

Year	Average rate <sup>2</sup>	Period end rate	High	Low
2000	8.0903	8.0205	9.0060	7.1800
2001	8.3619	8.4095	8.8611	7.8186
2002	7.8812	7.0822	8.6591	7.0822
2003	6.5899	5.9576	7.1592	5.9554
2004	5.9774	5.4676	6.3047	5.4580

**CAPITALIZATION AND INDEBTEDNESS**

Not applicable.

**REASONS FOR THE OFFER AND USE OF PROCEEDS**

Not applicable.

**RISK FACTORS**

The disclosure and analysis set forth herein, including the disclosure and analysis under the captions 'Off-Balance Sheet Arrangements' and 'Tabular Disclosure of Contractual Obligations' under Item 5, and in the Company's *Annual Report 2004* contain forward-looking statements as the term is defined in the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements provide current expectations or forecasts of events such as new product introductions, product approvals and financial performance.

Such forward-looking statements are subject to risks, uncertainties and inaccurate assumptions. This may cause actual results to differ materially from expectations. Factors that may affect future results include interest rate and currency exchange rate fluctuations, delay or failure of development projects, production problems, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, Novo Nordisk's ability to successfully market both new and existing products, exposure to product liability and other lawsuits, change in reimbursement rules and governmental laws and related interpretation thereof, and unexpected growth in costs and expenses.

Reference is made to pages 56-57 'Risk management', pages 46 – 47 Management report and discussion 2004', note 20 'Trade receivables', note 22 'Marketable securities' and note 36 'Derivative financial instruments', in the *Annual Report 2004*.

Novo Nordisk is under no duty to update any of the forward-looking statements or to conform such statements to actual results, unless required by law.

**ITEM 4 INFORMATION ON THE COMPANY****HISTORY AND DEVELOPMENT OF THE COMPANY**

Reference is made to the section 'About Novo Nordisk' in the *Annual Report 2004* pages 8 and 9 for a description of the Novo Nordisk history and development.

<sup>2</sup> The average exchange rate is calculated by using the exchange rate on the last day of each month according to Danmarks Nationalbank's daily official exchange rates.

Legal name: Novo Nordisk A/S  
Commercial name: Novo Nordisk  
Domicile: Novo Allé, DK-2880 Bagsværd, DENMARK  
Tel: +45 4444 8888  
Fax: +45 4449 0555  
Website: [novonordisk.com](http://novonordisk.com)

(The contents of this website are not incorporated by reference into this Form 20-F.)

Date of incorporation: 28 November 1931  
Legal form of the Company: A Danish limited liability company  
Legislation under which the Company operates: Danish law  
Country of incorporation: Denmark

**Important events in 2004**

Reference is made to 'Business review 2004', pages 38-39 in the *Annual Report 2004* for a list of important events in 2004.

**Capital expenditure in 2004, 2003 and 2002**

The total net capital expenditure for property, plant and equipment was DKK 3.0 billion in 2004 compared with DKK 2.3 billion in 2003 and DKK 4.0 billion in 2002. The capital expenditure in 2004 was slightly higher than the long-term ratio of an average of 10% to sales. The primary reason for capital expenditure in 2004 being higher than the long-term target was a changed timing for a number of projects in 2003, where a higher proportion of resources have been realized during 2004. The high level of capital expenditure in 2002 was due to a major production-plant expansion program being completed that year.

Investments in 2004 were mainly capacity expansion within the diabetes care area, increasing the capacity for insulin analogues, insulin filling and insulin delivery devices. The investments are primarily taking place in Denmark, though to an increasing extent also outside Denmark. In 2004, Novo Nordisk initiated expansion of the production facilities in the US, Brazil and China. The investments are financed internally. No significant divestments took place in 2004. No significant investments or divestments have taken place in 2005 to date. Novo Nordisk expects to invest around DKK 4 billion in fixed assets in 2005, and a significant part of these investments will take place outside Denmark. The relatively high expected level for investments in 2005 is to some extent due to an increase in the production capacity for the long-acting insulin analogue Levemir®, which is currently being rolled out in Europe. For further information on investments, please refer to 'Investing in the future' on page 33 and 'Outlook 2005' on page 46-47 in the *Annual Report 2004*.

**Public takeover offers in respect to the Company's shares**

No such offers have occurred during 2004 or 2005 to date.

**BUSINESS OVERVIEW**

Novo Nordisk is a healthcare company and the world leader in diabetes care. In addition, Novo Nordisk has a leading position within areas such as hemostasis management, growth hormone therapy and hormone replacement therapy. With headquarters in Denmark, Novo Nordisk employs approximately 20,250 fulltime employees in 78 countries and markets its products in 179 countries at year end.

#### **Segment information**

Novo Nordisk is engaged in discovery, development, manufacturing and marketing of pharmaceutical products and has two business segments – diabetes care and biopharmaceuticals. The diabetes care segment covers Novo Nordisk’s insulin franchise, including insulin analogues, human insulin and insulin-related sales, and OADs (oral antidiabetic drugs). The biopharmaceutical segment covers the therapy areas: hemostasis management (NovoSeven®), growth hormone therapy, hormone replacement therapy and other products.

For information on sales by business segment and geographic segment, reference is made to *Annual Report 2004* page 38 and 42-43 ‘Sales development by segment’ and Note 5 ‘Segment information’.

#### **Seasonality**

Sales of individual products in individual markets may be subject to seasonality and fluctuations from quarter to quarter, but besides the first quarter often being relatively weak, and a trend of increasing sales per quarter in general going from first quarter to fourth quarter, the Company’s consolidated results of operations have not been subject to significant seasonality.

#### **Raw materials**

As a focused healthcare company the impact on the overall profitability of Novo Nordisk from variations in raw material prices is unlikely to be significant. No raw material supply shortage has had a significant impact on the Company’s ability to supply the market. The Company’s production is mostly based on common and readily available raw materials with relatively low price volatility. Certain specific raw materials are, however, less available. For such raw materials, it is the policy of Novo Nordisk to develop close and long-term relationships with key suppliers as well as to secure dual sourcing whenever possible.

#### **Marketing and competition**

Novo Nordisk’s insulin and other pharmaceutical products are marketed and distributed through subsidiaries, distributors and independent agents with responsibility for specific geographical areas. The most important markets are United States, Japan and the major European countries.

Market conditions within the pharmaceutical industry continue to change, including efforts by both private and governmental entities to reduce/control costs in specific therapeutic areas.

Historically, the market for insulin has been more sensitive to quality of products and services than to price. Most of the countries in which the Company sells insulin subsidize or control pricing. In most of these markets insulin is a prescription drug, but in the United States, human insulin may be sold over the counter, whereas insulin analogues require a prescription.

In the normal course of its business the Company enters into numerous contracts with customers, suppliers, agents and industry partners. Some of the most important contracts include: in- and out-licensing (patent rights, products and development projects), co-promotion and co-development agreements, large tender orders and long-term sub-supplier agreements.

New manufacturing processes, efficient quality systems and innovative research and development are all important competitive factors affecting the Company.

Several of the major international pharmaceutical companies have entered the diabetes market, specifically in the area of oral products for treatment of type 2 diabetes. The insulin market has fewer producers with Novo Nordisk, Eli Lilly and Sanofi-Aventis being the only three global players.

## **Patents**

Patents are important intellectual property rights of Novo Nordisk. Novo Nordisk endeavors to secure the strongest possible protection for those Novo Nordisk inventions which will maintain and expand the competitiveness of Novo Nordisk in accordance with the company's Vision, business strategies, Patent Policy and the competitive environment.

The Company does not anticipate any instances of patent expiration that will have a significant negative impact on the sales of the Company within the next five years. Moreover, with the ongoing conversion from human insulin to insulin analogues an increasing proportion of Novo Nordisk's sales are in the major markets protected by patents for insulin analogues expiring in 2011 and beyond. Furthermore, NovoSeven® sales are protected by patents expiring around 2011 except in Japan where the NovoSeven® patent expires in 2008. Activelle®/Activella® sales may become exposed to generic competition due to patent expiration in the United States in 2006 and expiration of the Supplementary Protection Certificates in Europe in 2009.

In common with other companies engaged in production based upon rDNA technology, Novo Nordisk has obtained licenses under various patents which entitle the Company to use processes and methods of manufacturing covered by such patents.

## **Impact of regulations**

As a pharmaceutical company, Novo Nordisk is dependent on governmental approvals concerning production, development, marketing and reimbursement of its products. Important regulatory bodies include the United States Food and Drug Administration and the European Agency for the Evaluation of Medicinal Products in Europe. Treatment guidelines from non-governmental organizations like the European Association for the Study of Diabetes and the American Diabetes Association may also have an impact on the Company.

## **ORGANIZATIONAL STRUCTURE**

For information regarding the capital structure and securities exchange listings of Novo Nordisk A/S, reference is made to the sections 'Corporate governance' on pages 54-55 and 'Shareholder information' on pages 108-109 in the *Annual Report 2004*.

Reference is made to the section 'Shareholder information' on pages 108-109 in the *Annual Report 2004* regarding the parent (Novo A/S) and ultimate parent of Novo Nordisk (Novo Nordisk Foundation) and their share ownership in Novo Nordisk A/S.

Information about the companies in the Novo Nordisk Group, set forth in the Company's *Annual Report 2004* on pages 96-97, 'Companies in the Novo Nordisk Group', is incorporated herein by reference.

## **PROPERTY, PLANTS AND EQUIPMENT**

The Company's headquarters are located in Bagsværd, Denmark where the Company occupies several office buildings, the majority of which are owned by the Company.

The Company's major research and development facilities are located at a number of sites in Denmark. A number of smaller research and development operations around the world focus primarily on their local markets.

The major production facilities owned by the Company are located at a number of sites in Denmark, and the international production or processing facilities are located in the US, France, Japan, China and Brazil.

The Company believes that its current production facilities including facilities under construction are sufficient to meet its capacity requirements. Please refer to the sections 'Capital expenditure in 2004' under Item 4 and 'Investing in the future' on page 33 in the *Annual Report 2004* for more information about the current expansion programs. For the nature of the Company's property, plant and equipment as of 31 December 2003 and 2004 see Note 17 in the *Annual Report 2004*.

Reference is made to Note 5 in the *Annual Report 2004* regarding the location of the property, plant and equipment as of 31 December 2003 and 2004.

Property, plant and equipment include several production sites worldwide at the end of 2004. There are no material encumbrances on the properties. Active pharmaceutical ingredient production is mainly located in Denmark, primarily in Kalundborg and secondarily in Hillerød, Bagsværd and Gentofte. Outside of Denmark limited drug substance production takes place in Brazil. Below is a tabular presentation of the production sites.

Major production facilities	Size of site, square meters	Major activities
Kalundborg, Denmark	112,000	
1. Diabetes API, expansion in progress		Active pharmaceutical ingredients for diabetes
2. Factor VII Production		Active pharmaceutical ingredients for hemostasis management
3. Diabetes Pharmaceutical Production		Products for diabetes
Hillerød, Denmark	83,000	
1. Devices Manufacturing & Sourcing		Durable devices and components for disposable devices
2. Pharmaceutical Production		Products for diabetes
3. Factor VII Production		Active pharmaceutical ingredients for hemostasis management
Gentofte, Denmark	44,000	Products for growth hormone therapy, glucagon and hemostasis management
Chartres, France, expansion in progress	32,000	Products for diabetes
Bagsværd, Denmark	26,000	Products for diabetes
Måløv, Denmark	23,000	Hormone replacement therapy products Products for OAD
Montes Claros, Brazil, expansion in progress	20,000	Active pharmaceutical ingredients for diabetes, Products for diabetes
Clayton, North Carolina, U.S., expansion in progress	15,000	Products for diabetes
Hjørring, Denmark	11,000	Production of needles
Koriyama, Japan	8,000	Packaging of products for the Japanese market
Tianjin, China	7,000	Packaging of products for the Chinese market
Værløse, Denmark	6,000	Products for diabetes

The Diabetes API area is currently under expansion to establish additional capacity for the long-acting insulin analogue Levemir®. The investment amounts to approximately DKK 900 million. At the end of January 2005 the majority of the investment had been completed. The project is expected to be filed for approval in the second half of 2005. An additional capacity expansion project for Levemir® was launched at the end of 2004. This project will be finalized in 2007.

An expansion project in Montes Claros, Brazil, is currently ongoing with the main objective to establish additional Penfill® capacity. The investment amounts to more than DKK 1,300 million. At the end of January 2005 only a minor proportion of the investment had been spent. The project is expected to be finalized in 2007.

At the end of 2004 an expansion project in Clayton, North Carolina was initiated. The DKK 700 million investment will increase the Penfill® and FlexPen® production, assembly and packaging. The project is expected to be finalized in 2007.

The Chartres expansion project will increase the Penfill® and FlexPen® production, assembly and packaging. The investment amounts to approximately DKK 800 million. At the end of January 2005 approximately two thirds of the investment had been spent. The project is ongoing, and is expected to be finalized in 2006.

Novo Nordisk is expanding its production facilities in Tianjin, China, with an investment of approximately DKK 135 million. The new plant will be built on Novo Nordisk's site in Tianjin, which has been designated Novo Nordisk's primary production base in the Asia Pacific region. Creating more than 100 new jobs in China, the plant will be operational in 2006 and will supply both the domestic and export markets.

Novo Nordisk is committed to conducting its business in an environmentally responsible manner. The Company pursues new ways of reducing its impact on the environment while continuing to grow and bringing new products to market. No currently identified environmental issue is expected to have a material negative effect on the Company's ability to use its assets efficiently.

During 2002 and 2003, all major production sites worldwide were certified according to the international standard ISO 14001 (Environmental Management Standard). New sites will be included accordingly - site Montes Claros, Brazil certification expected in 2007. The goal is to pursue control of significant environmental impacts of the Company's operations worldwide.

ITEM 5            OPERATING AND FINANCIAL REVIEW AND PROSPECTS

#### **SIGNIFICANT ACCOUNTING ESTIMATES**

Reference is made to Note 4 in the *Annual Report 2004* regarding Critical accounting estimates and judgements.

#### **NEW ACCOUNTING PRONOUNCEMENTS**

##### **International Financial Reporting Standards**

As of 1 January 2004, the Group's accounting policies have been changed to comply with International Financial Reporting Standards (IFRS) with transition date 1 January 2002. Reference is made to Note 1 'Changes in accounting policies - Adoption IFRS' in the *Annual Report 2004* for a further description of the impact on historically reported Danish GAAP figures.

##### **New US accounting pronouncements**

New US accounting pronouncements generally only have implications for the US GAAP reconciliation of IFRS figures to US GAAP figures.

In December 2004, the FASB issued **Statement of Financial Accounting Standards No. 123(R) ("SFAS 123R")**, *Share Based Payment*, which is effective for public companies in periods beginning after 15 June 2005. This Statement addresses the accounting for transactions in which an enterprise receives employee services in exchange for (a) equity instruments of the enterprise or (b) liabilities that are based on the fair value of the enterprise's equity instruments or that may be settled by the issuance of such equity instruments. The proposed SFAS 123R would eliminate the ability to account for share-based compensation transactions using APB 25, and generally would require instead that such transactions be accounted for using a fair-value based method. As proposed, companies would be required to recognize an expense for compensation cost related to share-based payment arrangements including stock options and employee stock purchase plans. We are currently evaluating option valuation methodologies and assumptions in light of the proposed SFAS 123R related to employee stock options. Current estimates of option values using the Black-Scholes method (as disclosed in Note 34 to the *Annual Report 2004*) may not be indicative of results from valuation methodologies ultimately adopted in the final rules.

In December 2004, the FASB issued **Statement of Financial Accounting Standards No. 153 ("SFAS 153")**, *Exchanges of Non-monetary Assets*. This statement was a result of a joint effort by the FASB and the IASB to improve financial reporting by eliminating certain narrow differences between their existing accounting standards. One such difference was the exception from fair value measurement in APB Opinion No. 29, *Accounting for Non-monetary Transactions*, for non-monetary exchanges of similar productive assets. Statement 153 replaces this exception with a general exception from fair value measurement for exchanges of non-monetary assets that do not have commercial substance. A non-monetary exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. This Statement shall be applied prospectively and is effective for non-monetary asset exchanges occurring in fiscal periods beginning after 15 June 2005. Earlier application is permitted for non-monetary asset exchanges occurring in fiscal periods beginning after the date of issuance of this Statement. Management does not expect the adoption of SFAS 153 to have an effect on the Company's financial position, cash flows or results of operations.

In November 2004, the FASB issued **Statement of Financial Accounting Standards No. 151 ("SFAS 151")**, *Inventory Costs - An amendment to ARB No.43 Chapter 4 Inventory Pricing*. SFAS 151 was issued to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). SFAS 151 is the result of a broader effort by the FASB and the IASB to improve financial reporting by eliminating certain narrow differences between their existing accounting standards. One such difference was the accounting for abnormal inventory costs. Both the FASB and the IASB agree that abnormal expenses should be recognized in the period in which they are incurred; however, the wording of IAS 2, *Inventories*, and ARB 43, Chapter 4, *Inventory Pricing*, led to inconsistent application of that principle. The FASB agreed that the wording in IAS 2 was less ambiguous and decided to incorporate portions of that language into ARB 43. As such, this Statement requires that those items be recognized as current-period charges regardless of whether they meet the "so abnormal" criterion outlined in ARB 43. SFAS 151 also introduces the concept of "normal capacity" and requires the allocation of fixed production overheads to inventory based on the normal capacity of the production facilities. Unallocated overheads must be recognized as an expense in the period in which they are incurred. This Statement is effective for inventory costs incurred during fiscal years beginning after 15 June 2005. Earlier application is permitted for costs incurred during fiscal years beginning after the date of the issuance of this Statement. Management does not believe the adoption of this Statement will have an impact on the Company's financial position, cash flows or results of operations.

On 19 May 2004, the FASB issued Staff Position No. FAS 106-2, *Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003 ("FSP 106-2")*. FSP 106-2 provides guidance on accounting for the effects of the new Medicare prescription drug legislation by employers whose prescription drug benefits are actuarially equivalent to the drug benefit under Medicare Part D. It also contains basic guidance on related income tax accounting, and

complex rules for transition that permit various alternative prospective and retroactive transition approaches. For all public companies and for non-public companies that sponsor one or more plans with more than 100 participants, the FSP 106-2 is effective as of the first interim or annual period beginning after 15 June 2004, although earlier adoption is encouraged. Novo Nordisk has adopted this legislation in the *Annual Report 2004* without having any material impact.

In March 2004, the FASB ratified the recognition and measurement guidance and certain disclosure requirements for impaired securities as described in Emerging Issues Task Force (EITF) Issue No. 03-1, ***The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments ("EITF Issue No. 03-1")***. The recognition and measurement guidance will be applied to other-than-temporary impairment evaluations in reporting periods beginning 1 January 2005. Novo Nordisk does not believe the adoption of the recognition and measurement guidance in EITF Issue No. 03-1 will have a material impact on the Company's financial statements.

#### **OPERATING RESULTS**

The following discussion includes certain forward-looking statements. Such forward-looking statements are subject to a number of risk factors, including material risks, uncertainties and contingencies which could cause actual results to differ materially from the forward-looking statements. For a discussion of important factors that could cause actual results to differ materially from the forward-looking statements, see the discussion under the caption 'Risk factors' contained under Item 3.

The condition and development in the financial conditions of the Group are described in the *Annual Financial Report 2003* and the *Annual Report 2004*. The information in this section is based on these reports and should be read in conjunction with the Annual Reports. The analysis and discussions included in the Annual Reports are primarily based on the financial statements which from 1 January 2004 are prepared in accordance with International Financial Reporting Standards.

#### **2004 compared with 2003**

The following portions of the *Annual Report 2004* constitute the Board of Directors and Executive Management's discussion and analysis of results of operations (incorporated herein by reference):

'Management report and discussion' (pages 41-47)

On a US GAAP basis, net profit in 2004 decreased by 3% compared to 2003. The net profit in accordance with US GAAP was 7% lower than the net profit under IFRS, mainly due to differences in the treatment of accounting for acquired in-process research and development projects, investments in research and development companies and accounting for goodwill. Please refer to Note 39 in the *Annual Report 2004* for further information on the reconciliation of net profit to US GAAP for the years 2000 to 2004.

#### **2003 compared with 2002**

The following portions of the *Annual Financial Report 2003* constitute the Board of Directors and Executive Management's discussion and analysis of results (incorporated herein by reference):

'Management report' (pages 4-6)

'Financial discussion' (pages 12-16)

On a US GAAP basis, net profit increased by 13% in 2003 compared with 2002. Net profit on a US GAAP basis was in line with net profit on an IFRS basis in 2003. However, the net profit reconciliation to US GAAP comprises a number of counterbalancing adjustments mainly due to differences in the treatment of unrealized gains and losses on cash flow hedges, accounting for investments in research and development



companies and accounting for goodwill. Please refer to Note 39 in the *Annual Report 2004* for further information on the reconciliation of net profit to US GAAP for the years 2000 to 2004.

#### **Segment information**

The segmented reporting is based on two business segments 'Diabetes care' and 'Biopharmaceuticals'. Please refer to Note 5 in the *Annual Report 2004* for details on segmented results.

#### **Inflation**

Inflation for the three most recent fiscal years has not had a material impact on the Group's net sales and revenues or on net profit.

#### **Foreign currencies**

The major part of Novo Nordisk's sales is in foreign currencies, mainly EUR, USD, JPY and GBP. The predominant part of the production costs and research and development costs, though, are in DKK. As a consequence, Novo Nordisk has a significant exposure to foreign exchange risks and engages in significant hedging activities, where the most significant exposure and hedging are relating to USD, JPY and GBP. For further description of foreign currency exposure and hedging activities, please see the description of financial instruments in Note 36 and 'Outlook 2005' on pages 46-47.

#### **LIQUIDITY AND CAPITAL RESOURCES**

Novo Nordisk maintains a centralized approach to the management of the Group's financial risks. The overall objectives and policies for Novo Nordisk's financial risk management are outlined in the Novo Nordisk Treasury Policy, which is approved by the Board of Directors. The Treasury Policy governs the Group's use of financial instruments, please refer to Item 11.

#### **Financial resources**

It is part of Novo Nordisk's Treasury Policy to maintain sufficient financial resources for its present working capital requirements. Financial resources of DKK 10,165 million at 31 December 2004 consist of the Group's cash and cash equivalents of DKK 2,963 million, bonds with original term to maturity of more than three months of DKK 508 million and of undrawn committed credit facilities of DKK 6,694 million. The undrawn committed credit facilities consist of a EUR 500 million and a EUR 400 million facility committed by a number of Danish and international banks. These facilities mature in 2007 and 2009, respectively. Cash and cash equivalents consist primarily of bank deposits and short-term government bonds. The Group had long-term debt of DKK 1,188 million at 31 December 2004.

#### **Cash flow**

The free cash flow for 2004 amounted to DKK 4,278 million compared to DKK 3,846 million in 2003. The increase is mainly the result of a continued reduction in the average number of credit days for trade debtors. The increase in cash flow from operating activities is DKK 1,440 millions. Please refer to the consolidated cash flow and financial resources on page 62 in the *Annual Report 2004*.

There are no material restrictions on the ability of subsidiaries to transfer funds to the Company.

#### **Debt financing**

Debt financing is obtained in DKK and in foreign currencies. Please refer to Notes 24 and 28 in the *Annual Report 2004* for information on currency structure, interest rate structure and maturity profile.

Novo Nordisk has furthermore asset securitization programs with two external credit institutions which cover the major part of the trade debtors in the Japanese subsidiary. These programs are designed to accelerate the receipt of cash related to those receivables. Novo Nordisk has issued a credit guarantee of up to 15% of these receivables. Please refer also to Item 5 'Off-Balance Sheet Arrangements'.

#### **Financial instruments**

Novo Nordisk does not enter into speculative positions as it hedges commercial exposure only. The financial instruments used in conjunction with the Group's financial risk management include currency forwards, currency options, interest rate swaps and cross-currency swaps. Short- and long-term debt as well as money-market deposits are also used in the financial risk management. Please refer to Note 36 in the *Annual Report 2004* for further information on financial instruments including currency and interest rate structure.

#### **Commitments for capital expenditure etc.**

Contractual obligations for capital expenditure and other contingent liabilities at 31 December 2004 and 31 December 2003 are shown in Note 37 of the consolidated financial statement in *Annual Report 2004*. The Group has overall contractual obligations related to investments in fixed assets of DKK 547 million compared to DKK 658 million in 2003.

The Group has in addition contractual obligations of DKK 674 million relating to research and development projects, compared to DKK 604 million in 2003. Please refer to Note 37 in the *Annual Report 2004* for a description of these commitments and other contingencies. The Executive Management of the Group is of the opinion that the obligations are covered by the Group's financial resources as well as expected future cash flows generated from operating activities.

#### **RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.**

Novo Nordisk's research activities utilize biotechnological methods based on genetic engineering, advanced protein chemistry and protein engineering (molecular modeling). These methods have played a key role in the development of the production technology which is used in the manufacturing of insulin, recombinant factor VIIa, human growth hormone and glucagon.

Novo Nordisk's research and development facilities are mainly located in Denmark, but development activities take place in many other countries.

Research and development expenditures during 2004 were DKK 4,352 million (15% of sales), while research and development expenditures in 2003 and 2002 were DKK 4,055 million (16% of sales) and DKK 3,952 million (16% of sales), respectively. Novo Nordisk's research and development organization comprised approximately 3,000 employees at the end of 2004.

Novo Nordisk expects its research and development expenditure to be at the level of approximately 15% of sales. The spending level could, however, increase in years in which several major projects are in phase 3 of development, as this is typically the most expensive phase.

Information relating to selected research and development projects, set forth on pages 26-27 in the *Annual Report 2004*, is incorporated herein by reference.

#### **TREND INFORMATION**

As a pharmaceutical company Novo Nordisk has benefited from changes in demographics such as the increasing share of elderly people. Moreover, the growing problem of obesity both in the western world as well as in the developing world is resulting in a significant increase in the number of people with diabetes. In 2003, approximately 194 million people worldwide in the adult population (age group 20-79) were estimated to have diabetes. This is expected to increase to 333 million in the adult population by 2025, according to the International Diabetes Federation. Diabetes care is Novo Nordisk's largest segment comprising some 71% of sales. The epidemic growth in the number of people with diabetes, a continuing

conversion to insulin analogues and new delivery devices, as well as market share gains are driving the growth of the diabetes care segment.

The other segment of the Company is biopharmaceuticals, which consists of haemostasis management, growth hormone therapy and other biopharmaceutical products. Within haemostasis management the penetration of NovoSeven® has continued and the franchise has shown double-digit growth since launch. The growth hormone therapy franchise has benefited from a successful US launch of the liquid growth hormone Norditropin® cartridge and well as a solid market share development in Europe. Other biopharmaceuticals, consisting mainly of the hormone replacement therapy franchise, continue to be negatively impacted by studies highlighting the risk associated with long-term use of hormone replacement products, despite market share gains for Novo Nordisk's hormone replacement products.

For further information on trends please refer to the article 'Driving Force' pages 10-11 in the *Annual Report 2004* and 'Management report' on pages 41-47.

Information about the expectations for the financial year 2005 can be found in the *Annual Report 2004* on pages 46-47 in the section 'Outlook 2005'. Information about the Company's long-term financial targets can be found on page 41.

#### **Significant changes**

Novo Nordisk has completed the restructuring transaction with Aradigm Corporation related to the AERx® insulin Diabetes Management System (iDMS), giving Novo Nordisk full development and manufacturing rights to the program as of 26 January 2005. Novo Nordisk acquired fixed assets and related intellectual property from Aradigm Corporation of approximately DKK 300 million.

Novo Nordisk has 10 February 2005 entered into and completed a definitive sale and purchase agreement with Ferrosan Holding A/S. As a consequence of the transaction, Novo Nordisk will sell its entire shareholding in Ferrosan A/S, which prior to the agreement was an associated company of Novo Nordisk. Novo Nordisk expects to record an income in 2005 of around DKK 250 million in relation to the divestment of the shareholding in Ferrosan A/S, which will be recorded in 'Share of profit or loss in associated companies'.

#### **OFF-BALANCE SHEET ARRANGEMENTS**

Novo Nordisk has an off-balance sheet arrangement which is a credit guarantee regarding asset securitization.

Novo Nordisk's Japanese subsidiary has asset securitization programs with two external credit institutions. Under these asset securitization programs, the majority of the trade debtors in the Japanese subsidiary are sold to accelerate the receipt of cash related to those receivables. On part of the sold receivables, Novo Nordisk has issued a credit guarantee of up to 15% of the sold trade debtors. The credit guarantee is recognized in the balance sheet. For the Novo Nordisk Group these programs are not of material importance for liquidity.

DKK million	2001	2002	2003	2004
Sold trade debtors with credit guarantee	392	431	295	383
Credit guarantee	59	65	44	57

For further information on contingencies, reference is made to Note 37 in the *Annual Report 2004*.

**TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS**

Contractual obligations DKK million	Payments due by period				
	Less than 1 year	1-3 years	3-5 years	More than 5 years	Total
Long-term debt	37	39	153	996	<b>1,225</b>
Operating leases	349	480	299	450	<b>1,578</b>
Purchase obligations	988	270	16	0	<b>1,274</b>
<b>Total</b>	<b>1,374</b>	<b>789</b>	<b>468</b>	<b>1,446</b>	<b>4,077</b>

For further information on contractual obligations, reference is made to Note 37 in the *Annual Report 2004*.

ITEM 6            DIRECTORS, SENIOR MANAGEMENT<sup>3</sup>AND EMPLOYEES

**DIRECTORS AND EXECUTIVE MANAGEMENT**

Reference is made to page 106 in the *Annual Report 2004* for name, position, date of birth and period of service as director for the members of the Board of Directors.

Reference is made to page 107 for name, position, date of birth, year of appointment and year of joining Novo Nordisk for the members of Executive Management.

The Board of Directors has the overall responsibility for the affairs of the Company. The Board ordinarily meets seven times a year for the purpose of dealing with the principal issues of the Company's business and to establish and review general policies for the conduct of the Company's business.

The business address of the Board of Directors and Executive Management is Novo Nordisk A/S, Novo Allé, DK-2880 Bagsværd, Denmark.

The activities of the directors and members of Executive Management outside the Company are included in the Company's *Annual Report 2004* on pages 106-107.

There are no family relationships between the Board of Directors, Executive Management or between any of the members of the Board of Directors and any member of Executive Management. No director or member of Executive Management is elected according to an arrangement or understanding with customers, suppliers or others. As required by the Danish Companies Act, directors are elected at shareholder meetings by simple majority vote.

**COMPENSATION**

Reference is made to Notes 34 and 35 in the *Annual Report 2004* regarding compensation.

**BOARD PRACTISES**

Reference is made to the *Annual Report 2004* page 17, pages 54-55 and page 106 regarding board practices.

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<sup>3</sup> In this document the term Senior Management refers to Executive Management in the *Annual Report 2004*.

**EMPLOYEES**

Reference is made to the section titled 'Summary of financial data 2000-2004' pages 98-99 in the *Annual Report 2004* regarding the total number of full-time employees in Novo Nordisk at year-end for the years 2000-2004.

<b>Employees</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Employees outside Denmark as a percentage of total number of employees	36%	37%	38%	39%	41%

Executive Management believes that the Company has a good relationship with its employees in general and with the labor unions of the Novo Nordisk employees.

Novo Nordisk believes that the benefits of its current personnel policy include low staff turnover, high morale, and ease in recruiting new employees. The Company has not experienced any significant labor disputes. Three members of Novo Nordisk's current Board of Directors are elected by the employees.

**SHARE OWNERSHIP**

Since 1998, Novo Nordisk has established share option schemes for Executive Management and other key executives of the Company and its affiliates. The share option scheme provides for annual grants contingent on the fulfillment of performance and shareholder value related goals based on the long-term financial targets. For information on the Board of Directors' and Executive Management's individual holdings of, granting and exercise of options, please refer to Note 35 in the *Annual Report 2004*. The members of the Board of Directors and Executive Management and key management executives in the aggregate hold less than one percent of the beneficial ownership of the company.

Concerning information on the Board of Directors' and Executive Management's individual holdings of and trading in Novo Nordisk shares during 2004, please refer to Note 35 in the *Annual Report 2004*. As of 12 February 2005 the Board of Directors and Executive Management owned 81,987 B shares.

The total number of options to acquire B shares held by Executive Management and directors<sup>4</sup> as of 12 February 2005, equals 554,060, and the specific conditions can be summarized as follows:

<b><u>Share option plan</u></b>	<b><u>Number of options held</u></b>	<b><u>Exercise price</u></b> <b><u>(DKK)</u></b>	<b><u>Exercise period</u></b>
1997 Ordinary	10,500	190	19.2.2001 – 18.2.2006
1998 Ordinary	17,000	125	25.3.2002 – 24.3.2007
1999 Ordinary	57,000	198	24.3.2003 – 23.3.2008
2000 Ordinary	56,000	198	22.2.2004 – 21.2.2009
2000 Launch	296,060	198	01.2.2004 – 31.1.2007
2001 Ordinary	47,500	332	08.2.2005 – 07.2.2010
2003 Ordinary	70,000	195	06.2.2007 – 05.2.2012

For a full description of individual holdings and exercise of stock options, please refer to Note 35 in the *Annual Report 2004*.

In the period from 1 January 2005 until 12 February 2005, 5,300 B-shares were sold and no B shares have been bought by the members of the Board of Directors or Executive Management, and no options have

<sup>4</sup> Retired members of Executive Management (Mads Øvlisen and Kurt Anker Nielsen) are Board members in Novo Nordisk today. The share options outstanding to Board members were issued to these Board members when they were part of Executive Management.

been exercised. The internal rules on trading in Novo Nordisk securities by members of the Board of Directors and Executive Management only permit trading in the 15 calendar-day period following each quarterly announcement.

## ITEM 7 MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

### **MAJOR SHAREHOLDERS**

The total share capital of the Company is split in two classes, A shares and B shares, each with different voting rights. The A shares have 10 votes per DKK 1 of the A share capital, whereas the B shares have one vote per DKK 1 of the B share capital.

All of the A shares of the Company are held by Novo A/S, a wholly-owned subsidiary of the Novo Nordisk Foundation (the 'Foundation'). As of 31 December 2004, the A shares represented approximately 66% of the votes exercisable at the Annual General Meeting.

The Foundation is a self-governing and self-owned foundation whose main purposes are to be a stable base for the business and research activities of the subsidiaries of Novo A/S, and in addition to support medical research and other scientific, humanitarian and social objectives.

Novo A/S was established in September 1999 with a contribution in kind of interest-bearing securities from the Foundation. In December 1999, the Foundation contributed its total holdings of A and B shares in Novo Nordisk A/S to Novo A/S in return for shares in Novo A/S. The purpose of Novo A/S is to administer its portfolio of securities and minority capital interests and to administer and vote on the A shares and B shares in Novo Nordisk A/S, thereby creating a satisfactory financial return for the Foundation.

Under its statutes (Articles of Association), the Foundation is governed by a Board of Governors, which must consist of at least six and not more than 12 members, of whom at least two must have a medical or scientific background. Members of the Foundation's Board of Governors are typically proposed by the chairman and elected by a two-thirds vote of the members who have themselves been elected under the Articles of Association. Any member may be removed by unanimous vote of the other members of the Foundation's Board of Governors. In addition, employee representatives are elected for four-year terms by the employees of the subsidiaries of the Foundation in accordance with Danish law, which provides that the employees of the subsidiaries of the Foundation are entitled to be represented by at least half of the number of members who have themselves been elected under the Articles of Association. No person or entity exercises any kind of formal influence over the Foundation's Board. The Board of the Novo Nordisk Foundation currently consists of nine persons, of whom two are also members of the Board of Directors of Novo Nordisk A/S (Mads Øvlisen and Stig Strøbæk).

Under its statutes, Novo A/S is governed by a Board of Directors, which must consist of at least three and not more than six members to be elected by the shareholder to serve for terms of one year. According to the statutes of the Foundation, its Board of Governors can and shall provide for members of its own Board of Governors to be elected to Novo A/S' Board of Directors. The Board of Directors of Novo A/S currently consists of five persons, with two directors being members of the Board of the Foundation (Palle Marcus and Jørgen Boe) and two other directors also being member of the Board of Directors of Novo Nordisk A/S (Kurt Anker Nielsen and Ulf J Johansson). The Chairman of the Foundation's Board of Governors serves as the Chairman of Novo A/S' Board of Directors.

According to the statutes the Foundation is required, in exercising its voting rights through Novo A/S at Novo Nordisk A/S' General Meetings, to have regard for the protection of Novo Nordisk's interests. A shares held by Novo A/S cannot be sold or be the object of any disposition as long as the Foundation exists.

The dissolution of the Foundation or any change in its objectives would require the unanimous vote of the Foundation's Board of Governors, and other changes in the Foundation's statutes would require the approval of two-thirds of the members of the Foundation's Board of Governors. In addition, changes in the Foundation's statutes would require approval of the Danish foundation authorities. According to the statutes the Foundation is required to maintain material influence in Novo Nordisk A/S and its majority vote in Novo A/S.

The B shares of the Company are registered with the Danish Securities Centre and are not represented by certificates. Generally, the Danish Securities Centre does not provide the Company with information as to such registration. However, set forth below is information as of 12 February 2005 with respect to (a) any shareholder who is known to the Company to be the owner of more than 5% of any class of the Company's securities and (b) the total amount of any class owned by the directors and Executive Management as a group:

Title of class	Identity of person or group	Shares owned	Percent of class	Percent of total votes
A shares	Novo A/S	53,743,600 <sup>5</sup>	100.00	65.88
B shares	Novo A/S	38,842,780	12.9	4.76
B shares	The Capital Group Companies Inc.	35,511,008	11.80	4.35
B shares	Fidelity Investments	15,731,049	5.23	1.93
B shares	Danish Labor Market Supplementary Pension Scheme (ATP)	14,547,561	4.83	1.78
B shares	Novo Nordisk A/S and affiliates (treasury shares)	22,585,129	7.50	0.00
B shares	Board of Directors and Executive Management	81,987	0.03	0.01

On 27 December 2004, The Capital Group Companies, Inc. (a US corporation) notified the Copenhagen Stock Exchange of the above holding of shares, on behalf of several subsidiaries engaged in the investment management business. The shares are held in client accounts under the discretionary investment management authority of these subsidiaries.

In April 2004, Novo Nordisk announced a share buy-back scheme of DKK 5 billion. At the end of 2004 6,480,000 shares corresponding to DKK 2 billion had been repurchased under this program.

As the B shares are in bearer form, it is not possible to give an accurate breakdown of the holdings and number of shareholders per country. It is, however, estimated that approximately 59% of the B share capital was held in Denmark at the end of 2004. Approximately 25% of the B share capital is estimated to be held in North America. The estimated total number of shareholders is more than 75,000 of which more than 50,000 are estimated to be Danish residents and 10,000 to be resident in the US

#### **RELATED PARTY TRANSACTIONS**

Related parties are considered to be the Novo Nordisk Foundation, Novo A/S, the Novozymes Group (due to shared controlling shareholder), associated companies, the Board of Directors and officers of these entities

<sup>5</sup> The number of A shares is calculated as an equivalent of the trading size (DKK 2) of the listed B shares but is not formally divided into number of shares. The A shares are not listed on any stock exchange.

and Management of Novo Nordisk. Novo Nordisk has access to certain assets of and can purchase certain services from Novo A/S and the Novozymes Group and vice versa. All agreements relating to such assets and services are based on the list prices used for sales to third parties where such list prices exist, or the price has been set at what is regarded as market price. The material terms of these agreements are renegotiated annually.

Related party transactions in 2002, 2003 and 2004 are primarily payments for services provided between the Novo Nordisk Group and the Novozymes Group and transactions with associated companies. The financial impact of these transactions is limited.

The total DKK amount of transactions with associated companies has increased in 2004, primarily due to the acquisition of certain intangible property rights from associated companies. There have not been any significant transactions with related parties out of the ordinary course of business since 31 December 2004 other than the purchase of certain assets from one of its associated companies, Aradigm Corporation, in January 2005. For further information please refer to Note 37 in the *Annual Report 2004*.

The total DKK amount of transactions with associated companies has decreased in 2003, primarily due to lower sales from Novo Nordisk to associated companies, and lower equity contribution to Aradigm Corp. There have not been any significant transactions with related parties out of the ordinary course of business since 31 December 2003.

Transactions with associated companies have decreased in 2002, primarily due to lower fees and royalties paid to Aradigm Corp. and ZymoGenetics, Inc., and lower equity contribution to Aradigm Corp. There have not been any significant transactions with related parties out of the ordinary course of business since 31 December 2002.

There have not been and are no loans to the Board of Directors or Executive Management in 2002, 2003 and 2004.

For further information on related party transactions, please refer to Note 38 of the *Annual Report 2004*, Note 35 of the *Annual Financial Report 2003* and Note 34 of the *Annual Financial Report 2002*.

#### **INTERESTS OF EXPERTS AND COUNSEL**

Not applicable.

#### **ITEM 8 FINANCIAL INFORMATION**

##### **CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION**

See Item 17, 'Financial statements' for information on balance sheet, income statement, changes in shareholders' funds, cash flow statement, related notes, etc., including comparative figures. Pricewaterhouse-Coopers, independent accountants, have audited the *Annual Report 2004*<sup>6</sup> and their report does not contain qualifications.

For information on net turnover by business segments and geographic segments, see Item 4, 'Business overview'.

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<sup>6</sup> One section is included in the *Annual Report 2004* for convenience: 'Quarterly figures 2003 and 2004'. This section has not been audited and as such not covered by the independent auditors report.



**Dividend policy**

At the Annual General Meeting on 9 March 2005, the Board of Directors will propose a dividend of DKK 4.80 per share. No dividends will be paid on the Company's holding of its treasury shares. It is the intention of the Board of Directors that, over time, the payout ratio of Novo Nordisk shall be at the level of comparable companies.

**Legal proceedings**

Reference is made to Note 37 and page 46 in the *Annual Report 2004* regarding legal proceedings.

**Significant changes**

Reference is made to Note 37 in the *Annual Report 2004* for significant events after the balance sheet date. For information on important events in the financial year of 2004, please refer to 'Important events' under Item 4.

## ITEM 9 THE OFFER AND LISTING

**Offer and listing details**

The table below sets forth for the calendar periods indicated, in the first two columns, high and low prices for the B shares as reported by the Copenhagen Stock Exchange and, in the third and fourth columns, high and low ADR prices as reported by the New York Stock Exchange.

Following the change in trading units as of 4 April 2001, all quotes are restated to reflect the new trading unit of DKK 2 per B share and a ratio of B shares to ADRs of 1:1.

Following the demerger of Novozymes A/S in 2000, historical quoted prices have been restated to reflect the share price excluding the value of the discontinued operations.

	DKK per B share		USD per ADR	
	High	Low	High	Low
2000	368	168	41.22	22.45
2001	393	277	46.30	34.70
2002	340	168	40.60	21.50
2003	251	174	41.23	25.10
2004	331	230	55.28	39.03
<b>2003</b>				
1st Quarter	234	174	34.50	25.10
2nd Quarter	247	222	39.51	32.36
3rd Quarter	251	213	38.30	32.18
4th Quarter	245	228	41.23	35.01
<b>2004</b>				
1st Quarter	291	230	48.40	39.03
2nd Quarter	324	276	53.47	44.41
3rd Quarter	331	305	55.28	49.09
4th Quarter	329	290	54.98	49.41

August 2004	325	305	54.09	49.50
September 2004	331	320	55.28	51.93
October 2004	329	291	54.98	49.41
November 2004	305	290	54.24	49.75
December 2004	300	294	54.90	52.18
January 2005	302	282	53.91	49.22

**PLAN OF DISTRIBUTION**

Not applicable.

**MARKETS**

The Company's share capital consists of A shares and B shares. As described above, the A shares are owned by the Novo Nordisk Foundation through its fully owned company Novo A/S and are not listed or traded on any stock exchange. The B shares have been publicly traded since 1974 and have been listed on the Copenhagen Stock Exchange since that time and on the London Stock Exchange since 1978. The Copenhagen Stock Exchange is the principal trading market for the B shares.

American Depositary Receipts ('ADRs') representing the B shares, as evidenced by American Depositary Receipts issued by JP Morgan Chase Bank of New York, as the Depositary, have been listed on the New York Stock Exchange since 1981. As of 31 December 2004, 11,668,670 B share equivalents (representing 4.2% of the outstanding B shares, adjusted for the treasury shares) were held in the form of ADRs.

**SELLING SHAREHOLDERS**

Not applicable.

**DILUTION**

Not applicable.

**EXPENSES OF THE ISSUE**

Not applicable.

ITEM 10            ADDITIONAL INFORMATION

**SHARE CAPITAL**

Not applicable.

**MEMORANDUM AND ARTICLES OF ASSOCIATION**

At the Company's Annual General Meeting on 16 March 2004 the Articles of Association were amended in order to incorporate the Triple Bottom Line in the Articles of Association. The intention of the changed objects clause was to reflect the Company's commitment and work of many years within sustainability and the triple bottom line and as such emphasize that the Company strives to conduct its activities in a financially, environmentally, and socially responsible way.

The revised Articles of Association are filed together with this Form 20-F, exhibit 1.1.

#### **MATERIAL CONTRACTS**

There have been no material contracts outside the ordinary course of business. For a description of other contracts, please see the description under Item 4 - 'Important events'.

#### **EXCHANGE CONTROLS**

There are no governmental laws, decrees, or regulations in Denmark (including, but not limited to, foreign exchange controls) that restrict the export or import of capital, or that affect the remittance of dividends, interest or other payments to non-resident holders of the B shares or the American Depositary Receipts.

There are no limitations on the right of non-resident or foreign owners to hold or vote the B shares or the American Depositary Receipts imposed by the laws of Denmark or the Articles of Association of the Company.

#### **TAXATION**

The following summary outlines certain United States and Danish tax consequences to holders of ADRs or B shares who are citizens or residents of the United States under the current Convention between the Government of the United States of America and the Government of the Kingdom of Denmark for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income (the 'Current Convention').

For purposes of the United States Jobs and Growth Tax Relief Reconciliation Act of 2003 (P-L. 108-27, 117 Stat. 752) and the Internal Revenue Code of 1986 as amended (the 'US Code'), and the Current Convention, the holders of ADRs will be treated as the owners of the underlying B shares.

Under the usual Danish tax procedure withholding tax is deducted from dividend payments to United States residents and corporations at a 28% rate, the rate which is generally applicable in the case of nonresidents in Denmark without regard to eligibility for a reduced treaty rate. Under the Current Convention, however, the maximum rate of Danish tax which may be imposed on a dividend paid to a United States resident or corporation not having a 'permanent establishment' (as defined therein) in Denmark is 15%. United States residents and corporations who are eligible for the reduced treaty rate may apply to the Danish tax authorities to obtain a refund of the withholding tax exceeding the maximum rate.

Effective in 1987, the Danish tax authorities approved the Company's proposal to simplify such procedure. Under the approved procedure, US resident shareholders holding ADRs will receive their dividends from the Depositary reduced only by the 15% Danish withholding tax provided for in the Current Convention if they certify to being US residents. Accordingly, U.S. resident shareholders that have submitted the required form (Form 6166) to the Depositary will not have to file for any tax withholding refund from the Danish tax authorities.

Subject to the limitations and conditions provided in the Jobs and Growth Tax Relief Reconciliation Act of 2003 (P-L. 108-27, 117 Stat. 752), a United States citizen will be taxed at a maximum of 15% of the dividend, as the dividend is received from a Qualified Foreign Corporation (QFC); Novo Nordisk A/S is a Qualified Foreign Company. It is a condition that the ADR holder fulfils certain holding period requirements.

Subject to the limitations and conditions provided in the US Tax Code, the ADR holder may elect to credit the Danish taxes paid on dividends against its United States federal income tax liability. The credit includes taxes initially withheld from dividends declared to the extent the withheld taxes are not repayable to the United States shareholder. For United States federal income tax purposes, the full dividend payment, without reduction for Danish withholding tax, is treated as a foreign source dividend.

Subject to the limitations and conditions provided in the US Tax Code, a United States resident or domestic corporation may elect to credit against its United States federal income tax liability Danish taxes paid on dividends from a Danish corporation. The credit includes taxes initially withheld from dividends declared to the extent the withheld taxes are not repayable to the United States shareholder. Alternatively, subject to applicable limitations, a US shareholder may elect to deduct Danish taxes withheld from dividend payments which will generally constitute passive income for certain shareholders. For United States federal income tax purposes, the full dividend payment, without reduction for Danish withholding tax, is treated as a foreign source dividend.

Under the US Tax Code, United States corporations receiving dividend payments from Danish corporations generally will be taxable as income on the dividend and are not eligible for any dividend-received deduction. The full amount of dividends declared, without reduction for any Danish tax withheld, will be included in the gross income of the recipient United States Corporation for United States federal income tax purposes, subject to the aforementioned foreign tax credit.

#### **Sales of ADRs or B shares**

Gains or losses derived from the sale of ADRs or B shares by an individual not a resident in Denmark or a non-Danish corporation not doing business in Denmark are not subject to Danish taxation, but are subject to the general United States tax rules applicable to such transactions by United States citizens, residents or domestic corporations. A United States shareholder will recognize capital gain or loss for United States federal income tax purposes on a sale or other disposition of ADRs or B shares in the same manner as on the sale or other disposition of any other shares. In addition, any non-resident of Denmark may transfer out of Denmark any convertible currency representing the proceeds of the sales of ADRs or B shares in Denmark.

#### **DIVIDENDS AND PAYING AGENTS**

Not applicable.

#### **STATEMENT BY EXPERTS**

Not applicable.

#### **DOCUMENTS ON DISPLAY**

It is possible to read and copy documents referred to and filed with the SEC together with this Form 20-F at the SEC's public reference room located at 450 Fifth Street, NW, Washington, DC 20549. Please call the United States Securities and Exchange Commission at 1-800-SEC-0330 for further information on the public reference rooms.

Copies of this Form 20-F Report can be downloaded from the Investors pages on [novonordisk.com](http://novonordisk.com). (The contents of the website are not incorporated by reference into this Form 20-F.) The Form 20-F is also filed and can be viewed via EDGAR on [www.sec.gov](http://www.sec.gov).

**SUBSIDIARY INFORMATION**

Not applicable.

**ITEM 11 QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISKS****Financial exposure and financial risk management**

For a description and discussion of the Company's foreign exchange risk management, interest risk management, counterparty risk management and equity price risk management, please refer to the section on financial risk factors in Notes 20, 22 and 36 in the *Annual Report 2004*.

**Sensitivity analysis**

When conducting a sensitivity analysis, the Group assesses the change in fair value on the market-sensitive instruments following hypothetical changes in market rates and prices. The rates used to mark-to-market the instruments are market data from the end of 2004.

**Interest rate sensitivity analysis**

The financial instruments included in the sensitivity analysis of interest rate risk consist of the Group's marketable bonds and deposits together with short- and long-term loans with floating and fixed interest rates. Not included are foreign currency forwards, foreign currency options, and foreign currency swaps due to the very limited interest effect of these instruments when the interest rate risk is assessed through the below-mentioned risk measures.

The interest rate risk is calculated as the 'duration', which expresses the percentage change in the market value of the financial instruments by a 1 percentage point parallel shift in the interest rate curve.

An interest rate change has a very limited effect on the Group's financial instruments. In the table below is shown how a 1 percentage point change of the interest rate level, all other variables being unchanged, would change the fair value of the Group's financial instruments.

The result of the sensitivity analysis at the end of 2004 is as follows:

	Interest rate level	Fair value of Group's financial instruments (DKK million)
2004	+ 1 percentage point	+ 6
	- 1 percentage point	- 6
2003	+ 1 percentage point	+1
	- 1 percentage point	- 1

**Foreign exchange sensitivity analysis**

The financial positions included in the foreign exchange sensitivity analysis are the Group's cash, accounts receivable and payable, short- and long-term loans, short- and long-term financial investments, foreign currency forward contracts, currency options, and currency swaps hedging transaction exposure. Not included are anticipated currency transactions, investments and fixed assets. Further, currency swaps hedging translation exposure are excluded from the sensitivity analysis, as the effects of changing exchange rates hereon are recognized directly under shareholders' funds. Moreover, the Group does not have any marketable bonds in foreign currency.

At the end of 2004, a 5% increase in the levels of all foreign exchange rates against the DKK, i.e. a unilateral weakening of DKK, would, all other variables being unchanged, result in a decrease in the fair value of the Group's financial positions of DKK 294 million. A 5% decrease in the levels of all foreign exchange rates against DKK, i.e. a unilateral strengthening of DKK, would, all other variables being unchanged, increase the value of the Group's financial positions by DKK 294 million.

In comparison, at the end of 2003, a 5% increase in the levels of all foreign exchange rates against the DKK, i.e. a unilateral weakening of DKK, would, all other variables being unchanged, result in a decrease in the fair value of the Group's financial positions of DKK 295 million. A 5% decrease in the levels of all foreign exchange rates against DKK, i.e. a unilateral strengthening of DKK, would, all other variables being unchanged, increase the value of the Group's financial positions by DKK 295 million.

To reflect the Danish fixed rate policy vis-à-vis EUR, an alternative calculation has been made. This calculation assumes that DKK remains unchanged versus EUR, i.e. that DKK and EUR weaken by 5% against all other currencies. Likewise it is assumed that DKK and EUR strengthen by 5% against all other currencies.

At the end of 2004, a 5% increase in the levels of foreign exchange rates against DKK and EUR would, all other variables being unchanged, result in a decrease in the fair value of the Group's financial positions of DKK 394 million. A 5% decrease in the levels of all foreign exchange rates against DKK and EUR would, all other variables being unchanged, increase the value of the Group's financial positions by DKK 417 million.

In comparison, at the end of 2003, a 5% increase in the levels of all foreign exchange rates against the DKK and EUR would, all other variables being unchanged, result in a decrease in the fair value of the Group's financial positions of DKK 440 million. A 5% decrease in the levels of all foreign exchange rates against DKK and EUR would, all other variables being unchanged, increase the value of the Group's financial positions by DKK 481 million.

ITEM 12 DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not applicable.

**PART II**

ITEM 13 DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14 MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

None.

ITEM 15      CONTROLS AND PROCEDURES

**Evaluation of disclosure controls and procedures**

Novo Nordisk maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in reports that Novo Nordisk files under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the United States Securities and Exchange Commission

Novo Nordisk's Chief Executive Officer and Chief Financial Officer have evaluated the Company's disclosure controls and procedures as of the end of 2004. Based on this evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective at the reasonable assurance level for gathering, analyzing and disclosing the information the Company's is required to disclose in the reports it files under the Securities Exchange Act of 1934, within the time periods specified in the SEC's rules and forms.

In designing and evaluating the disclosure controls and procedures, Management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

**Changes in internal controls over financial reporting**

There were no changes in the Company's internal control over financial reporting that occurred during the year ended 31 December 2004, that have materially affected, or are reasonably likely to materially affect the Company's internal control over financial reporting.

ITEM 16A      AUDIT COMMITTEE FINANCIAL EXPERT

Novo Nordisk's Board of Directors has determined that Kurt Anker Nielsen and Niels Jacobsen, both serving on Novo Nordisk's Audit Committee, qualify as Audit Committee Financial Experts as defined under the Sarbanes-Oxley Act.

ITEM 16B      CODE OF ETHICS

Novo Nordisk has an ethics framework consisting of a number of rules and guidelines, including but not limited to the Novo Nordisk Way of Management, which consists of the Company's Vision, Charter, commitment to the Triple Bottom Line and Policies. This framework is applicable to all employees in Novo Nordisk including the Board of Directors and Management.

The Novo Nordisk Way of Management is principle-based and describes corporate values and required mindsets on business conduct and ethics including a number of the topics dealt with in the rules on Code of Ethics set forth in the Sarbanes-Oxley Act in the New York Stock Exchange Listed Company Manual.

Novo Nordisk has not established a separate Code of Ethics as a response to the requirement set forth in the Sarbanes-Oxley Act because the framework is already well integrated in the Company, and because the framework includes rules and guidelines reasonably similar to those requirements defined as Code of Ethics in the Sarbanes-Oxley Act and in the New York Stock Exchange Listed Company Manual.

For further information on the Novo Nordisk Way of Management please visit Novo Nordisk's homepage at [novonordisk.com](http://novonordisk.com) or receive a copy upon request.

ITEM 16C PRINCIPAL ACCOUNTANT FEES AND SERVICES

**Audit fees**

Reference is made to Note 9 in the *Annual Report 2004* regarding aggregate audit fees.

**Statutory audit**

Statutory audit fees consist of fees billed for the annual audit of the Company's annual report, the financial statements of the Parent Company, Novo Nordisk A/S and financial statements of fully owned affiliates. The fees also include fees billed for other audit services, which are those services that only the statutory auditor can provide, and include the review of documents filed with the SEC.

**Audit-related fees**

Fees for Audit-related services consist of fees billed for assurance and related services that are related to the performance of the audit or review of the Company's annual report and include consultations concerning financial accounting and reporting standards and internal control reviews.

**Tax fees**

Fees for tax advisory services include fees billed for tax compliance services, including assistance on the preparation of tax returns and claims for refund; tax consultations, such as assistance and representation in connection with tax audits and appeals, transfer pricing, tax planning services; and expatriate tax services.

**All other fees**

All other fees include fees billed for services such as royalty audits and wholesaler audits.

**Pre-approval policies**

The Audit Committee assesses and pre-approves all audit and non-audit services provided by PricewaterhouseCoopers. The pre-approval includes the type of service and a fee budget. Furthermore, the Audit Committee receives a quarterly update on actual services provided and fees realized.

ITEM 16D EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.



## ITEM 16E PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

2004	Total Number of Shares Purchased (a)	Average Price Paid per Share in DKK (b)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (c)	Maximum Approximate Value of Shares that may yet be purchased under the Plans or Programs in DKK (d)
January 1-31	0	0	0	5,000,000,000
February 1-29	0	0	0	5,000,000,000
March 1-31	0	0	0	5,000,000,000
April 1-30	0	0	0	5,000,000,000
May 1-31	152,500	281.06	152,500	4,957,137,938
June 1-30	1,297,500	296.78	1,297,500	4,572,067,465
July 1-31	550,000	321.11	550,000	4,395,456,253
August 1-31	920,000	322.09	920,000	4,099,130,165
September 1-30	560,000	328.68	560,000	3,915,068,265
October 1-31	0	0	0	3,915,068,265
November 1-30	2,630,000	298.93	2,630,000	3,128,894,123
December 1-31	370,000	297.20	370,000	3,018,930,823
<b>Total</b>	<b>6,480,000</b>	<b>305.72</b>	<b>6,480,000</b>	

**Note to column (a)**

Acquisition of treasury shares during 2004 is part of the share buy-back program of up to DKK 5 billion worth of Novo Nordisk B shares announced in April 2004, which was initiated in order to align the capital structure with the expected development in free cash flow.

**Notes to columns (c) and (d)**

All shares have been purchased as part of the share buy-back program. The remaining DKK 3.0 billion to be used under the share buy-back program is expected to be utilized in 2005 and 2006.

### PART III

## ITEM 17 FINANCIAL STATEMENTS

The financial statements required by this item accompany this Annual Report as the Novo Nordisk *Annual Report 2004* (see Exhibit 14.1).

In the *Annual Report 2004*, Novo Nordisk discloses some non-GAAP financial measures as defined in Regulation G, including:

- Free cash flow;
- Cash/earnings; and
- Return on invested capital (ROIC).

**Free cash flow**

Free cash flow is defined as 'cash flow from operating activities plus cash flow from investing activities' excluding 'Net change in marketable securities (> 3 months)'.

Management uses the measure of free cash flow to monitor the operating activities' ability to finance the investing activities of the Group. A positive free cash flow shows that the operation is able to finance the investing activities of the Group and thus external financing is not necessary.

Below is a reconciliation of free cash flow to the GAAP measure 'Cash flow from operating activities'.

Reconciliation of free cash flow				
DKK Million	2004	2003	2002	2001
Free cash flow	4,278	3,846	497	186
+ Net change in marketable securities (>3 months)	1,310	(1,516)	1,085	(61)
+ Cash flow from investing activities	2,001	3,819	3,285	4,178
= <b>Cash flow from operating activities</b>	<b>7,589</b>	<b>6,149</b>	<b>4,867</b>	<b>4,303</b>

#### Cash/earnings

Cash/earnings is defined as 'free cash flow as a percentage of net profit'.

Cash/earnings measures the Group's ability to turn earnings into cash and is, therefore, in the eyes of Management a meaningful measure for public use to demonstrate a sound cash flow development from operations. That is why free cash flow is used as the numerator instead of net cash flow, because it is the ability of operations to generate cash which should be captured. Cash/earnings is reconciled to 'Cash flow from operating activities / earnings in %'.

Reconciliation of cash/earnings				
DKK Million	2004	2003	2002	2001
<b>Numerator</b>				
Free cash flow	4,278	3,846	497	186
<b>Denominator</b>				
Net profit	5,013	4,833	4,116	3,620
<b>Cash/earnings (as reported in AFR) in %</b>	<b>85.3%</b>	<b>79.6%</b>	<b>12.1%</b>	<b>5.1%</b>
<b>Numerator</b>				
Free cash flow is reconciled to cash flow from operating activities				
Free cash flow	4,278	3,846	497	186
+ Net change in marketable securities (>3 months)	1,310	(1,516)	1,085	(61)
+ Cash flow from investing activities	2,001	3,819	3,285	4,178
= <b>Cash flow from operating activities</b>	<b>7,589</b>	<b>6,149</b>	<b>4,867</b>	<b>4,303</b>
<b>Denominator</b>				
No reconciliation				
Cash flow from operating activities	7,589	6,149	4,867	4,303
/ Net profit	5,013	4,833	4,116	3,620
= <b>Cash flow from operating activities / Net profit in %</b>	<b>151.4%</b>	<b>127.2%</b>	<b>118.2%</b>	<b>118.9%</b>

### Return on invested capital (ROIC)

ROIC is defined as 'operating profit after tax (using the effective tax rate) as a percentage of average stocks, debtors, tangible and intangible fixed assets less non-interest bearing liabilities including provisions (where average is the sum of above assets and liabilities at the beginning of the year and at year-end divided by two)'.

ROIC is used by Management as a measure for financial performance. Management believes that ROIC captures the Group's ability to provide a competitive return on investments in the Group compared to investing in the capital market.

Reconciliation of ROIC					
DKK Million		2004	2003	2002	2001
	Operating profit after tax	4,691	4,206	3,853	3,441
/	Average non-interest bearing balance sheet items	22,746	21,547	18,827	15,153
=	<b>ROIC (as reported in AFR) in %</b>	<b>20.6%</b>	<b>19.5%</b>	<b>20.5%</b>	<b>22.7%</b>
	<b>Numerator</b>				
	Reconciliation of Operating profit after tax to Operating profit				
	Operating profit after tax	4,691	4,206	3,853	3,441
/	(1-effective tax rate) in %	67.2%	65.5%	65.0%	63.6%
=	<b>Operating profit</b>	<b>6,980</b>	<b>6,422</b>	<b>5,927</b>	<b>5,410</b>
	<b>Denominator</b>				
	Reconciliation of Average non-interest bearing balance sheet items to Equity				
	Average non-interest bearing balance sheet items as used in ROIC calculation	22,746	21,547	18,827	15,153
*	2	45,492	43,093	37,654	30,305
-	Non-interest bearing balance sheet items at the beginning of the year	22,294	20,799	16,855	13,450
=	Non-interest bearing balance sheet items at the end of the year	23,198	22,294	20,799	16,855
	Non-interest bearing balance sheet items at the end of the year	23,198	22,294	20,799	16,855
+	Investments in associated companies	883	1,040	1,249	1,364
+	Other fixed asset investments	159	80	79	99
+	Marketable securities	526	1,828	315	1,402
+	Cash at bank and in hand	3,433	1,262	1,423	1,660
-	Long-term debt	(1,188)	(753)	(824)	(863)
-	Short-term debt	(507)	(975)	(564)	(817)
=	<b>Equity at the end of the year (as reported in the AFR)</b>	<b>26,504</b>	<b>24,776</b>	<b>22,477</b>	<b>19,700</b>
	Operating profit	6,980	6,422	5,927	5,410
/	Equity	26,504	24,776	22,477	19,700
=	<b>Operating profit / Equity in %</b>	<b>26.3%</b>	<b>25.9%</b>	<b>26.4%</b>	<b>27.5%</b>

ITEM 18 FINANCIAL STATEMENTS

The Registrant has responded to Item 17 in lieu of responding to this item.

ADDITIONAL INFORMATION

**Enforceability of civil liabilities**

The Company is a Danish corporation and substantially all of its directors and officers, as well as certain independent accountants named herein, are non-residents of the United States. A substantial portion of the assets of the Company, its subsidiaries and such persons are located outside the United States. As a result, it may be difficult for shareholders of the Company to effect service within the United States upon directors, officers and independent accountants who are not residents of the United States or to enforce judgments in the United States. In addition, there can be no assurance as to the enforceability in Denmark against the Company or its respective directors, officers and independent accountants who are not residents of the United States, or in actions for enforcement of judgments of United States courts, of liabilities predicated solely upon the federal securities law of the United States.

**a. Annual Report**

The following pages from the Annual Report 2004, filed on Form 6-K, dated 22 February 2005, are incorporated by reference.

	<b><u>Page(s) in the Annual Report</u></b>
Driving Force	[10-11]
Research and development pipeline	[26-27]
Management report and discussion 2004	[41-47]
Outlook 2005	[46-47]
Financial highlights	[48]
Corporate governance	[54-55]
Risk management	[56-57]
Consolidated income statements for the years ended 31 December [2002, 2003 and 2004]	[60]
Consolidated balance sheets at 31 December 2003 and 2004	[61]
Consolidated cash flow and financial resources for the years ended 31 December [2002, 2003 and 2004]	[62]
Consolidated statements of changes in equity for the years ended 31 December [2002, 2003 and 2004]	[63]
Notes to the consolidated financial statements	[64-95]
Note 39, Reconciliation to US GAAP	[93-95]
List of companies in the Novo Nordisk Group	[96-97]
Summary of financial data 2000-2004	[98-99]
Management Statement	[103]
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Shareholder information	[108-109]

**b. Exhibits**

List of exhibits:

<b><u>Exhibit No.</u></b>	<b><u>Description</u></b>	<b><u>Method of filing</u></b>
<a href="#">1.1</a>	<a href="#">Articles of Association of Registrant, as amended on 16 March 2004</a>	<a href="#">Filed in English translation.</a>
8.1	List of companies in the Novo Nordisk Group	Incorporated by reference to pages 96-97 of the <i>Annual Report 2004</i> filed on Form 6-K dated 22 February 2005.
<a href="#">12.1</a>	<a href="#">Certification of Lars Rebien Sørensen, President and Chief Executive Officer of Novo Nordisk, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>	<a href="#">Filed together with this Form 20-F for 2004.</a>
<a href="#">12.2</a>	<a href="#">Certification of Jesper Brandgaard, Executive Vice President and Chief Financial Officer of Novo Nordisk, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>	<a href="#">Filed together with this Form 20-F for 2004.</a>
<a href="#">13.1</a>	<a href="#">Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</a>	<a href="#">Filed together with this Form 20-F for 2004.</a>
14.1	Registrant's Annual Report for the fiscal year ended December 2004.	Incorporated by reference to the Registrant's Report on Form 6-K dated 22 February 2005.
14.2	Registrant's Annual Financial Report for the fiscal year ended December 2003.	Incorporated by reference to the Registrant's Report on Form 6-K dated 25 February 2004.

**c. Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of Novo Nordisk A/S

We have audited the accompanying consolidated balance sheets of Novo Nordisk A/S and its subsidiaries as of 31 December 2004 and 2003, and the related consolidated income statements, the consolidated statement of changes in equity and cash flows and financial resources for each of the three years in the period ended 31 December 2004 expressed in Danish kroner and incorporated with reference to the Registrant's Annual Report filed on Form 6-K dated February 22, 2005, pages 1-109. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Novo Nordisk A/S and its subsidiaries at 31 December 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended 31 December 2004, in conformity with International Financial Reporting Standards.

International Financial Reporting Standards vary in certain significant respects from accounting principles generally accepted in the United States of America. Information relating to the nature and effect of such differences is presented in Note 39, as restated, to the consolidated financial statements in the Annual Report 2004.

PricewaterhouseCoopers  
Copenhagen  
Denmark

27 January 2005

SIGNATURES

The Registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

**NOVO NORDISK A/S**

/s/ Lars Rebien Sørensen

/s/ Jesper Brandgaard

Name: Lars Rebien Sørensen

Name: Jesper Brandgaard

Title President and Chief Executive Officer

Title: Executive Vice President and  
Chief Financial Officer

Dated: 21 February 2005