURING

For information on restructuring expenses please refer to Note 4 in the consolidated accounts.

NOTE 5	T 1999 DKK million	1998 DKK million	1997 DKK million
LICENCE FEES AND OTHER OPERATING INCOME (NET)			
Licence fees related to Seroxat®	726	663	617
Other licence fees	632	570	239
Other operating income	58	51	42
One-off income, net	-	601	-
	1,416	1,885	898

One-off income, net in 1998 relates primarily to outlicensing of Gabitril®, sale of Seroxat® rights in the Nordic countries and costs in relation to settlement with Genentech, Inc.

NOTE 6	T 1999 DKK million	1998 DKK million	1997 DKK million
FINANCIAL INCOME			
Interest receivable	161	222	194
Exchange gain on investments etc (net)	20	23	158
Foreign exchange gain (net)	-	68	-
	181	313	352
of this interest relating to subsidiaries	-	6	10

NOTE 7	DKK million	1998 DKK million	1997 DKK million
FINANCIAL EXPENSES			
Interest payable Foreign exchange loss (net)	146 389	139	104 67
Other financial expenses	9 544	10 <b>149</b>	17 188
of this interest relating to subsidiaries	78	55	51

Interest payable was DKK 196m in 1999. Of this DKK 50m has been capitalised as financing interest under tangible fixed assets. For 1998 interest payable was DKK 193m and capitalised interest DKK 54m, and for 1997 interest payable was DKK 181m and capitalised interest DKK 77m.

NOTE 8	▼ 1999 DKK million	1998 DKK million	1997 DKK million
ТАХ			
Taxes paid during the year	970	1,321	516

For specification of tax please refer to Note 8 in the consolidated accounts.

NOTE 2	1999 DKK million	1998 DKK million	1997 DKK million
EMPLOYEE COSTS			
Wages and salaries Pensions Other contributions to social security Other employee costs	3,061 147 68 132 <b>3,408</b>	3,292 153 73 132 <b>3,650</b>	3,023 186 59 155 <b>3,423</b>
Included in the balance sheet as:	-,	-,	
Capitalised employee costs related to assets in course of construction Change in employee costs included	0	1	23
in stocks	43	35	27
Total remuneration to the Management	20	18	19
Total remuneration to the Board of Directors	4	4	4
	▼ 1999	1998	1997
Average number of employees in Novo Nordisk A/S	8,146	8,905	8,916

NOTE 3	1999 DKK million	1998 DKK million	1997 DKK million
FEES TO STATUTORY AUDITORS			
Fees from Novo Nordisk A/S to Danish audit firms:			
Total fee to PricewaterhouseCoopers, Hellerup Total fee to Ernst & Young, Copenhagen	24	14	14
of which statutory audit fee to PricewaterhouseCoopers, Hellerup	4	4	4
of which statutory audit fee to Ernst & Young, Copenhagen	1	1	1

NOTE 9	DKK million	DKK million	▼ DKK million
INTANGIBLE FIXED ASSETS	Goodwill	Patents and licences	Total
Cost at the beginning of the year	106	148	254
Additions during the year	-	-	-
Disposals during the year	-	-	-
Cost at the end of the year	106	148	254
Amortisation at the beginning of the year	54	64	118
Amortisation for the year	18	19	37
Amortisation eliminated on disposals during the year	-	-	-
Amortisation at the end of the year	72	83	155
Book value at the end of the year	34	65	99

Amortisation is provided under the straight-line method over the expected economic lives as follows:

Patents and licences are amortised over their duration. Booked patents and licences are amortised over periods of up to 10 years
 Goodwill is amortised over the expected economic life, not exceeding 40 years. Booked goodwill is amortised over 5-15 years

NOTE 10	DKK million	DKK million	DKK million	DKK million	▼ DKK million
TANGIBLE FIXED ASSETS	Land and buildings	Plant and machinery	Other equipment	Payments on account and assets in course of construction	Total
Cost at the beginning of the year	6,469	6,205	2,195	1,734	16,603
Additions during the year	88	103	112	1,182	1,485
Disposals during the year	(17)	(125)	(355)	-	(497)
Transfer from/(to) other items	359	276	184	(819)	-
Cost at the end of the year	6,899	6,459	2,136	2,097	17,591
Depreciation at the beginning of the year	1,523	3,272	1,510	-	6,305
Depreciation for the year	206	541	170	-	917
Depreciation eliminated on disposals during the year	(12)	(120)	(238)	-	(370)
Depreciation at the end of the year	1,717	3,693	1,442	-	6,852
Book value at the end of the year	5,182	2,766	694	2,097	10,739

The latest official valuation of properties of the Company for property tax purposes amounts to a total of DKK 2,904m. Cost of property not officially valued amounts to DKK 466m.

Depreciation is provided under the straight-line method over the following expected useful lives:

- Buildings, 12-50 years

- Plant and machinery, 5-16 years

- Other equipment, 3-16 years

- Minor fixed assets below DKK 50,000 and fixed assets with a limited expected useful life are charged to the profit and loss account in the year of acquisition

NOTE 11	DKK million	DKK million	DKK million	DKK million	DKK million
FIXED ASSET INVESTMENTS	Participating interests in subsidiaries	Amounts owed by subsidiaries	Participating interests in associated companies	Other securities and participating interests	Total
Cost at the beginning of the year	5,091	5	99	273	5,468
Additions during the year	317	4	-	20	341
Disposals during the year	(698)	(3)	-	(69)	(770)
Cost at the end of the year	4,710	6	99	224	5,039
Revaluation reserve at the beginning of the year	1,709	(1)	25	(195)	1,538
Profit/(loss) before tax (net)	1,395	-	8	-	1,403
Corporation tax on profit for the year	(586)	-	-	-	(586)
Dividends received	(1,246)	-	-	-	(1,246)
Currency adjustment	652	-	-	-	652
Other adjustments	(162)	-	(5)	61	(106)
Revaluation at the end of the year	1,762	(1)	28	(134)	1,655
Offset against amounts owed by subsidiaries					
at the beginning of the year	13	-	-	-	13
Change for the year	(12)	-	-	-	(12)
At the end of the year	1	-	-	-	1
Non realised profit at the beginning of the year	(1,422)	-	-	-	(1,422)
Currency adjustment	(275)	-	-	-	(275)
Change for the year	(520)	-	-	-	(520)
At the end of the year	(2,217)	-	-	-	(2,217)
Book value at the end of the year	4,256	5	127	90	4,478
	4,200	5	127	50	-,-//

Book value of participating interests in subsidiaries includes net capitalised goodwill, DKK 69m at 31 December 1999. As of 31 December 1998 the amount was DKK 93m (net). Amortisation of goodwill for the year was DKK 24m. Book value of participating interests in associated companies includes net capitalised goodwill, DKK 30m at 31 December 1999. As of 31 December 1998 the amount was DKK 34m (net). Amortisation of goodwill for the year was DKK 4m. There were no additions to goodwill during 1999.

Participating interests in subsidiaries and associated companies are detailed on pages 56-57.

- Goodwill is amortised over the expected economic life, not exceeding 40 years. Booked goodwill is amortised over 5-15 years

NOTE 12	T1999 DKK million	1998 DKK million
OTHER DEBTORS		
Prepayments to authorities	750	250
Accrued licence fee income	380	356
Prepayments and accrued income	190	153
Interest receivable	55	38
Assets for sale including land and buildings	-	143
Other debtors	515	663
	1,890	1,603

NOTE 13	1999 DKK million	1998 DKK million
CURRENT ASSET INVESTMENTS		
Original acquisition cost amounts to	2,098	767
Market value at the end of the year	2,130	779

NOTE 14	1999 DKK million	1998 DKK million	1997 DKK million
SHAREHOLDERS' FUNDS			
Share capital			
A share capital - 10,748,720 shares of DKK 10 each	107	107	107
B share capital at the beginning of the year Additions to B share capital for the year	647 _	643 4	643 _
At the end of the year	754	754	750
Total number of B shares at the end of 1999 is 64,690,112 shares of DKK 10 each.			
Total share capital at the end of 1999 is 75,438,832 shares of DKK 10 each.			
Share premium account			
At the beginning of the year	2,565	2,539	2,539
Additions during the year At the end of the year	2,565	26 <b>2,565</b>	2,539
Revaluation reserve			
At the beginning of the year Change for the year	12 20	31 (19)	- 31
At the end of the year	32	12	31
Revaluation reserve according to the equity method			
At the beginning of the year Appropriated from net profit	1,473	1,299 174	895 404
Transfer to retained earnings	(437)	-	-
At the end of the year	1,036	1,473	1,299
Retained earnings			
At the beginning of the year	13,168	13,621	12,159
Effect of changes in accounting policies	-	-	53
Appropriated from net profit Transfer from revaluation reserve	1,700	1,673 19	1,234
Transfer from revaluation reserve		15	
according to the equity method Currency adjustment of investments	437	-	-
in subsidiaries	270	(143)	191
Purchase of own shares	(1,448) 21	(1,970)	(16)
Other adjustments At the end of the year	14,148	(32) 13,168	(16) <b>13,621</b>
Total development (			
Total shareholders' funds at the end of the year	18,535	17,972	18,240
		,	

Regarding own shares and average number of shares please refer to Note 15 in the consolidated accounts.

NOTE 15	1999 DKK million	1998 DKK million
BANKS AND OTHER CREDIT INSTITUTIONS		
Mortgage debt	157	155
Other long-term debt	2,703	812
	2,860	967
less mortgage debt falling due within a year	-	18
	2,860	949
Long-term debt falling due later than five years from the balance sheet date amounts to	712	867
nom the balance sheet date amounts to	/12	007

NOTE 16	1999 DKK million	1998 DKK million
CONTINGENT LIABILITIES AND PENDING LITIGATION		
Contingent liabilities		
Rental and lease commitments	270	290
Contractual obligations relating to investments		
in tangible fixed assets	241	178
Guarantees given for subsidiaries	3,971	2,843
Other guarantees and commitments	916	468
Contractual obligations related to research		
and development projects	451	360
Security for debt		
Land, buildings and equipment etc at net book value	645	637
Pending litigation		
The state of the second st	24 1	and the second

For information on pending litigation please refer to Note 21 in the consolidated accounts.

#### NOTE 17

#### RELATED PARTY TRANSACTIONS

For information on transactions with related parties please refer to Note 22 in the consolidated accounts.

# SUBSIDIARIES OF NOVO NORDISK A/S

	Country	Year of incorporation/ acquisition		lssued share capital/ paid-in capital	Percentage of shares owned
Subsidiaries *					
<ul> <li>Novo Nordisk Pharma Argentina S.A.</li> </ul>	Argentina	1998	ARS	7,065,150	100
<ul> <li>Novo Nordisk Bioindustrial Pty. Ltd.</li> </ul>	Australia	1976	AUD	500,000	100
<ul> <li>Novo Nordisk Pharmaceuticals Pty. Ltd.</li> </ul>	Australia	1985	AUD	500,001	100
<ul> <li>Novo Nordisk Biotechnologie GmbH</li> </ul>	Austria	1997	ATS	500,000	100
<ul> <li>Novo Nordisk Pharma GmbH</li> </ul>	Austria	1974	ATS	500,000	100
• S.A. Health Care Europe N.V.	Belgium	1998	BEF	20,000,000	100
• S.A. Novo Nordisk Pharma N.V.	Belgium	1974	BEF	103,250,000	100
<ul> <li>Novo Nordisk Bioindustrial do Brasil Ltda.</li> </ul>	Brazil	1975	BRL	19,272,849	100
<ul> <li>Novo Nordisk Farmaceutica do Brasil Ltda.</li> </ul>	Brazil	1990	BRL	30,093,779	100
Novo Nordisk Canada Inc.	Canada	1983	CAD	200	100
<ul> <li>Novo Nordisk (China) Biotechnology Co. Ltd.</li> </ul>	China	1994	CNY	859,058,400	90
<ul> <li>Novo Nordisk Engineering Tianjin Co.</li> </ul>	China	1996	CNY	1,662,940	100
Novo Nordisk Invest Co. Ltd.	China	1997	CNY	248,202,000	100
<ul> <li>Novo Nordisk Shenyang Biochemical Processing Ltd.</li> </ul>	China	1994	CNY	9,069,257	100
<ul> <li>Novo Nordisk Tianjin Biochemicals Ltd.</li> </ul>	China	1994	CNY	165,781,758	100
<ul> <li>Suzhou Hongda Enzyme Co. Ltd.</li> </ul>	China	1994	CNY	34,769,000	62
• Novo Nordisk s.r.o.	Czech Republic	1997	CZK	14,500,000	100
• FeF Chemicals A/S	Denmark	1990	DKK	10,000,000	100
Novo Nordisk Bioindustrial A/S	Denmark	1974	DKK	1,000,000	100
Novo Nordisk Bioindustrial China A/S	Denmark	1999	DKK	500,000	100
Novo Nordisk Engineering A/S	Denmark	1989	DKK	500,000	100
Novo Nordisk Farmaka Danmark A/S	Denmark	1985	DKK	500,000	100
Novo Nordisk Invest 1 A/S	Denmark	1984	DKK	36,000,000	100
Novo Nordisk Invest 5 A/S	Denmark	1996	DKK	500,000	100
Novo Nordisk IT A/S	Denmark	1998	DKK	1,000,000	100
Novo Nordisk Pharmaceuticals A/S	Denmark	1974	DKK	1,000,000	100
Novo Nordisk Servicepartner A/S	Denmark	1998	DKK	1,000,000	100
Novo Nordisk Servicepartner Sikring A/S	Denmark	1998	DKK	1,000,000	100
Novo Nordisk Farma OY	Finland	1972	FIM	2,500,000	100
<ul> <li>Novo Nordisk Bioindustrie SA</li> </ul>	France	1976	FRF	300,000	100
Novo Nordisk Pharmaceutique SA	France	1959	FRF	200,000,000	100
Hermedico GmbH	Germany	1995	DEM	50,000	100
<ul> <li>Novo Nordisk Biotechnologie GmbH</li> </ul>	Germany	1991	DEM	500,000	100
Novo Nordisk Pharma GmbH	Germany	1973	DEM	1,200,000	100
Novo Nordisk Hellas Ltd.	Greece	1979	GRD	350,000,000	100
Novo Nordisk Hungary Kft.	Hungary	1997	HUF	371,000,000	100
Novo Nordisk Enzymes Private Limited	India	1998	INR	18,500,020	100
Novo Nordisk Pharma India Limited	India	1994	INR	130,000,000	100
Novo Nordisk Pharmaceuticals Ltd.	Ireland	1978	IEP	500	100
Novo Nordisk Ltd.	Israel	1997	ILS	100	100
Home Care Srl.	Italy	1995	ITL	20,000,000	100
Novo Nordisk Bioindustriale Srl.	Italy	1978	ITL	20,000,000	100
Novo Nordisk Elonidustriale Sh.     Novo Nordisk Farmaceutici SpA	Italy	1980	ITL	1,000,000,000	100
Novo Notalsk raffiaceutici spa     Nippon Novo Ltd.	Japan	1979	JPY	10,000,000	100
Novo Nordisk Property Ltd.	Japan	1982	JPY	2,843,000,000	100
Novo Nordisk Property Ltd.     Novo Nordisk Bioindustry Ltd.	Japan	1977	JPY	50,000,000	90
Novo Nordisk Biolindustry Ltd.     Novo Nordisk Pharma Ltd.	Japan	1980	JPY	5,480,000,000	90 100

	Country	Year of incorporation/ acquisition		Issued share capital/ paid-in capital	Percentage of shares owned
Subsidiaries *					
<ul> <li>Novo Nordisk Bioindustrial (Malaysia) Sdn. Bhd.</li> </ul>	Malaysia	1997	MYR	5,606,000	100
<ul> <li>Novo Nordisk (Malaysia) Sdn. Bhd.</li> </ul>	Malaysia	1992	MYR	200,000	100
• Novo Nordisk de Mexico S.A. de C.V.	Mexico	1994	MXN	338,100	100
• Novo Nordisk, S.A. de C.V.	Mexico	1994	MXN	338,100	100
• Hermedico B.V.	The Netherlands	1986	NLG	40,000	100
• Novo Nordisk Farma B.V.	The Netherlands	1983	NLG	135,000	100
Novo Nordisk Pharmaceuticals Ltd.	New Zealand	1990	NZD	1,000,000	100
Novo Nordisk Pharma AS	Norway	1965	NOK	250,000	100
<ul> <li>Novo Nordisk Pharmaceuticals (Philippines) Ltd.</li> </ul>	Philippines	1999	PHP	8,000,000	100
<ul> <li>Novo Nordisk Pharma Sp. Zoo.</li> </ul>	Poland	1996	PLN	27,364,000	100
<ul> <li>Novo Nordisk Comércio Produtos Farmacêuticos, Lda.</li> </ul>	Portugal	1984	PTE	4,000,000	100
Novo Investments Pte. Ltd.	Singapore	1994	SGD	7,000,000	100
<ul> <li>Novo Nordisk Health Care (Asia Pacific) Pte. Ltd.</li> </ul>	Singapore	1997	SGD	2,000,000	100
Novo Nordisk Pharma (Singapore) Pte. Ltd.	Singapore	1997	SGD	200,000	100
Novo Nordisk Pte. Ltd.	Singapore	1994	SGD	2,000,000	100
• Enzymes S.A. (Pty) Ltd.	South Africa	1996	ZAR	100	49
• Novo Nordisk (Pty) Ltd.	South Africa	1959	ZAR	8,000	100
• Novo Nordisk Korea Ltd.	South Korea	1991	KRW	3,300,000,000	100
<ul> <li>Novo Nordisk Pharma Korea Ltd.</li> </ul>	South Korea	1994	KRW	6,108,400,000	100
Novo Nordisk Pharma SA	Spain	1978	ESP	250,000,000	100
Novo Nordisk Bioindustrial SA	Spain	1989	ESP	60,000,000	100
Novo Nordisk Pharma AB	Sweden	1971	SEK	100,000	100
Novo Nordisk Ferment AG	Switzerland	1998	CHF	5,000,000	100
Novo Nordisk Finanz AG	Switzerland	1998	CHF	2,500,000	100
Novo Nordisk Holding AG	Switzerland	1967	CHF	110,000,000	100
Novo Nordisk Pharma AG	Switzerland	1968	CHF	50,000	100
• Novo Nordisk Pharma (Taiwan) Ltd.	Taiwan	1990	TWD	9,000,000	100
Novo Nordisk Pharma (Thailand) Ltd.	Thailand	1983	THB	15,500,000	49
Novo Nordisk Enzim Dis Ticaret Ltd. Sti.	Turkey	1998	TRL	T21,000,000	100
<ul> <li>Novo Nordisk Saglik Urunleri Ticaret Ltd. Sti.</li> </ul>	Turkey	1993	TRL	T1,275,300,000	100
Novo Nordisk Bioindustries UK Ltd.	United Kingdom	1977	GBP	1,000,000	100
Novo Nordisk Holding Ltd.	United Kingdom	1977	GBP	2,802,132	100
Novo Nordisk Pharmaceuticals Ltd.	United Kingdom	1978	GBP	2,350,000	100
<ul> <li>Novo Nordisk BioChem North America, Inc.</li> </ul>	United States	1976	USD	17,500,000	100
Novo Nordisk Biotech, Inc.	United States	1992	USD	1,000	100
<ul> <li>Novo Nordisk of North America, Inc.</li> </ul>	United States	1988	USD	187,709,512	100
<ul> <li>Novo Nordisk Pharmaceutical Industries, Inc.</li> </ul>	United States	1991	USD	20,200,000	100
<ul> <li>Novo Nordisk Pharmaceuticals, Inc.</li> </ul>	United States	1982	USD	2,000	100
ZymoGenetics, Inc.	United States	1988	USD	34,357	100
Novo Nordisk Bioindustrial SA	Venezuela	1987	VEB	14,500	100
Associated companies *					
• Aldaph SpA	Algeria	1994	DZD	42,900,000	45
• DAKO A/S	Denmark	1992	DKK	48,135,000	29
• S.A.V.P.O.	France	1976	FRF	275,400	50

\* Novo Nordisk A/S' subsidiaries and associated companies operate primarily in their country of domicile.

# SUMMARY OF THE GROUP 1990-1999

DKK million	▼ 1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Profit and loss account										
Net turnover	20,924	17,911	16,932	14,873	13,723	13,524	12,163	10,699	9,361	8,066
Health Care	16,423	13,647	12,585	11,128	9,991	9,286	8,279	7,144	6,435	5,746
Enzyme Business	4,501	4,264	4,347	3,745	3,388	3,472	3,202	2,819	2,400	1,948
Other businesses	0	0	0	0	344	766	682	736	526	372
Employee costs	6,562	6,014	5,604	5,062	4,787	4,549	3,981	3,459	3,033	2,636
Research and development costs	3,355	3,399	2,761	2,244	1,950	1,896	1,669	1,522	1,347	1,195
Operating profit	4,214	3,536	3,041	2,487	2,090	2,170	1,749	1,709	1,351	1,019
Financial items (net)	(263)	204	257	235	168	(44)	215	108	168	163
Profit before taxation	3,951	3,740	3,298	2,722	2,258	2,126	1,964	1,817	1,519	1,200
Tax on ordinary profit before tax	1,455	1,337	1,201	966	916	602	584	544	570	417
Net profit	2,411	2,409	2,097	1,759	1,342	1,524	1,380	1,273	949	783
Turnover in per cent:										
Health Care	78.5%	76.2%	74.3%	74.8%	72.8%	68.6%	68.1%	66.8%	68.8%	71.2%
Enzyme Business	21.5%	23.8%	25.7%	25.2%	24.7%	25.7%	26.3%	26.4%	25.6%	24.2%
Other businesses	0.0%	0.0%	0.0%	0.0%	2.5%	5.7%	5.6%	6.8%	5.6%	4.6%
Sales outside Denmark in per cent of net turnover Research and development costs	99%	98%	98%	98%	97%	97%	97%	96%	96%	94%
in per cent of net turnover	16.0%	19.0%	16.3%	15.1%	14.2%	14.0%	13.7%	14.2%	14.4%	14.8%
Operating profit margin *	20.1%	19.7%	18.0%	16.7%	15.2%	16.0%	14.4%	16.0%	14.4%	12.6%
Pre-tax ordinary profit margin *	18.9%	20.9%	19.5%	18.3%	16.5%	15.7%	16.1%	17.0%	16.2%	14.9%
Net profit margin *	11.5%	13.4%	12.4%	11.8%	9.8%	11.3%	11.3%	11.9%	10.1%	9.7%
Effective tax rate *	36.8%	35.7%	36.4%	35.5%	40.6%	28.3%	29.7%	29.9%	37.5%	34.8%
Balance sheet										
Cash and current asset investments	4,514	2,717	4,042	2,800	3,727	4,065	3,642	3,910	4,395	2,990
Total assets	31,013	27,342	27,171	24,048	22,682	23,097	21,351	18,782	17,159	14,281
Current liabilities	6,559	5,486	5,298	4,897	4,665	4,581	3,679	3,433	3,850	4,171
Long-term debt	3,732	1,835	1,758	944	1,322	3,109	3,333	2,594	1,711	1,141
Shareholders' funds	18,535	17,972	18,240	16,343	14,781	13,746	12,611	11,174	10,006	7,507
Equity ratio *	59.8%	65.7%	67.1%	68.0%	65.2%	59.5%	59.1%	59.5%	58.3%	52.6%
Payout ratio *	28.7%	23.3%	20.4%	15.9%	13.9%	12.2%	10.8%	11.7%	15.4%	16.1%
Return on equity *	13.2%	13.3%	12.1%	11.3%	9.4%	11.6%	11.6%	12.0%	10.8%	11.0%
RONFA *	18.5%	16.1%	14.6%	13.1%	11.6%	12.6%	11.4%	12.9%	11.7%	9.6%
Investments and cash flow										
Investments in tangible fixed assets (net)	1,831	2,020	2,546	1,913	1,335	1,860	2,641	2,116	1,465	1,313
Investments in intangible assets and										
fixed asset investments (net)	29	122	(2)	214	(32)	297	158	167	185	86
Free cash flow *	1,763	1,334	583	(70)	1,519	399	(687)	(690)	(321)	225

DKK million	▼ 1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Share data										
Earnings (net profit) per share in DKK *	33.72	32.47	28.17	23.63	18.03	20.47	18.54	17.13	13.91	12.47
Cash flow per share in DKK *	50.67	46.85	40.60	25.77	34.03	30.99	25.44	17.44	18.58	23.94
Shareholders' funds per share in DKK *	261.33	247.94	245.04	219.55	198.57	184.67	169.42	150.11	134.93	119.43
Dividend per share in DKK	9.75	7.75	5.75	3.75	2.50	2.50	2.00	2.00	2.00	2.00
Share capital (nominal) at year-end in DKK million	754	754	750	750	750	750	750	750	747	633
Number of shares at year-end (m)	75.4	75.4	75.0	75.0	75.0	75.0	75.0	75.0	74.7	63.3
Number of shares outstanding at year-end (m)	70.9	72.5	74.4	74.4	74.4	74.4	74.4	74.4	74.2	62.9
Weighted average number of										
shares outstanding (m) *	71.5	74.2	74.4	74.4	74.4	74.4	74.4	74.3	68.2	62.8
Quoted price at year-end for B shares in DKK $\star$	980	843	984	545	378	289	333	273	264	180
Quoted price (high) for B shares										
during the year in DKK	1,005	1,200	1,000	565	380	374	337	299	264	182
Quoted price (low) for B shares										
during the year in DKK	660	670	523	362	253	259	266	248	172	140
Quoted price at year-end for ADSs in USD $\star$	64.63	66.50	72.13	46.75	34.25	23.75	24.75	22.19	22.38	15.38
Quoted price (high) for ADSs										
during the year in USD	69.88	84.88	73.00	47.38	34.50	27.63	24.75	24.10	23.13	16.03
Quoted price (low) for ADSs										
during the year in USD	48.31	53.88	43.63	31.50	22.25	21.88	19.50	20.00	14.25	11.03
Market capitalisation in DKK million *	69,506	61,106	73,246	40,568	28,137	21,512	24,788	20,321	19,433	11,215
Price/earnings *	29.1	26.0	34.9	23.1	21.0	14.1	18.0	15.9	19.0	14.4
Price/cash flow *	19.3	18.0	24.2	21.1	11.1	9.3	13.1	15.7	14.2	7.5
Price/book value *	3.8	3.4	4.0	2.5	1.9	1.6	2.0	1.8	2.0	1.5
Employees										
(number at year-end)										
Denmark	9,345	9,333	8,979	8,746	8,662	9,060	8,286	7,794	7,059	6,624
Rest of Europe	2,149	9,333 1,890	1,810	1,768	1,664	1,705	1,584	1,363	1,222	1,017
US	1,386	1,890	1,810	1,182	1,004	1,054	931	782	636	558
	795									
Japan Rest of the world	795 1,509	840 1.472	826	762 937	666 819	517 511	440 407	372 422	315 395	281 262
		1,473	1,288							
Total	15,184	14,857	14,175	13,395	12,997	12,847	11,648	10,733	9,627	8,742
Employees outside Denmark in per cent										
of total number of employees	38%	37%	37%	35%	33%	29%	29%	27%	27%	24%

\* For definitions, please refer to the inside of the back cover.

## SHAREHOLDER INFORMATION

#### NOVO NORDISK'S SHARES IN 1999

Novo Nordisk B shares equivalent to a market value of DKK 38.8 billion were traded on the Copenhagen Stock Exchange during 1999. The shares closed at DKK 980 on 30 December 1999 against 843 at the end of 1998. This represents an increase of 16% during 1999. The market value of Novo Nordisk's outstanding share capital at the end of 1999 was DKK 69.5 billion compared with DKK 61.1 billion at the end of 1998.

#### INVESTOR RELATIONS

Shareholders, financial analysts, representatives of banks, brokerage firms and other investment professionals should address enquiries concerning Novo Nordisk and its businesses to the company's Investor Relations offices:

#### OUTSIDE NORTH AMERICA:

Carsten Bøss	Rasmus R Holm-Jørgensen	Michael Steen-Knudsen
Novo Nordisk A/S	Novo Nordisk A/S	Novo Nordisk A/S
Novo Allé	Novo Allé	Novo Allé
2880 Bagsværd	2880 Bagsværd	2880 Bagsværd
Denmark	Denmark	Denmark
Tel (+45) 4442 6047	Tel (+45) 4442 2983	Tel (+45) 4442 6048
Fax (+45) 4444 2314	Fax (+45) 4444 2314	Fax (+45) 4444 2314
E-mail carb@novo.dk	E-mail rrhj@novo.dk	E-mail mskn@novo.dk

#### IN NORTH AMERICA:

405 Lexington Avenue, Suite 6400 New York. NY 10017, USA

Peter Lundby Hansen Tel (+1) 212 867 0123 Novo Nordisk of Fax (+1) 212 867 0298 North America, Inc E-mail plha@novo.dk

#### PAYMENT OF DIVIDENDS

US and Canadian resident shareholders in the ADS system will receive their dividends denominated in USD less the statutory 15% deduction of Danish tax. Shareholders resident in other countries will receive their dividends denominated in DKK less the statutory 25% deduction of Danish tax. However, under the existing double taxation convention, UK resident shareholders may apply to the Danish tax authorities for a refund of dividend tax in excess of 15%. Shareholders resident in other countries are eligible for a refund of dividend tax deducted in Denmark subject to the double taxation conventions in force between Denmark and the countries concerned.

#### FINANCIAL CALENDAR, YEAR 2000

Nauisson SAS, Taiko	ner Center, Falkoner Allé 9,		
2000 Frederiksberg	, Denmark	23	March
DIVIDEND			
Ex-dividend	B shares	24	March
	ADSs	24	March
Record date	B shares	28	March
	ADSs	28	March
Payment	B shares	29	March
	ADSs	6	April
ANNOUNCEMENT	OF FINANCIAL RESULTS		
	First three months	3	May
	Half year	14	August
	nun yeu		
	Nine months		November
	,		November February 2001
PERSPECTIVE (SHA	Nine months	2	i to remoei
PERSPECTIVE (SHA	Nine months Full year	2	i to remoei
PERSPECTIVE (SHA	Nine months Full year AREHOLDER MAGAZINE) AVA	2	February 2001

Shareholders' enquiries concerning dividend payments, transfer of share certificates, consolidation of shareholder accounts and tracing of lost shares should be addressed to Novo Nordisk's transfer agents:

OUTSIDE NORTH AMERICA: Den Danske Bank A/S Holmens Kanal 2-12 1092 Copenhagen K, Denmark Tel (+45) 3344 0000

Fax (+45) 3929 0146

#### IN NORTH AMERICA:

Morgan Guaranty Trust Company of New York Morgan ADR Service Center PO Box 8205 Boston, MA 02266-8205 USA Tel (+1) 781 575 4328 Fax (+1) 781 575 4082

#### DIVIDEND REINVESTMENT

The Automatic Dividend Reinvestment Plan for holders of American Depositary Shares (ADSs) in Novo Nordisk A/S provides shareholders with a simple and convenient way to reinvest dividends. Enquiries concerning the plan should be addressed to:

Morgan Guaranty Trust Company of New York Shareholder Services Program (re Novo Nordisk A/S) PO Box 9073 Boston, MA 02205-9948 USA

Tel (+1) 781 575 4237 Tel (+1) 800 428 4237 Fax (+1) 781 575 4082

#### SHARE INFORMATION

Novo Nordisk's B shares are quoted on the stock exchanges in Copenhagen, London and Zurich. Its ADSs are listed on the New York Stock Exchange under the ticker symbol 'NVO'. The B shares are traded in units of DKK 10. The ratio of Novo Nordisk B shares to ADSs is 1:2 (one B share to two ADSs). The B shares are issued to the bearer but may upon request be registered in the holder's name in Novo Nordisk's register of shareholders. Each holding of DKK 10 of the A share capital carries ten votes. Each holding of DKK 10 of the B share capital carries one vote.

#### THE DEMERGER PROCESS FROM THE SHARE-HOLDERS' POINT OF VIEW

As in previous years, the ordinary general meeting for the existing company Novo Nordisk A/S on 23 March 2000 will declare the dividend for the preceding year. An extraordinary general meeting is expected to be held around the turn of the year 2000/2001. Shareholders of Novo Nordisk A/S are expected to give the final approval of the proposed structural changes. Once the split is adopted at the extraordinary general meeting, shareholders in Novo Nordisk A/S will receive one share in the new enzyme company, Novozymes A/S, for every share they own in the existing Novo Nordisk A/S, which will continue as the health care company. After the split, shareholders will thus have two shares - one in the enzyme company and one in the health care company – for every share of Novo Nordisk A/S they held prior to the split. After approval at the extraordinary general meeting, Novozymes A/S is expected to be listed on the Copenhagen Stock Exchange.

PRICE DEVELOPMENT OF NOVO NORDISK'S B SHARES ON THE COPENHAGEN STOCK EXCHANGE RELATIVE TO THE TOTAL INDEX, 1995-1999



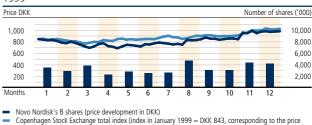
Novo Nordisk's B shares (price development in DKK)
 Copenhagen Stock Exchange total index

PRICE DEVELOPMENT OF NOVO NORDISK'S ADSs ON THE NEW YORK STOCK EXCHANGE RELATIVE TO STANDARD & POOR'S 400 MIDCAP INDEX, 1995-1999



Novo Nordisk's ADSs (price development in USD)

PRICE DEVELOPMENT AND MONTHLY TURNOVER OF NOVO NORDISK'S B SHARES ON THE COPENHAGEN STOCK EXCHANGE. 1999



Copenhagen Stock Exchange total index (index in January 1999 = DKK 843, corresponding to the price

of Novo Nordisk's B shares ultimo 1998)

Monthly turnover of Novo Nordisk's B shares (number of shares in '000)

The first ordinary general meetings for the two listed companies after the split are expected to be held in March/April 2001. Dividend for the year 2000 will be declared for each of the two companies, and will be distributed after the general meetings.

More information about the demerger will be provided later in year 2000

Standard & Poor's 400 MidCap index

#### SHARE OWNERSHIP

Novo Nordisk's A shares – a total of 10,748,720 – are held by Novo A/S (based in Gladsaxe, Denmark), a private limited Danish company which is 100% owned by the Novo Nordisk Foundation (based in Gentofte, Denmark). In addition, Novo A/S holds 8,194,780 B shares. Holding 25.1% of the total share capital, Novo A/S controls 69.0% of the total number of votes. Novo Nordisk A/S is included in the accounts for Novo A/S. As Novo Nordisk B shares are in bearer form, no official record of shareholders exists. Based on the available sources of information on the company's shareholders, it is estimated that Novo Nordisk's B shares at the end of 1999 were distributed as shown in the table below. At that point in time 74% of the total B share capital was included in Novo Nordisk's register of shareholders.

#### FORM 20-F

Copies of the Form 20-F Report filed in June 1999 with the US Securities and Exchange Commission can be obtained upon request from Novo Nordisk of North America, Inc (see 'Investor Relations' on page 60).

#### ENVIRONMENTAL AND SOCIAL REPORT

Copies of Novo Nordisk's Environmental and Social Report 1999 can be obtained upon request from Stakeholder Relations, tel (+45) 4442 2554.

#### INTERNET

The Novo Nordisk investor site at http://investors.novo.dk contains historical and updated information on Novo Nordisk's activities, including press releases from 1995 and onwards, financial results, investor presentations, backgrounders on business areas and the Group's most recent annual reports and accounts and environmental reports.

#### SELECTED STOCK EXCHANGE ANNOUNCEMENTS IN 1999

Date		Headline
12	January	Novo Nordisk in innovative partnership with the University of Oxford and the UK National Health Service
17	February	Financial Results 1998
24	March	Annual general meeting at Novo Nordisk A/S
26	March	US Food and Drug Administration approves NovoSeven® for treatment of haemophilia patients
4	May	Novo Nordisk continues to improve environmental performance
5	May	Financial statement for the first quarter of 1999
11	May	Novo Nordisk presents new insulin delivery system, Innovo®
1	June	Novo Nordisk and DGI BioTechnologies sign licensing and research collaboration agreement
28	June	Novo Nordisk publishes its first social report
5	August	Novo Nordisk and Bedford Laboratories, a division of Ben Venue Laboratories, announce US marketing deal for GlucaGen®
9	August	Novo Nordisk and Takeda announce marketing collaboration for Novo- Norm <sup>®</sup> and pioglitazone in Japan
11	August	Financial statement for the first half of 1999
9	September	The future structure of Novo Nordisk announced
9	September	EMEA approves NovoRapid™ – a new rapid-acting insulin analogue
15	September	Novo Nordisk gets approval of liquid growth hormone in EU
3	November	Financial statement for the first nine months of 1999
29	November	Novo Nordisk and Lundbeck to collaborate on use of drug discovery technology

BREAKDOWN OF B SHAREHOLDERS		GEOGRAPHICAL DISTRIBUT	ION
1999	%	1999	%
Novo A/S	13	Denmark	64
Novo Nordisk A/S	7	North America	15
Danish ATP	11	UK	13
Pension funds	23	Other	8
Insurance companies	22		
Private individuals, companies,			
foundations and other	24		
Total	100	Total	100

# BOARD OF DIRECTORS



#### VAGN ANDERSEN

Director, chairman Chairman of the Board of Copenhagen Airport Authority Limited



#### GERT ALMIND

Family physician, Professor, Dr Med Sc



TOVE FUNDER-NIELSEN Specialist laboratory technician Novo Nordisk A/S



#### ULF J JOHANSSON

Dr Tech Chairman of the Board of Europolitan Holdings AB (pulb), Kungliga Tekniske Högskolan, Stockholm and Zodiak Venture Capital AB; member of the Board of Novo A/S



#### PALLE MARCUS Director, vice chairman Chairman of the Boards of Coloplast A/S

Chairman of the Boards of Coloplast A/S and Novo A/S; vice chairman of the Boards of Den Danske Bank Aktieselskab and Carlsberg A/S



ULLA MORIN Laboratory technician, shop steward Novo Nordisk A/S



MORTEN MUNK Chemical engineer, principal scientist *Novo Nordisk A/S* 



# JAROMIR RUZICKA

Professor University of Washington



# OLE SCHERFIG

Chairman of the Boards of A/S Bladkompagniet, BRFkredit a/s, De Bergske Blade A/S, Dan-Ejendomme Holding A/S, Dansk Industri Invest A/S, Hotel Ebeltoft Strand A/S, Hotel Koldingfjord A/S and A/S Sjællandske Avistryk; vice chairman of the Boards of Dagrofa a/s, Århus Stiftstidende A/S, A/S Jydske-Vestkysten and Driftsselskabet Klelund Plantage A/S



STIG STRØBÆK Electrician, shop steward *Novo Nordisk A/S* 



#### HANS WERDELIN

Director Chairman of the Boards of Danske Trælast A/S, Damgaard A/S, CW Obel A/S, Lomax A/S and Publicis A/S; vice chairman of the Board of Skandinavisk Holding A/S and subsidiaries; member of the Boards of Ratin A/S and Novo A/S



#### MADS ØVLISEN

President and CEO, Novo Nordisk A/S Chairman of the Boards of LEGO A/S and The Royal Theatre (from 1 January 2000)

# CORPORATE MANAGEMENT



#### HENRIK GÜRTLER

Corporate Staffs *Co-president, Novo A/S* 

BRUCE CARTER\*

Corporate Strategy Member of the Boards of AVI Biopharma and Skeletech

#### STEEN RIISGAARD

Enzyme Business Member of the Boards of J Lauritzen Holding A/S and World Wide Fund For Nature (Denmark)

#### LARS REBIEN SØRENSEN

Health Care

\* Employed by ZymoGenetics, Inc.

# CORPORATE VICE PRESIDENTS

#### HEALTH CARE

Lars Almblom Jørgensen, Health Care International Operations Mariann Strid Christensen, Health Care Regulatory Affairs Peter Bonne Eriksen, Health Care Development

Mads Krogsgaard Thomsen, Health Care Discovery & Preclinical Development

Kåre Schultz, Health Care Quality & Resource Management Per Valstorp, Health Care Product Supply

#### ENZYME BUSINESS

Søren Carlsen, Enzyme Research Per Falholt, Enzyme Development & Applications Peder Holk Nielsen, Enzyme Business Operations Per Månsson, Enzyme Economy, Logistics and Quality Arne W Schmidt, Enzyme Production

#### CORPORATE FINANCE AND LEGAL

Jesper Brandgaard, Corporate Finance Ole Ramsby, Legal, Trademarks and Risk Management

#### CORPORATE STAFFS

Lise Kingo, Stakeholder Relations

#### MADS ØVLISEN

President and CEO Chairman of the Boards of LEGO A/S and The Royal Theatre (from 1 January 2000)

### KURT ANKER NIELSEN

Deputy CEO, Corporate Finance and Legal Chairman of the Board of Incentive A/S and member of the Board of Coloplast A/S; Co-president, Novo A/S

STEEN RI Enzyme Busin Member of the

# AFFILIATES AND OFFICES

NOVO NORDISK IS REPRESENTED IN 68 COUNTRIES, WITH HEADQUARTERS IN DENMARK.

Novo Nordisk A/S Novo Allé 2880 Bagsværd Denmark Tel (+45) 4444 8888 Fax (+45) 4449 0555 Telex 37173 http://www.novo.dk

A list of company addresses can be found on Novo Nordisk's corporate website at http://www.novo.dk under 'contacts'.

#### Health Care affiliate websites:

#### HEALTH CARE

Australia http://www.novonordisk.com.au Austria http://www.novo.at Belgium http://www.novonordisk.be Bulgaria http://www.novo.bg Denmark http://www.farmaka.dk India http://www.novoindia.com Ireland http://www.novonordisk.ie Israel http://www.novo.co.il Japan http://www.nnpl.co.jp Middle East & Africa

http://www.novohealth.com (including country sites for: Algeria, Armenia, Azerbaijan, Bahrain,

Cyprus, Egypt, Georgia, Iran, Iraq, Jordan, Kazakhstan, Kenya, East Africa, Kuwait, Kyrghystan, Lebanon, Libya, Malta, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, UAE, Uzbekistan, Yemen) New Zealand http://www.novonet.co.nz Slovac Republic http://www.novo.sk South Africa http://www.novo.co.za Spain http://www.novonordisk.es Sweden http://www.novonordisk.se Switzerland http://www.novo-nordisk.ch Thailand http://www.novothai.com Turkey http://www.novoturk.com United Kingdom http://www.novonordisk.co.uk USA http://www.novo-nordisk.com

Albania Algeria Argentina Australia Austria Republic of Belarus Bangladesh Belgium Bosnia Brazil Bulgaria Canada China Croatia Czech Republic Denmark Egypt Estonia Finland France Ghana Germany Greece Hungary India Ireland Israel Italy Japan Jordan Yugoslavia Kazakhstan Kenya Republic of Latvia

Lithuania Macedonia Malaysia Mexico Moldova Morocco The Netherlands New Zealand Norway Pakistan Philippines Poland Portugal Puerto Rico Romania **Russian Federation** Saudi Arabia Singapore Slovak Republic Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey UAE Ukraine United Kingdom USA Uzbekistan

#### ENZYME BUSINESS

Australia Austria Brazil China Denmark France Germany Greece India Italy Japan Kazakhstan Malaysia Mexico Poland **Russian Federation** South Africa South Korea Spain Switzerland Turkey United Kingdom USA Uzbekistan





#### Novo Nordisk A/S

Novo Allé 2880 Bagsværd Denmark

Tel (+45) 4444 8888 Fax (+45) 4449 0555 Telex 37173 http://www.novo.dk

A/S Reg No 16201

# PREPARED TO LISTEN





At Novo Nordisk we are keen to know the views and perspectives of our stakeholders. Therefore, we kindly ask you to complete the questionnaire below and return it to us.

For each completed questionnaire we receive, we will donate an amount to the World Wide Fund for Nature (WWF). So, by helping us, you are helping to protect the world.



#### Please tick the answer closest to your own opinion:

- 1. I believe Novo Nordisk's stakeholders will benefit from the new corporate structure.
- 2. Novo Nordisk is the leading pharmaceutical company within diabetes care.
- 3. Novo Nordisk is at the forefront of the application of health care and biotech research.
- 4. Novo Nordisk applies biotechnology in a beneficial way.

   □ Disagree strongly
   □ Disagree

   □ Neutral
   □ Agree strongly
- 5. I believe the increasing environmental awareness in society will provide great opportunities for Novo Nordisk.
  Disagree strongly
  Disagree
  Neutral
  Agree
  Agree strongly

Comments:

#### Please tell us to which of the following groups you belong:

Professional investor/analyst
 Retail investor (private shareholder)
 Health care professional/nurse

□ Journalist □ Scientist/student Novo Nordisk supplier
 Novo Nordisk employee
 Other, please specify:

Novo Nordisk customer

#### ORDER FORM

#### Please indicate if you would like to receive any of the information below in the future:

- Yes, I would like to receive, by post, a copy of Novo Nordisk's Environmental and Social Report 1999.
- Yes, I would like to receive an e-mail notification when Novo Nordisk publishes its Environmental and Social Report 1999.
- Yes, I would like to receive an e-mail notification when Novo Nordisk releases future stock exchange announcements.

In order for us to provide you with this information, please write your name and e-mail address below. Your postal address is only needed if you wish to order a printed copy of our Environmental and Social Report 1999. This information will not be used in connection with your answers to the above questions.

Name: Address:		
Zip or post code: _		
State/Country:	 	
E-mail:	 	

REPONSE PAYEE DANEMARK

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UESTIONNAIR

# Vovo Nordisk A/S

Vovo Allé Communications & Design +++0040+++ 2880 Bagsværd Denmark

# FINANCIAL DEFINITIONS

#### ADS

American Depositary Share.

#### Cash flow per share

Cash flow from operating activities divided by the weighted average number of shares.

#### Earnings per share

Net profit divided by the weighted average number of shares.

#### Earnings per share (diluted)

Net profit divided by the sum of weighted average number of shares and number of share options 'in the money'.

#### Effective tax rate

Income tax on ordinary income as a percentage of profit before taxation and extraordinary income.

#### Equity ratio

Shareholders' funds at year-end as a percentage of the sum of total liabilities and shareholders' funds at year-end.

#### Free cash flow

Cash flow before financing.

#### Market capitalisation

Total number of A and B shares outstanding at year-end multiplied by the quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange.

#### Net profit margin

Net profit as a percentage of net turnover.

#### Number of shares outstanding at year-end

Number of shares at year-end excluding the number of own shares.

#### Operating profit margin

Operating profit as a percentage of net turnover.

#### Payout ratio

Total dividends for the year as a percentage of net profit.

#### Pre-tax profit margin

Profit before tax as a percentage of net turnover.

#### Price/cash flow

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange divided by cash flow per share.

#### Price/earnings

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange divided by earnings per share.

#### Price/shareholders' funds per share

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange divided by shareholders' funds per share.

#### Quoted price at year-end for ADSs

The quoted (closing) price at year-end for Novo Nordisk's ADSs on the New York Stock Exchange.

#### Quoted price at year-end for B shares

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange.

#### Return on shareholders' funds

Income before extraordinary income as a percentage of average shareholders' funds (the sum of shareholders' funds at the beginning of the year and at year-end divided by two).

#### RONFA (Return on non-financial assets)

Operating profit as a percentage of average intangible assets; tangible fixed assets; stocks; and trade accounts receivable (the sum of the above assets at the beginning of the year and at year-end divided by two).

#### Shareholders' funds per share

Shareholders' funds at year-end divided by the total number of A and B shares outstanding at year-end.

#### Weighted average number of shares

The weighted average number of A and B shares outstanding during the year (excluding the holding of own shares).

#### Beta cell

Any of the insulin-secreting pancreatic cells in the islets of Langerhans.

#### Diabetes late complications

Late complications associated with diabetes include maladies such as blindness, kidney failure, neuropathy, amputations and atherosclerosis.

#### Endocrinology

The study of the endocrine (hormonal) system and its role in the physiology of the body.

#### Inhibitor reactions

Haemophilia patients may develop antibodies to the traditional treatment consisting of plasmaderived Factor VIII and IX.

#### Insulin sensitiser

A sensitiser is a compound that increases the cells' sensitivity to insulin.

#### Menopause

The period of natural cessation of menstruation, occurring usually between the ages of 45 and 50.

#### Metabolism

The chemical changes in living cells by which energy is provided for vital processes and activities and new material is assimilated.

#### Oral anti-diabetic agent

An orally administered drug for the treatment of Type 2 diabetes.

#### Prandial glucose regulator

A chemical entity for oral treatment of Type 2 diabetes designed to manage meal-related (prandial) glucose loads.

#### Type 1 diabetes

Also called 'juvenile onset diabetes'; occurs when very little or no insulin is produced and therefore insulin must be administered. Onset of Type 1 diabetes is more common in children and adolescents and this type accounts for approximately 5% of all people with diabetes.

#### Type 2 diabetes

Also called 'late onset diabetes'; occurs when insulin is still produced but not in sufficient amounts. Type 2 diabetes mostly affects adults. It can be controlled through diet, exercise, oral medication and insulin.

#### UKPDS

The United Kingdom Prospective Diabetes Study is a landmark study of the treatment of Type 2 diabetes. Running for 20 years and involving more than 5,000 people with newly-diagnosed Type 2 diabetes, UKPDS is the largest and longest ever study in this field. Its results were announced in September 1998.

