

# REPORT

## Getting on with my life

Advances in insulin therapy make the difference

## Time to act

Diabetes is a time bomb in the developing world

# CAN DIABETES REALLY BE DEFEATED?

## Movers and shakers

Embracing the globe

## Driving force

Innovation and balance drive business success

# REPORT

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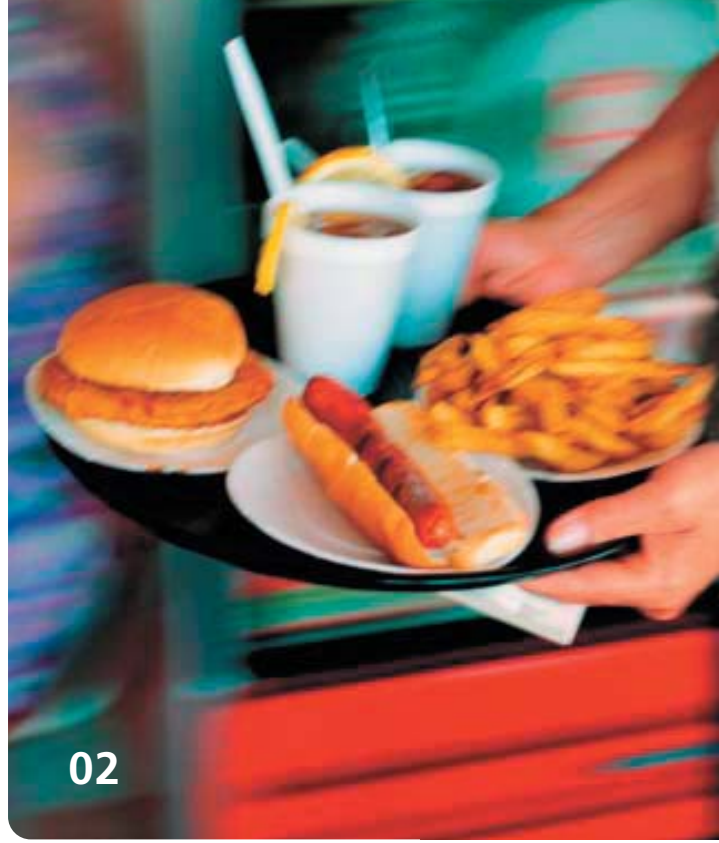
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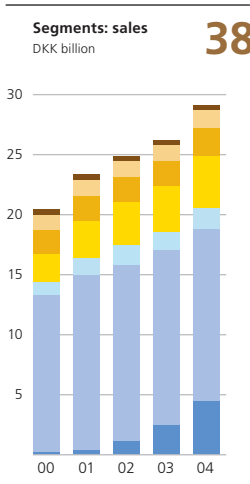
**Front cover:** Andrea Monjarás Taméz from Mexico knows that by taking care of herself, she can live her life with all it has to offer – including skateboarding! Andrea has type 1 diabetes. See page 14 for more information.



02



28



34



12



20

9%

growth in operating profit in 2004.

24%

operating profit margin in 2004.

29,031

million DKK sales in 2004.

20.6%

return on invested capital in 2004.

85.3%

cash to earnings ratio in 2004.

## Global challenges – global opportunities

**D**efeating diabetes is our passion and our business. We have built our company on that aspiration, and this is what defines our commitment as a responsible business. The diabetes epidemic travels fast across the globe, and so we must be there at its heels when it strikes – or even better: before it does. We will continue to develop better treatment options and to drive research into what matters most: to find the cure. We will also be rallying for the prevention of diabetes, with a special focus on children and youth – our future.

Novo Nordisk is an increasingly active player in the global competition for resources, people, market shares and voice. In 2004 we significantly expanded our sales organisation in key growth markets. We have grown our business, especially in the US and in developing countries. In Brazil, China and the US we have made large investments in new production facilities, building a global sourcing network at competitive costs. And today, more than 40% of Novo Nordisk's people are employed outside Denmark.

In diabetes, Novo Nordisk has the broadest product portfolio in the industry, and with the approval and launch of Levemir® in Europe, we are the first company with a full range of insulin analogues. In haemostasis management, we achieved proof of concept in stopping serious bleeds in trauma and intracerebral haemorrhage with NovoSeven®. And we believe that our pipeline will prove that we can play a key role in the discovery and development of new biopharmaceuticals for the treatment of other serious illnesses such as cancer and inflammatory diseases.

As a result of the growing demand for better diabetes therapy, our competitive portfolio of patent-protected new analogues, and further penetration of the usage of NovoSeven® both within haemophilia and for investigational use, we are realising strong growth in our sales.

But no road is smooth. Competition is tougher than ever, and healthcare reforms across the globe and in particular in Europe are impacting profit margins. In 2004 we also saw yet another year with adverse currency developments for European-based companies which called for continued cost cautiousness. In spite of this we are pleased to see very satisfactory financial results for 2004. For this, we thank the people of Novo Nordisk for their commitment and efforts, as well as our

partners and collaborators throughout the world. Also in 2004 we saw an appreciation of Novo Nordisk's share price and we are pleased to see that our shareholders were rewarded for their support.

Novo Nordisk is well positioned to meet the challenges of the future. We have built leadership positions in areas of huge unmet medical needs. We are expanding our research network internationally while building a global sourcing organisation. There will be challenges related to the transformation of jobs in developed countries to jobs with increased knowledge content, while new jobs are created in developing economies. We are rolling out a portfolio of new and patent-protected products and are not like the rest of the pharmaceutical industry, which is exposed to patent expirations over the next few years. We have a strong track record in the area of biopharmaceuticals, an area which we believe will represent significant growth opportunities in the future. Therefore we see globalisation as an opportunity.

In a highly competitive business environment there is a particular challenge in taking a long-term, holistic perspective. Novo Nordisk takes a multi-pronged approach to providing better access to health through capacity building, a preferential pricing policy for the poorest nations and funding through the World Diabetes Foundation, which is now reaching out to many millions of people with diabetes.

In terms of sustainability, Novo Nordisk demonstrates its determination to play a leading role by setting a target for an absolute reduction of CO<sub>2</sub> emissions over the next decade. When people can overcome the challenges of diabetes, we must as a company tackle the global challenges of social and sustainable stewardship.

The Novo Nordisk *Annual Report 2004* provides a balanced presentation of the company's financial, social and environmental performance – this year for the first time in one inclusive report.

We hope you will enjoy reading it. ✱



*Lars R. Sørensen*

**LARS REBIEN SØRENSEN (L)**  
PRESIDENT AND CEO

*Mads Øvlisen*

**MADS ØVLISEN (R)**  
CHAIRMAN OF THE BOARD OF DIRECTORS

**58%**

of diabetes cases worldwide are linked to being overweight; in some countries, it is as high as 90%.

**400,000**

people died in the US in 2000 from obesity-related causes, making it the second-leading cause of death.

# Can diabetes be **defeated?**

Defeating diabetes, one of the four chronic diseases which account for 50% of global mortality, demands social leadership as much as scientific breakthroughs. It all comes down to prevention, says Oxford University, Novo Nordisk and their partners in a unique global alliance.



# 1

billion people worldwide are overweight or obese while 800 million are hungry and underweight.

# 194

million people were estimated to have diabetes in 2003; about two-thirds live in developing countries.

# 50%

of new cases of diabetes in children in the US and Britain are type 2, compared with just 4% in 1990.

# 90%

of children in China with diabetes have type 2 diabetes.

# 29

million deaths worldwide were caused by chronic diseases in 2002.

# really

**T**he bicycle paths in Shanghai are being paved over for new highways. From New York to Munich to São Paulo, people eat food high in fat, sugar and salt. Conveniences like modern appliances, cars, computers and television encourage people to move less. There are too few parks and playgrounds as much of the world gets around by car.

The traditional Western lifestyle, to which many in the developing world aspire, puts human health at risk. The chronic diseases associated with an unhealthy lifestyle, like heart disease and diabetes, are striking not just the elderly but also the working-age population in societies around the world. With growing rates of obesity, children are developing type 2 diabetes – a disease formerly seen only in adults.

Chronic diseases are now the largest cause of death in the world. But the developing world is fighting on two fronts: fighting infectious diseases while also dealing with explosive rates of chronic disease.

Something has to change. And it means every sector of society has to get involved. In 2003, Novo Nordisk, together with Oxford University, founded Oxford Vision 2020. Its goal is to call attention to the fact that three risk factors (tobacco, diet and lack of physical exercise) cause four chronic diseases (cardiovascular disease, diabetes, chronic lung disease, and some types of cancer) which lead to 50% of deaths globally. It is dedicated to the cause of preventing the pandemic growth of chronic diseases, especially in low- and middle-income countries and the poorer segments of society in the developed world. The intention is not simply to prevent or delay illness or death but to create momentum for a healthier lifestyle and a better quality of life. For more information, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

In 2004, the more than 50 founding members met for the second time in Oxford and agreed on a plan of action to start combating these risk factors. The members include government and public health agencies, universities, corporations such as Novo Nordisk, Johnson & Johnson, Nestlé and Unilever, and organisations like the World Bank, the World Health Organization and the World Heart Federation.

The members have pledged to develop further evidence for the movement's rallying call and will launch community-based demonstration projects to show that prevention works. With advocacy and communication they aim to move chronic disease higher up the political agenda.

### Drugs alone not the answer

It is a challenging task, given that obesity is a worldwide epidemic and that we live in an environment not always designed to encourage fitness and exercise. But turning away from the challenge is simply not an option, says John Bell, regius professor of Medicine at Oxford University and one of the leaders of Oxford Vision 2020.

"Social leadership will be just as important as science in defeating a disease like diabetes," says Professor Bell. "Diabetes cannot be

## DIABETES PREVENTION

“When I ask people with diabetes ‘What is it you really expect from us?’, they don’t say ‘I want your latest insulin analogue in a device that can speak to my telephone.’ They want to get rid of their disease and they want to prevent their relatives and friends from getting the disease. So prevention for us is part of good diabetes care.”

Lars Rebien Sørensen, president and chief executive officer, Novo Nordisk



➤ tackled by drugs alone. The scale of the problem is too big and most people with the disease live in countries where they can’t afford the enormous medical burden of treating this disease with drugs.”

That is a view echoed by Novo Nordisk, a world leader in diabetes care with the vision of defeating diabetes. That might seem an unlikely goal for a company whose success is based on treating diabetes. But according to Lars Rebien Sørensen, president and CEO of Novo Nordisk, the vision is consistent with the company’s promise to be there for its customers – people with diabetes.

“When I ask people with diabetes ‘What is it you really expect from us?’, they don’t say ‘I want your latest insulin analogue in a device that can speak to my telephone.’ They want to get rid of their disease and they want to prevent their relatives and friends from getting the disease. So prevention for us is part of good diabetes care,” says Mr Rebien Sørensen.

“We take our leadership in diabetes care seriously, and care means more than selling products. I would be dishonest with my customers if I only focused on the part of our interaction that made money, rather than trying to meet their ultimate need – which is trying to defeat diabetes,” he adds.

### Working in partnership

“While Novo Nordisk has not yet been able to identify a business model based around prevention, given that its products and services enter the picture only after people have developed diabetes, there are other more indirect benefits from its involvement in efforts like Oxford Vision 2020,” says Mr Rebien Sørensen.

“As a knowledge-based company, we know that type 2 diabetes is caused largely by factors which can be prevented. If society is moving in the direction of prevention, it makes sense for us to be involved, not only because we have knowledge about how to potentially postpone or prevent the disease, but also because we need to be alert to changes in society that could affect our long-term activities,” he says. “It is about turning what could be considered a risk into an opportunity.”

The company has also been working with scenarios to examine key drivers of future change within the global economy, nutrition and culture as well as healthcare delivery, diabetes care, corporate social responsibility and the market. Such exercises inform the company’s thinking and future strategy, so that it is not taken by surprise by developments in society. Oxford Vision 2020 is another way for the company to keep its ear close to the ground.

“I believe through our involvement we earn respect as a partner and collaborator that can work openly with other sectors of society. I also believe it makes us more attractive as an employer. Young people want to work for companies that dare to take a stand and fight for it,” he adds.

With its 80-year history in treating diabetes, Novo Nordisk has long collaborated with other stakeholders to improve diagnosis and treatment as well as conduct some of the most advanced research into a cure (see page 6). Spearheading a movement like Oxford Vision 2020 became a natural outcome of a stakeholder approach built on dialogue and alliances.

That is an argument that makes sense to Professor Bell. “As a

healthcare company, you have a commitment to improve healthcare, regardless of where the incentive comes from. And if a solution involves changing the environment rather than producing a drug, a healthcare company should endorse that because it makes people healthier and that's why they're in this business."

### Providing the right incentives

Both industry and government have incentives to take up prevention as a business model, says Professor Bell. With rising healthcare costs attributed to treating chronic diseases like diabetes and its complications, governments have an economic incentive to focus on prevention, as well as an obligation to improve people's quality of life, he says.

"Of course, in the end it is up to individuals to make choices but, the question is, how can government, industry and other partners in society help to make the healthy choices the easy choices?" asks Professor Bell.

"Government can offer economic incentives for business and individuals to make healthier choices. In many countries, the unhealthiest food choices are also the cheapest and most widely available, whereas fresh fruits and vegetables are often more expensive. Cities and towns can be planned in a way that allows for more green spaces and more bike paths," says Professor Bell.

### Getting kids to listen

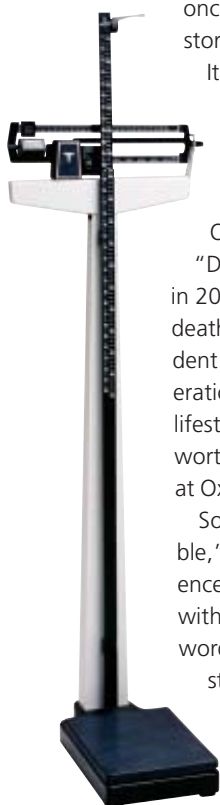
That is a message that needs to be driven home to the generation which will most benefit from a successful prevention movement today: children and youth.

"If you really want to make an impact on society's health, you need to focus your attention on the future generation. You have to make the investment in good health as a child and teenager. If your health is already deteriorating at age 50, it is very hard to turn it around. People will give up their wealth and their fortune once they've had a heart attack if only they were able to restore a little bit of their health," says Mr Rebien Sørensen.

It is a warning that came across loud and clear to the group of young people who attended the Oxford Vision 2020 Summit in Oxford in September 2004. Members of Kikass, a youth charity group based in the UK, told the summit participants that kids need a movement like Oxford Vision 2020 – but it has to speak in their language.

"Don't tell us that 400 million people will die from diabetes in 2020. Tell us that one in 10 of our friends will die an early death from this terrible disease," says Sarah Jarman, a student at the Surrey Institute of Art and Design. "We're a generation that's willing to take a responsible approach to our lifestyle choices but there has to be a reputable and trustworthy source of information," adds Mark Harris, a student at Oxford University.

So, can diabetes really be defeated? "It is entirely possible," says Mr Rebien Sørensen, "but it won't be through science alone. I don't think we can solve our societal problems with a pill. It's going to take more than that. Getting the word out about these risk factors for type 2 diabetes has to start with young people. That is how we will really make progress towards defeating diabetes over the next 20 years." \*



An employee receives encouragement from a fitness instructor at Novo Nordisk's leisure centre in Bagsværd, Denmark.

## Putting prevention into practice

Awareness is the key to prevention. Novo Nordisk has long had a business approach that focuses not only on selling its products and devices, but also on educating people about diabetes. Education efforts, in both the developed and developing world, are aimed at healthcare professionals, people with diabetes and the general public. Examples include:

- In India, diabetes awareness exhibitions sponsored by Novo Nordisk attracted 318,000 people in 2004.
- In China, Novo Nordisk and the Chinese Ministry of Health have launched a project to bring extensive diabetes education throughout China.
- Novo Nordisk also has programmes in sub-Saharan Africa to educate doctors and nurses as well as people with diabetes (see page 28).
- The landmark study about the psychosocial aspects of diabetes, called DAWN, sponsored by Novo Nordisk (see page 14), has prompted a series of educational activities around the world in partnership with other organisations.

Knowing what it does about the risk factors for diabetes, Novo Nordisk has also turned its attention to its own employees with a prevention programme aimed at improving employees' health, called NovoSund. It was launched in Denmark in 2004, where 59% of the company's employees are based, but will go global. The programme offers company-sponsored stop-smoking courses and campaigns to promote more exercise and better nutrition, such as healthier canteen food, company-sponsored sports activities or ways to reduce stress. In a pilot programme at one of the company's facilities in Denmark, employees can test their risk factors for diabetes and other chronic diseases, and consult with a healthcare provider on how to make healthy changes in their lives.

Novo Nordisk is also conducting a baseline study of the health status of its employees in Denmark. The status will be monitored over a period of years and the results made available to those who may be interested in efforts to improve health in the workplace.

By creating a culture and working environment supportive of healthy lifestyles, the idea is to put prevention into practice.

Scientists around the world are working hard to defeat diabetes, but a cure has proven elusive. Still, there are encouraging signs of progress. Meanwhile, advanced treatment makes it easier for people to cope with diabetes today.

# The search for a cure



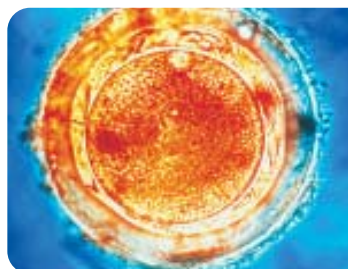
**D**avid Matthews is a relentless optimist. He concedes that after more than 30 years of research, a cure for diabetes is still not a reality. But he also points out that the scientific community is closer than ever to its goal – or at least some approximation of a cure for diabetes by 2015. David Matthews should know. As professor at Oxford University and the head of the Oxford Centre for Diabetes, Endocrinology and Metabolism (OCDEM), he is at the centre of the strides being made in the field of diabetes in the last decade.

“I believe we can look at diabetes the same way we look at cancer. In other words, as a disease that breaks out but can be sent into remission, a stage without symptoms. If you consider type 2 diabetes like that, how would you define a cure? I would say a treat-

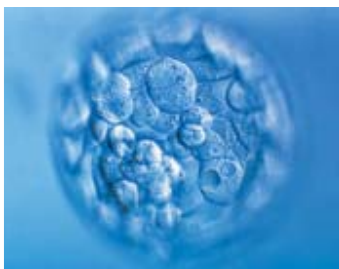
ment that prevents the insulin-producing beta cells from dying and keeps blood sugar under control. The patient might have to be treated several times in order to be symptom-free. But I believe it is possible to develop that kind of treatment within the next 15 years. The situation is different for type 1 diabetes. Here the body destroys the beta cells through an immune reaction, and a cure thus involves producing new, well-functioning beta cells – from stem cells, for example – as well as developing drugs to stop attacks on the immune system. Early results from various laboratories indicate that both are possible in time,” says Professor Matthews.

OCDEM is a unique place in which to realise those possibilities. It represents a partnership between the UK’s National Health Service, Oxford University and Novo Nordisk. It opened in 2003 and is the

## Different sources of stem cells



Fertilised egg (zygote)



Embryonic stem cells (blastocyst)



Embryo



‘Adult’

Stem cell research has raised hopes for a future treatment for people with type 1 diabetes, using cell transplantation. Novo Nordisk’s research activities in this area have to date concentrated on mouse embryonic stem cells.

The company actively participated in the scientific, public and political processes leading up to the revised Danish laws *Komitéloven* and *Patientretsstillingsloven* and the EU Cells and Tissue Directive. Novo Nordisk’s Bioethics Policy can be found at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)



first diabetes centre in Europe to combine basic and clinical research with patient care and medical training, all under one roof. Novo Nordisk's investment amounts to 4 million British pounds.

OCDEM is heading up a project within the European Union to look for biomarkers for diabetes: molecules in the body that can reveal how far developed the disease is for the individual patient and provide guidelines for optimal treatment.

### Promise of stem cells

For type 1 diabetes, the search for a cure revolves around being able to transplant islet cells from the pancreas into a person with diabetes. Islet cells contain the beta cells that regulate the blood sugar level. Currently, this type of transplantation can only be done on a limited scale and with limited success, through donor pancreases. People who undergo transplantation also need to take immunosuppressant drugs, which can have serious side effects. This is because type 1 diabetes is a chronic autoimmune disease, in which the immune system attacks and destroys the beta cells.

However, advancements in stem cell research hold the promise of creating a safe, stable and widely available source of insulin-secreting cells for transplantation. Stem cells are 'blank' cells with the ability to grow into any other type of cell, such as islets.

Novo Nordisk is at the forefront of stem cell research. The Hagedorn Research Institute, an independent basic research component of Novo Nordisk, is the only industrial partner in both the National Institutes of Health-supported Beta Cell Biology Consortium and the Juvenile Diabetes Research Foundation Centre for Beta Cell Therapy in Europe. The company is currently investing 17 million Danish kroner in stem cell research at Hagedorn.

Meanwhile, scientists are pursuing many other clues, such as the use of genetics to point the way to new biological molecules that serve as targets for drugs; biomarkers, to identify the biological signs of impending diabetes or its complications; or an artificial pancreas, a medical device that would register blood glucose levels and in response deliver the right amount of insulin.

### Facing today's challenges

"When and if a cure becomes reality, Novo Nordisk will have a strong presence. But meanwhile the estimated 194 million people with diabetes need the best possible treatment today to control their disease and avoid serious complications, such as blindness, nerve damage, kidney failure, heart disease and stroke, and treatment-related hypoglycaemia (low blood sugar)," says Mads Krogsgaard Thomsen, chief science officer of Novo Nordisk.

"While it is our vision to defeat diabetes, in reality we don't know if we will ever get there. But it is important to do everything we can

for the millions of people living with diabetes," says Dr Krogsgaard Thomsen.

That is why Novo Nordisk has developed the broadest and most comprehensive diabetes portfolio on the market. "There is no one-size-fits-all diabetes management," says Dr Krogsgaard Thomsen.

Today's insulin therapy strives to mimic the body's exquisitely precise regulation of blood glucose by insulin-producing pancreatic beta cells. When these cells are missing, as they are in type 1 diabetes, or depleted, as in type 2 diabetes, insulin analogues can provide the next-best alternative to Mother Nature.

These are designer insulins, which via chemical or protein engineering take on a different action profile and hence mimic insulin physiologically in the body.

### Better control, healthier lives

There has been a great evolution in the development of insulin analogues in the past decade. The research into new and better insulin

therapy was accelerated by the findings of two landmark studies, the Diabetes Control and Complications Trial (DCCT), which studied type 1 diabetes, and the UK Prospective Diabetes Study (UKPDS), which examined type 2 diabetes.

Both studies found that while intensive control of diabetes helped reduce complications by as much as 50%, it heightened the risk of hypoglycaemia, which is serious and even life-threatening, and caused weight gain, which for people with type 2 diabetes is already a contributing factor to their disease.

In 2004, Novo Nordisk added Levemir® to its portfolio, the only insulin product in the world, says Dr Krogsgaard Thomsen, that doesn't make you put on weight, and offers predictability in regulating blood sugar. Also the GLP-1 analogue under development, liraglutide, has proved in clinical trials so far to produce less or no hypoglycaemia, since it is glucose-dependent, and to help people manage their weight.

While numerous studies have shown that people with type 2 diabetes often benefit in terms of better control and reduced complications

by starting insulin therapy earlier, resistance to insulin therapy can be strong, due to worries and fears over injection, as uncovered by the Novo Nordisk study Diabetes Attitudes, Wishes and Needs (DAWN) (see page 14). For such people, AERx® insulin Diabetes Management System, now undergoing clinical trials by Novo Nordisk, could be a motivating factor to start insulin therapy, as insulin could be administered by inhalation.

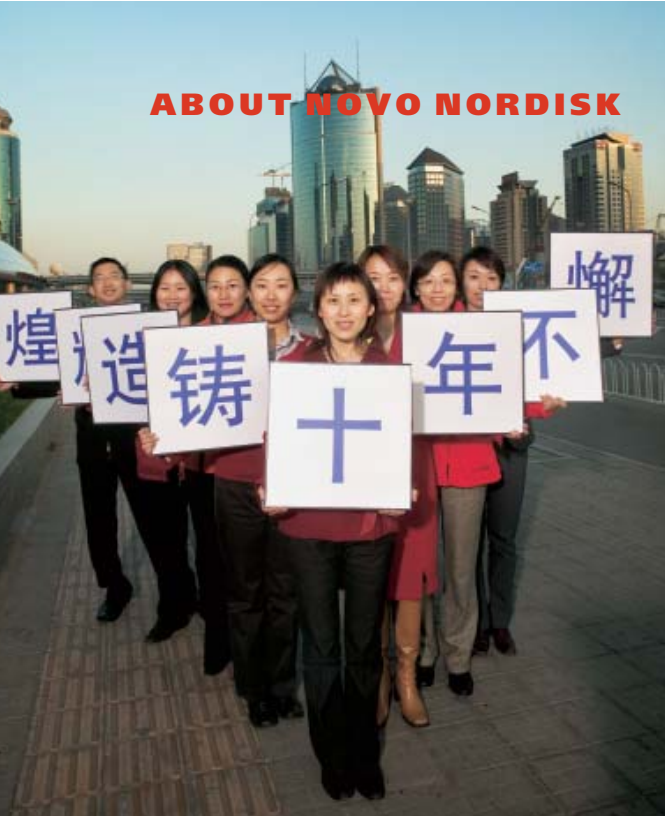
"We believe that leadership is responding to patients' needs, whether it is for a more innovative range of insulins or more convenient devices," says Dr Krogsgaard Thomsen. "At the same time, if we are serious about fulfilling our vision of defeating diabetes, then we must be present in the future when a cure moves closer to reality. This is why we take a holistic approach to diabetes care. The answers aren't simple but they are within reach." \* ❁



"In a decade we could have a situation in which diabetes is a disease, like cancer, that goes into remission, perhaps for years."

Professor David Matthews, Oxford University

**ABOUT NOVO NORDISK**



Novo Nordisk employees in China and the US.

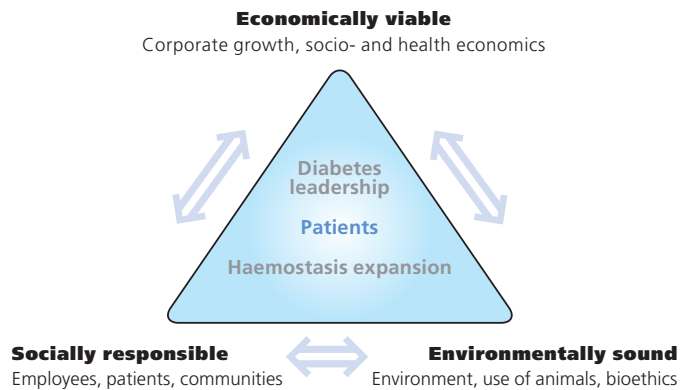
# The Novo Nordisk way

Novo Nordisk is a biotech-based healthcare company that strives to conduct its activities in a financially, environmentally and socially responsible way.

**T**his commitment to sustainable development is anchored in the Novo Nordisk Way of Management. The company is a world leader in diabetes care and has the broadest diabetes product portfolio in the industry, including the most advanced products within the area of insulin delivery systems. In addition, Novo Nordisk has leading positions within areas such as haemostasis management, growth hormone therapy and hormone replacement therapy. Novo Nordisk manufactures and markets pharmaceutical products and services that make a difference to patients, the medical profession and society.

With headquarters in Denmark, Novo Nordisk has 20,725 employees, operates in 78 countries and markets its products in 179 countries.

**THE TRIPLE BOTTOM LINE – A BROAD BUSINESS PRINCIPLE**



Photos: Jesper Westley for Novo Nordisk and Novo Nordisk

## Company history

Novo Nordisk's strong background in diabetes care builds on more than 80 years' experience in this area. It began in 1922 when August Krogh, Danish Nobel laureate in physiology, and his wife Marie, who had type 2 diabetes, visited the Canadian researchers Frederick Banting and Charles Best.



had begun extracting insulin from the pancreas of cows the previous year. The Kroghs returned home and the following year August Krogh set up a company in Denmark called Nordisk Insulinlaboratorium (Nordic Insulin Laboratory) with Dr H C Hagedorn and began producing insulin for the treat-



## Vision

Novo Nordisk's Vision sets the company's direction for the future. It expresses what Novo Nordisk strives for, how the company will work, and how it is guided by its values as it endeavours to find the right balance between compassion and competitiveness. The Vision is part of the Novo Nordisk Way of Management. This management approach ensures that the company, in pursuit of its strategic objectives, links financial, environmental, social and bioethical considerations for the long-term benefit of its stakeholders. For more information, visit [novonordisk.com/about\\_us](http://novonordisk.com/about_us)

## Novo Nordisk's Vision:

- We will be the world's leading diabetes care company. Our aspiration is to defeat diabetes by finding better methods of diabetes prevention, detection and treatment. We will work actively to promote collaboration between all parties in the healthcare system in order to achieve our common goals.
- We will offer products and services in other areas where we can make a difference. Our research will lead to the discovery of new, innovative products, also outside diabetes. We will develop and market such products ourselves whenever we can do it as well as, or better than, others.
- We will achieve competitive business results. Our focus is our strength. We will stay independent, and form alliances whenever they serve our business purpose and the cause we stand for.
- A job here is never just a job. We are committed to being there for our customers whenever they need us. We will be innovative and effective in everything we do. We will attract and retain the best people by making our company a challenging place to work.
- Our values are expressed in all our actions. Decency is what counts. Every day we strive to find the right balance between compassion and competitiveness, the short and the long term, self and commitment to colleagues and society, work and family life.

## Ownership structure

Novo Nordisk's ownership is split between holders of A and B shares. A shares are held by Novo A/S, the holding company, fully owned by the Novo Nordisk Foundation and established in 1999 to manage the Foundation's assets and to actively invest in life science businesses. The Novo Nordisk Foundation is a privately owned self-governing institution. Its objectives are to provide a stable basis for the commercial and research activities undertaken by the companies in the Novo Group and to support scientific, humanitarian and social purposes. The majority of its grants go to medical and scientific projects. \*

ment of diabetes. In 1925 two former employees, the brothers Harald and Thorvald Pedersen, formed a competing insulin company, Novo Terapeutisk Laboratorium (Novo Therapeutic Laboratory). In 1989, the two Danish companies joined forces to become Novo Nordisk A/S.



## The Novo Nordisk Way of Management

The Novo Nordisk Way of Management is the framework for how the company does business. Internally, as well as to external stakeholders, this governance framework defines the commitments and puts them into context.

The Novo Nordisk Way of Management explicitly refers to the Triple Bottom Line (TBL) – social, environmental and financial responsibility – as the company's underlying business principle. In order to serve the long-term interest of the shareholders, in March 2004 Novo Nordisk amended its Articles of Association to specify that the company will 'strive to conduct its activities in a financially, environmentally and socially responsible way'. For more information, see page 49.

To ensure performance to the highest standards, whether they are legal or ethical, global or company-specific, the Novo Nordisk Way of Management has built-in follow-up methods that seek to ensure systematic and validated documentation of performance to the company's values-based management system:

- The Balanced Scorecard is employed as the management tool for embedding and cascading corporate goals throughout the organisation. The Balanced Scorecard outlines the key priorities for Novo Nordisk in a short-term perspective.
- The annual reporting accounts for performance against targets, strategies, activities, risk profile and new targets.
- Facilitations, undertaken by Novo A/S, measure Novo Nordisk's governance performance at unit level, facilitate organisational learning and help align projects with business targets. The facilitators are a global team of people with long-standing managerial experience and expertise in the business. They evaluate how well the practices and understanding of the Novo Nordisk Way of Management, including the company's commitment to the Triple Bottom Line, are embedded in the organisation. This involves review of documentation, interviews with management and employees, sometimes also external stakeholders, and analyses of relevant business processes.

For further information about the Novo Nordisk Way of Management, including the full list of Fundamentals, please visit [novonordisk.com](http://novonordisk.com)

When the leadership of a company is trying to navigate in a fast-paced world surrounded by intense global competition, it's essential to have a strategy for staying focused on the road ahead.

# Driving force

**W**hile the business strategy of Novo Nordisk is based in the here and now, it is also forward-looking. By working with future scenarios of what the business of diabetes care may look like 20 years from now, Novo Nordisk is making sure it is well aware of signposts along the road that could point the way to a smart detour – or a route best not taken. In this Q&A, Kåre Schultz, chief operating officer of Novo Nordisk, tells us what he sees from the driver's seat – and what may lie ahead.

### What is driving Novo Nordisk's growth in the short term?

Strategically important products like insulin analogues continue to drive sales growth as people increasingly recognise the benefits of intensive insulin therapy in terms of better patient

care and quality of life. With the launch of Levemir® in 2004, we can offer more predictable day-to-day control of blood glucose levels than conventional insulins and competing basal insulin analogues. We predict that NovoSeven® in its new indications for trauma and intracerebral haemorrhage (ICH) will also be a key driver of growth. We expect to see our products penetrate even further in the US, which has become our largest and most rapidly growing single market in recent years. But we are also making significant inroads in big new markets like China and Latin America, where we've established a solid presence as a leader in diabetes care over the past decade.

### What is driving Novo Nordisk's growth in the long term?

We believe sales of insulin analogues in key markets will continue to boost our long-term growth. In addition, new treatment concepts in our pipeline such as inhaled insulin (AERx® iDMS)



will provide new treatment options for the growing number of people with type 2 diabetes who fail to achieve satisfactory blood glucose regulation by traditional blood glucose-lowering tablets. And there are the opportunities for long-term growth inherent in new indications for NovoSeven®, including its use for people undergoing cardiac surgery and those with traumatic brain injury.

#### **What are your key markets now and in the future, and why?**

Currently Europe is our biggest market and, with our full insulin analogue portfolio, we expect to see healthy growth in this market. As the world's biggest pharmaceutical market, the US is a key market for us. We started to penetrate the US insulin and growth hormone markets a few years ago and are now significantly increasing our market share. The US has a large and growing population of people with diabetes, many of whom would benefit greatly from improved blood glucose control to avoid the complications associated with diabetes. The US is also the biggest market for the current and future uses of NovoSeven®. Then again, we are seeing encouraging growth in key markets in our International Operations due to the increasing number of people being treated for diabetes. Right now half of the company's total diabetes care production is for countries in these markets, namely China, India, Korea, Turkey, Taiwan, Brazil, Mexico, Egypt, Thailand and Argentina. In Europe and Japan, more moderate growth is expected, hampered by healthcare reforms that are becoming increasingly common as governments face pressure to contain healthcare costs. This limits our ability to negotiate prices that cover the cost of innovation. The sales growth in the US, however, offsets more modest growth in Europe.

#### **What is the future strategy for diabetes care and will Novo Nordisk become a major player in oral products?**

We will remain strongly focused on insulin and other protein therapeutics which are our core competences. Within diabetes, our strategy is not simply to deliver superior products and devices but also to provide the services and education that make us the preferred partner in diabetes care. As for oral products, we want to fulfil unmet needs rather than make incremental improvements in what is already available. Therefore, within oral antidiabetic research, we will only focus on projects where we have a clear edge. This contributed to our decision in 2004 to terminate the balaglitazone oral antidiabetic project, since the preclinical results did not suggest a sufficient competitive advantage for balaglitazone, compared to similar, marketed products within this therapeutic category.

#### **You have four therapy areas, but you only mention two of them as business drivers. What about growth hormone therapy and HRT? What is your strategy for these areas?**

We've seen nice growth in growth hormone this year, thanks in part to our strategy of providing superior delivery systems for the company's liquid growth hormone Norditropin® SimpleXx®. This product has particularly taken off in the US market, where the first disposable human growth hormone pen, NordiFlex®, received US Food & Drug Administration (FDA) approval in 2004 for long-term treatment of children. The market for hormone replacement therapy (HRT) has been contracting due to negative media. But we still believe that HRT fills an important medical need for women with ser-



**Kåre Schultz, chief operating officer of Novo Nordisk.**

ious menopausal symptoms, and our product line is well suited to treatment recommendations for lowest possible dose.

#### **You have been investing in several new production facilities this year, most of which are outside Denmark. Can you outline the strategy behind these investments?**

Increased activities outside Denmark give us a more competitive cost base and a more balanced exposure to risks such as currency fluctuations. We also gain a strong presence in key markets, such as the US, Brazil and China – globalisation of production will be a continuing focus of our future growth strategy. Internationalisation of our manufacturing capacity enables us to stay cost-competitive and offers us a favourable position in key segments and markets. But Denmark will most likely continue to be an important 'engine room' of growth, where we can undertake productivity improvement measures, using facilities in Denmark as 'labs' for upscaling and fine-tuning production. The learnings can then be applied around the world.

#### **In October, when your American affiliate reached 1 billion dollar sales, the president of the affiliate stated that the success you have enjoyed in the US is due to your Triple Bottom Line (TBL) approach. How is that?**

First you need the right products and the right strategy and organisation. When you have these things, the TBL approach is important. We have been in the business of diabetes care for more than 80 years. For Novo Nordisk, diabetes is both a business and a passion. We want to do more to improve diabetes care in the US than simply provide products. By offering services and education for people with diabetes and the healthcare professionals who treat them, we try to live up to our commitment to the Triple Bottom Line, where social and environmental responsibility is as important as the financial results. With an estimated 17 million people with diabetes in the US, almost 6 million of them undiagnosed, there is clearly a need for this type of approach.

For more information, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004) \* 

# **Getting on with my life**

**As people with diabetes know all too well, there is no one-size-fits-all insulin therapy. Diabetes is as complex and variable as people's individual personalities and lifestyles, whether you are an extreme adventurer like Will Cross or an active mother like Beverley Munroe.**

Will Cross on his NovoLog® Peaks and Poles Challenge. Mr Cross hopes to be the first person with diabetes to reach both poles and scale the world's highest mountains.



**W**hen Will Cross was diagnosed with diabetes at age nine, his doctor discouraged him from any rigorous or demanding physical activity. But he didn't listen. Will Cross, a high school principal from Pennsylvania, US, intends to become the first person with diabetes to reach both of the Earth's poles and scale the world's highest mountains. He's already walked to both the South and North Poles and climbed five of the seven highest peaks. He's doing it to raise money for research into diabetes and to make people aware that diabetes doesn't have to stop people from getting on with their lives – in both big ways and small.

Novo Nordisk is the sponsor of Mr Cross' NovoLog® Peaks and Poles Challenge. The company is providing the NovoLog® (called NovoRapid® in the rest of the world) rapid-acting insulin that Mr Cross will need to master his challenge, as well as covering the costs of the adventure.

"I want to complete the NovoLog® Peaks and Poles Challenge to show the tens of millions of people with diabetes that they don't have to be defined by their disease. I want to prove that there are no diabetics, only people who happen to have diabetes," says Mr Cross. "Those of us with diabetes can manage the disease successfully and accomplish anything."

While tackling the punishing Antarctic environment and climbing some of the world's tallest mountains, Mr Cross has the added task of giving himself insulin shots that he needs to control his blood sugar level. For the climbs, he consumes 5,000 calories a day on a diet consisting of stews, energy bars, chocolate, cheese and a lot of coffee to keep him focused and able to withstand the cold and altitude. "Sometimes I have to force myself to eat, whereas other climbers can just say, 'Oh, I'll eat in the morning.'" says Mr Cross. While on Mount Everest this past summer, he drank four to six litres of water each day, about a litre more than a climber with a normal metabolism would need.

While he has to make some adjustments to suit his body's specific physiology, Mr Cross says his diabetes has never once stopped him from seeking a physical challenge.

"I want to inspire kids. I don't expect them to walk to the South Pole, but I do want to motivate them to go out and play, kick a ball and get on a soccer team," he says. "I have lived all my life in defiance of the common misperception that people with diabetes must restrict their physical activities."

#### **Never able to plan ahead**

Beverly Munroe of Canada, who has type 2 diabetes, says she felt "total disbelief" when she was diagnosed with diabetes 10 years ago, even though her grandmother had diabetes. "My grandmother didn't take any medication and she lived to be 92! I thought, 'If she survived that long, so can I!' At the beginning I just took tablets but my blood sugar level was still high. I couldn't plan ahead – I didn't know how I would feel when I woke up in the morning. So I



## DIABETES TREATMENT

could never arrange to go on a trip too much in advance.” That changed when Ms Munroe began using insulin.

“I didn’t want to take insulin because I thought that would be the beginning of the end. It was just too much – too serious. So I avoided taking it as long as I could. Looking back, I wish I hadn’t been so stubborn because now I’m on insulin and I’ve never felt so good. I’m raring to go. I enjoy riding my bike, swimming in my pool, gardening, going out with friends, making porcelain dolls... I’m never bored, that’s for sure,” she says.

Staying active means regularly monitoring her blood sugar levels and controlling her diet. “Even though I feel so good,” she says, “I wish there was a cure for diabetes, so that children didn’t have to suffer.”

### When choice is limited

Novo Nordisk does not offer its full range of insulin analogues in all parts of the world, as there is not a sufficiently profitable market in all countries for these products. But the company does make human insulin available in most countries of the world, and in 49 of the 50 Least Developed Countries, as defined by the United Nations, Novo Nordisk offers preferential pricing for its human insulin at 20% of its price in the Western world (see page 29).

As markets and economies develop, and knowledge about the best diabetes care becomes more widespread, it is hoped that the latest advances in insulin therapy can be made available to all who can benefit from them. That would make getting on with life just a little bit easier.

### When fear blocks treatment

When Ray ka Msenga’s doctor told him that he was to change from tablets to insulin therapy to treat his type 2 diabetes, he felt shocked.

As far as he knew, an early death was the only possible outcome for people who need insulin injections to live. He felt guilt and anger, and retreated from his closest relationships. Finally, a doctor friend calmly explained why the doctor had recommended insulin, and Mr ka Msenga saw that his fears were exaggerated.

Had his doctor responded to his fears in the same way, Mr ka Msenga, a former president of the South African Red Cross Society and a member of the International Red Cross, feels he would not have suffered as he had.

He is not alone. According to the DAWN (Diabetes Attitudes, Wishes and Needs) stakeholder innovation programme initiated by Novo Nordisk in 2001, people with diabetes experience emotional distress and poor psychological well-being, a major contributing factor to impaired diabetes health outcomes. Healthcare professionals acknowledge a lack of resources to identify and care for the many psychosocial problems as well as a major gap with regard to team-based patient-centred communication.

As the largest study of its kind in diabetes ever conducted, DAWN involved more than 5,400 people with diabetes and more than 3,800 healthcare professionals from 12 countries in collaboration with the International Diabetes Federation (IDF) and an international expert advisory board.

The main conclusion drawn from the multitude of learnings was that to improve health outcomes in diabetes, the total healthcare system must focus more on the psychological and social issues attached to managing the condition; in other words, address the people behind the disease.

The ongoing DAWN programme, led by Novo Nordisk in collaboration with the IDF and an expert advisory board, provides a business case for stakeholder innovation and concerted action at national,



## Advances in insulin therapy

Novo Nordisk has the broadest portfolio of insulin products and devices on the market, including a full range of insulin analogues. These are designed to mimic more closely the body’s own physiological insulin regulation of blood glucose levels than human insulin and offer better meal-time glucose control, less hypoglycaemia and increased convenience for all types of people with diabetes.

Levemir®, launched in many countries in Europe in 2004, is the latest of the insulin analogues developed by Novo Nordisk. Levemir® is a long-acting insulin analogue that provides more consistent day-to-day control of blood glucose levels compared to conventional insulin preparations. Among the benefits for people with diabetes, it

“I know I have something called diabetes, but I have always had it! I don’t think about it much; I just do what I have to do to take care of myself,” explains Andrea, who has had type 1 diabetes since she was four years old. Andrea’s story features in *Young Voices*, a book about the lives of 13 young people living with diabetes. For more information on the book, visit [novonordisk.com](http://novonordisk.com)





“I want to inspire kids. I don’t expect them to walk to the South Pole, but I do want to motivate them to go out and play, kick a ball and get on a soccer team. I have lived all my life in defiance of the common misperception that people with diabetes must restrict their physical activities.” [Will Cross](#)

regional and international level to improve diabetes care by increasing the availability of psychosocial support for people with the condition. A worldwide call to action emerged from the 2nd International DAWN Summit in 2003 with participation from 31 countries.

The DAWN message was published in 2004 in more than 140 countries by the IDF and featured in international and national scientific and lay journals to reach millions of people with diabetes, diabetes caregivers and decision-makers. Also in 2004, the DAWN call to action and resulting tools and strategies were used in more than 20 countries to increase awareness of the importance of the psychosocial aspects to optimise treatment. This included updating national diabetes care guidelines to reflect DAWN, holding scientific

symposia on the topic and holding training programmes for health-care professionals.

In total 33 countries sent in submissions for the 2004 DAWN award to recognise innovative projects aimed at implementing the DAWN call to action.

In 2005 and 2006, DAWN will include a new focus on the attitudes, wishes and needs of young people and ethnic minorities with diabetes, through new research and dialogue aimed at improving the health and quality of life of these groups and reducing health disparities.

For more information on DAWN, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004) \*

has been demonstrated that Levemir® reduces fasting blood glucose and the risk of hypoglycaemia, especially at night-time. In addition, studies have shown that people using Levemir® do not experience the undesirable weight gain often associated with conventional insulin preparations.

Another insulin analogue developed by Novo Nordisk is NovoRapid® (called NovoLog® in the US), which gives tighter blood glucose control at meal-times without risk of increased hypoglycaemia. The shorter duration of action leads to less hypoglycaemia at other times, including at night. The more rapid onset of action also means that it can be injected just before a meal, increasing convenience and quality of life.

Increased convenience is also an advantage of NovoMix® 30 (called NovoLog® Mix 70/30 in the US and NovoRapid® Mix in Japan), a dual-release insulin analogue, which means that rather than having two injections of one rapid- and one intermediate-acting insulin, people get both types of insulin in one injection.

Devices that offer convenience and discretion are also part of improved control of diabetes and better quality of life. Novo Nordisk produces a range of devices for insulin therapy, including FlexPen®, an easy-to-use, prefilled injection pen.

Advances in insulin therapy in the Novo Nordisk pipeline include NovoMix® 50 and 70. These are premixed formulations of the rapid-acting insulin analogue, insulin aspart. These products are expected to offer better glycaemic control with only three daily injections for both type 1 and type 2 diabetes.

Another substance under development is GLP-1 or liraglutide. GLP-1 is a hormone produced in the intestine. It stimulates the pancreas to secrete insulin, and also tells the brain to reduce appetite. Novo Nordisk’s researchers have turned the natural hormone into a drug by stabilising it so that, instead of breaking down within a couple of minutes, its effect is sustained for 24 hours, so that it can be taken once daily for the treatment of type 2 diabetes. For more information, visit [novonordisk.com/diabetes](http://novonordisk.com/diabetes)



## We're one step ahead in diabetes care



Novo Nordisk has the first, and only, full insulin analogue portfolio, offering a range of benefits. Analogues mimic the body's physiological insulin regulation of blood glucose levels, providing better mealtime glucose control, less hypoglycaemia and increased convenience for all types of people with diabetes.

**NovoMix®** is a dual-release insulin analogue with both rapid- and intermediate-acting insulin in one administration. **NovoRapid®** is a rapid-acting insulin analogue. **Levemir®** is our new long-acting insulin analogue. For more information visit [novonordisk.com/diabetes](http://novonordisk.com/diabetes)

# Governance rules!

Stakeholders state it simply: to earn our trust, be trustworthy. To earn our confidence, show strategic direction and management oversight. And to help us make decisions, disclose business risks and opportunities. Taking up this invitation, Novo Nordisk steps up its governance practices.

**G**ood governance is the system by which companies are directed and controlled," said Sir Adrian Cadbury in the report on financial aspects of corporate governance, commissioned by the UK government in 1992. Since then, the intense debate has brought new dimensions to the table: the Danish Nørby Committee calls for accountability towards stakeholders. The US Sarbanes–Oxley Act imposes stricter requirements to financial reporting, internal control and auditing. And the OECD guidelines, updated in 2004, recognising the links between the mainstream financial agenda and broader corporate responsibility, demand insights into the role of stakeholders and shareholder rights.

These initiatives evolve around essential principles: transparency, accountability, openness, integrity and responsibility put into practice by a combination of statutory requirements and self-regulation.

## Beyond compliance

Novo Nordisk is generally in compliance with the codes of good corporate governance designated by the stock exchanges in Copenhagen (Nørby Committee recommendations on Corporate Governance), New York (NYSE Corporate Governance Standards) and London (Combined Code), where Novo Nordisk is listed. A full overview can be found at [novonordisk.com/about\\_us](http://novonordisk.com/about_us)

Based on a review of business practices against current and upcoming requirements, the company has taken steps to further improve its corporate governance. These improvements address four key issues: putting principles into action, shareholder rights, board and management accountability, and risk management.

## Audit and Disclosure Committees

In March 2004, Novo Nordisk's Board of Directors set up an Audit Committee, chaired by Kurt Anker Nielsen. Its two other members are Niels Jacobsen and Ulf J Johansson. All qualify as independent under the US Securities and Exchange Commission Rules. This move follows international trends and meets the requirements of the US Sarbanes–Oxley Act. The Audit Committee assists the Board of Directors in overseeing for example external and internal auditors, accounting and internal controls.

Employees and other stakeholders can, via the 'whistleblower' system, anonymously bring to the attention of the Audit Committee any issues or concerns they might come across pertaining to accounting malpractices or irregularities.

Another step to formalise internal procedures is the Disclosure

Committee, established in November 2004. It is chaired by the chief financial officer, with the mandate to consider the materiality of information, determine disclosure obligations and oversee the publication of stock exchange announcements.

## A key role for stakeholders

The company values open and transparent communication. Without sufficient insight, stakeholders have little chance of assessing the company's performance. That is why the company proactively engages in dialogues with rating agencies, analysts, investors and others with an interest in Novo Nordisk's business. The aim is twofold. First, to better address stakeholders' concerns, align with different views and focus on the issues that matter to the company's ability to pursue its vision. And second, to candidly convey the company's positions and rationale for its decisions. \*

## Strengthening the stand on corporate governance

In 2004, Novo Nordisk's Board and Executive Management took steps to ensure that the company maintains its position as a trustworthy business:

### ● Putting principles into action

Formalised 'whistleblower' function established under the remit of the Audit Committee. Also, employees can bring to the Novo Nordisk Ombudsman any personal and organisational issues which conflict with the company's values and fundamental management systems.

### ● Shareholder rights

Equal access to information: simultaneous translation into English at the Annual General Meeting in March 2005.

### ● Board and management accountability

Audit Committee (board), Disclosure Committee (management), improved disclosure and current updates at [novonordisk.com/about\\_us](http://novonordisk.com/about_us)

### ● Risk management

Systematic and integrated risk management approach (see page 56).

The pharmaceutical industry is being challenged on everything from access to medicine, drug pricing and marketing, to the conduct of clinical trials. With calls for transparency, earning society's trust becomes a business imperative.

# An industry under fire: credibility at risk

**P**harmaceutical companies are in the business of developing and manufacturing healthcare products for the good of humankind. This entails a particular social responsibility. But there is a growing perception that the industry is failing to help solve real health challenges and instead is too focused on its own profitability. Other issues on the agenda are the degree to which it funds public research and engages in the post-graduate education of healthcare providers, the full and timely disclosure of clinical trial results, perceived overzealous marketing and unhealthy political influence. The public, government authorities and others are demanding more transparency.

"Public authorities and NGOs have sharpened their tone, and we must take them seriously," says President and CEO of Novo Nordisk, Lars Rebien Sørensen. "It is important to be open and honest about our stand and our actions. Trust has to be earned."

### The Novo Nordisk way

As one response to the increased focus on ethical business conduct, the Board of Directors has endorsed that a Novo Nordisk policy on business ethics be added to the existing set of policies and that operational procedures are conveyed to employees. Furthermore, in 2005 the current policies in the Novo Nordisk Way of Management will be reviewed to ensure that business ethics are sufficiently addressed in each policy.

Novo Nordisk also participated in The UN Global Compact Leaders Summit, where the 10th principle on fighting bribery and corruption was endorsed. The company has committed to this principle.

### Working in partnership

Novo Nordisk works with many partners to address key areas of corporate responsibility. Reaching out to stakeholders helps reconcile

dilemmas and find common ground for more sustainable solutions. It also helps the company's monitoring of trends that can affect its future business.

"If all the different groups involved in the healthcare sector are to trust each other, a partnership concept is essential. We all have our own values. If we put them all on the table, we could perhaps find some that we share," says Lise Kingo, executive vice president of Novo Nordisk for people, reputation and relations.

For more information on Novo Nordisk's stakeholder engagement, see [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

### Investors look for leadership

How well a company responds to non-financial risks is sparking interest among some large investors who are beginning to evaluate companies based on their strategies to address social, environmental and governance risks.

"At a time of intense scrutiny of the industry, investors are looking for companies that stand out because they perform well in social, environmental and ethical areas," says Stewart Adkins, senior analyst for the pharmaceutical industry at Lehman Brothers. "Investors feel greater trust in such companies, finding that

they are less likely to be subject to litigation or have difficult relationships with key stakeholders. And that makes a better long-term investment."

### Facing the critics

In 2004, Novo Nordisk was put to the test with legal challenges of its own. Lars Rebien Sørensen, president and CEO of Novo Nordisk, responds below to general industry criticism as well as specific issues.

### Critics say that the industry is not doing enough to increase access to medicine in developing countries.

There's no doubt that the industry was late in getting its act together

"At a time of intense scrutiny of the industry, investors are looking for companies that stand out because they perform well in social, environmental and ethical areas."

Stewart Adkins  
Senior analyst at Lehman Brothers

when it comes to increasing access to medicine, but I think today many companies are doing a lot. Our own approach is based on the priorities of the World Health Organization for improving access to medicine [see page 28].

**The industry is charged with suppressing negative clinical trial results and not making all results publicly available.**

I will not engage in a discussion about the cases which have triggered the debate, because I don't know the cases well enough. But speaking about the issue in general, I'm strongly in favour of increasing transparency when it comes to clinical trials – we cannot live with the perception that the industry is hiding important information from the public.

Starting in 2005 we will publish the results of all our clinical trials of marketed compounds in a public database in accordance with the principles laid out by the pharmaceutical manufacturers' associations. Likewise we will publicly report the initiation of all new phase 2, 3 and 4 clinical trials at a public trial registry in accordance with the specifications and requirements from the International Committee of Medical Journal Editors. In addition, we adhere to international as well as internal ethical standards on the conduct of clinical trials, and are committed to making the results publicly available regardless of the outcome of the trial.

**The industry is accused of having doctors under its thumb by funding most post-graduate medical education and sponsoring most clinical trials.**

I hate to see doctors portrayed as the pharmaceutical industry's marionettes. It's not the picture I get. Most doctors I know – and I meet many in my job – are people who hold themselves to high moral standards, who are not under anyone's thumb and whose first priority is to meet the needs of their patients. Having said that, I would like to see increased public funding of research and post-graduate medical education, so doctors have more sources of funding to choose from. That's in everybody's interest.

**Novo Nordisk is one of several pharmaceutical companies under investigation for illegal activities related to public tenders in Brazil in which it is alleged that businesses conspired with Health Ministry officials and others to inflate the prices of ministry purchases, including insulin.**

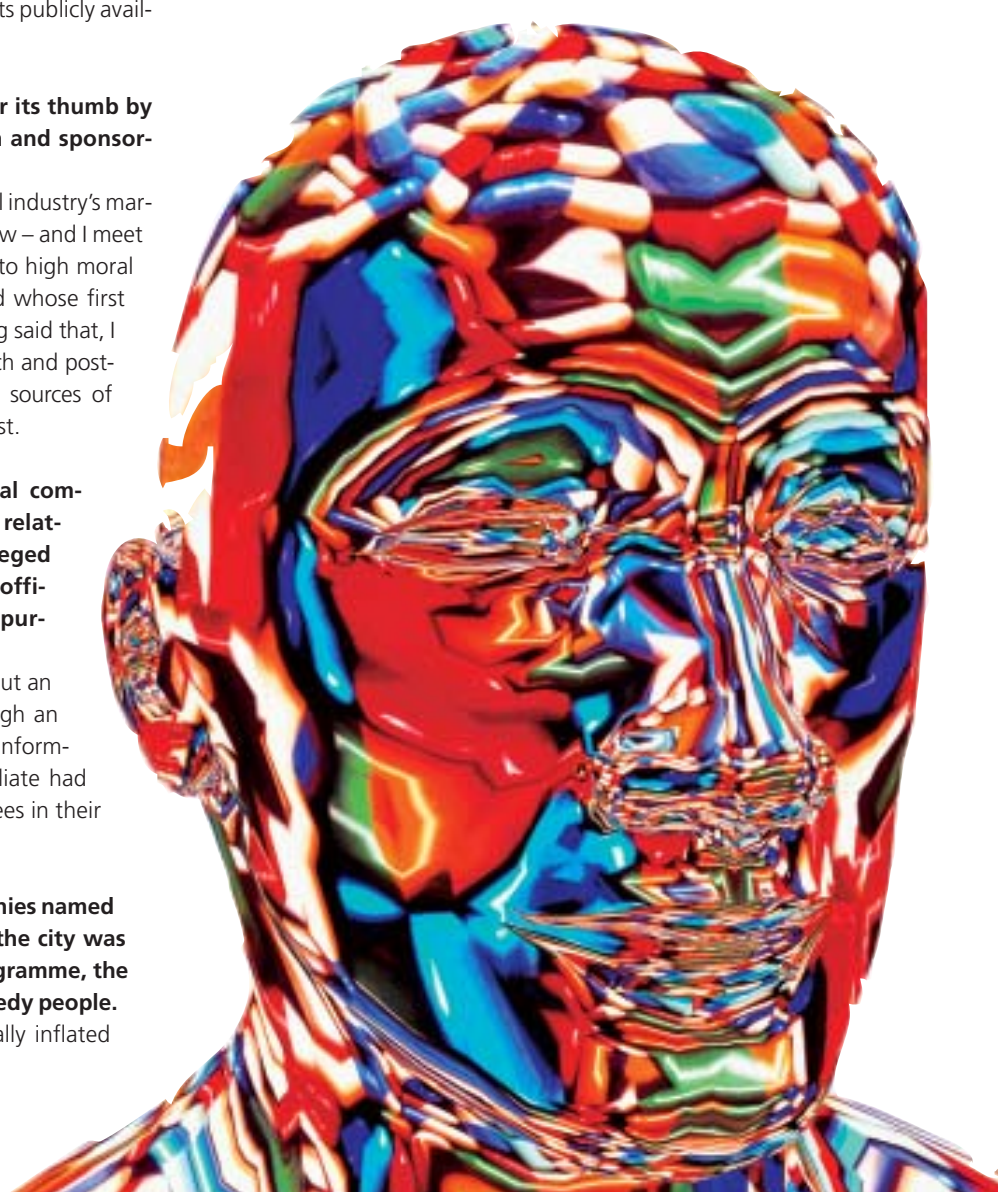
Novo Nordisk does participate in tenders in Brazil, but an independent investigation that we conducted through an international law firm concluded, based on available information, that no individuals at the Novo Nordisk affiliate had done anything wrong. We will support our employees in their defence in these cases.


**Novo Nordisk is one of 44 pharmaceutical companies named in a lawsuit filed by New York City that claims the city was overcharged on drugs used for its Medicaid programme, the government health insurance programme for needy people. The claim against Novo Nordisk is that we artificially inflated**

reimbursement prices for three products, which led to allegedly inflated Medicaid payments to the pharmacies that dispensed these products. To the best of our knowledge Novo Nordisk correctly calculated the reimbursement prices for the products in question.

**Over the past few years, several thousand women have filed lawsuits against pharmaceutical manufacturers and sellers for alleged injuries arising from their use of hormone replacement therapy (HRT) products.**

Novo Nordisk Inc., together with the majority of hormone therapy product manufacturers, is a defendant in 16 product liability lawsuits. Since the initiation of the lawsuits in July 2004, three cases against Novo Nordisk Inc. have been dismissed by the courts. Novo Nordisk's hormone therapy products (Activella® and Vagifem®) have been sold and marketed in the US since 2000. Until July 2003, the products were sold and marketed exclusively in the US by Pharmacia & Upjohn Corporation (now Pfizer). The proceedings are in their preliminary stages and at this point we can't provide further information. \*



A photograph of two surgeons in an operating room. They are wearing blue scrubs, blue surgical caps, and white masks. They are focused on a surgical procedure. The room is illuminated by large, circular overhead lights, creating a strong blue color cast. The surgeons are in the foreground, and the background shows the ceiling and other parts of the operating room.

**NovoSeven® may save lives and prevent severe disabilities in many life-threatening situations. Novo Nordisk must research this prospect while developing the product responsibly and ethically.**

**When time is  
running out**

**T**he 60 minutes following a car crash is what emergency crews aptly call 'the golden hour', when doctors have the best chance of saving a life. But many people suffering trauma injuries from a car crash literally bleed to death before a surgeon can intervene. Stopping that bleeding could make the critical difference to the millions of people who experience serious trauma every year. About five million people are killed by traumatic injuries each year worldwide, such as motor vehicle accidents, gunshots, knife wounds or falls. That number is expected to reach 8.4 million by 2010, according to the World Health Organization. That's close to 10% of all deaths worldwide.

"Most trauma deaths are due to blood loss or the complications of fighting that blood loss," says Dr Carl J Hauser, professor of surgery at the New Jersey Medical School, who specialises in critical care.

He was among the doctors who were excited by the news at the 6th World Congress on Trauma, Shock, Inflammation and Sepsis in Munich, Germany, in March 2004 that recombinant factor VIIa, marketed by Novo Nordisk to people with haemophilia with inhibitors under the name NovoSeven®, could have a future in the treatment of critically bleeding trauma patients.

Also promising were early clinical trial results during 2004 for the use of NovoSeven® in intracerebral haemorrhage (ICH) – the most dangerous and least treatable form of stroke.

NovoSeven® is currently approved for treatment of the estimated 3,400 people with haemophilia with inhibitors in the developed world, as well as in Europe for people with acquired haemophilia, and the rare bleeding disorders Glanzmann's thrombasthenia and factor VII deficiency.

#### Hope for stroke victims

Dr Stephan Mayer, a neurologist who heads an intensive care unit at Columbia University Medical Center in New York City, often sees the devastating impact of ICH – for which there is no proven treatment.

An intracerebral haemorrhage occurs when a blood vessel inside the brain ruptures, leaking blood directly into the brain tissue. Studies indicate that around 250,000 people in North America, Europe and Japan experience ICH each year.

"I've sat many times with ICH patients in the intensive care unit, unable to do anything but watch them gradually sink into a coma. It is as if they are drowning on the inside. It is terrible to watch," says Dr Mayer, who was lead trial investigator in the phase 2 trial of NovoSeven® as a treatment for ICH.

People who survive intracerebral haemorrhages are left with more severe disabilities than survivors of other forms of stroke, including loss of movement, speech and mental capability. About 50% of people who experience an intracerebral haemorrhage die within 30 days.

Dr Mayer has worked with ICH patients for 10 years; the results of the phase 2 trial, announced in June 2004, were more than he hoped for.

The ICH trial showed that use of NovoSeven® could reduce the volume of blood leaking into the brain during intracerebral haemorrhage when administered within four hours of onset.

#### Next steps

"I was thinking that maybe if we reduced bleeding a bit we could improve the lives of patients; what we found was that we reduced bleeding and had incredible reductions in poor outcomes," Dr Mayer says.

According to Dr Mayer, with the use of NovoSeven®, mortality appeared to be reduced by a third and the number of patients in the trial who survived with none or limited disability tripled.

Some 400 patients in 20 countries worldwide participated in the trial, making

1

person, Professor Ulla Hedner, and her team, discovered NovoSeven® in 1981.

3,400

people with haemophilia also have inhibitors (antibodies) to replacement therapy in the developed world.

50%

of people who experience intracerebral haemorrhage die within 30 days.

5

million people worldwide each year are killed by traumatic injuries such as car accidents, gunshots, knife wounds or falls.

10%

of all deaths worldwide will be caused by traumatic injuries by 2010.



The 60 minutes following a car crash is what emergency crews aptly call 'the golden hour', when doctors have the best chance of saving a life. But many people suffering trauma injuries from a car crash literally bleed to death before a surgeon can intervene. Based on the results of clinical trials for the blunt trauma indication, NovoSeven® was submitted for the treatment of blunt trauma in Europe in January 2005.

it the largest ever ICH-focused clinical trial with a biopharmaceutical agent. Following regulatory consultations in Europe, Novo Nordisk expects to file an application for marketing approval in Europe for the use of NovoSeven® in connection with ICH by mid-2005.

Mads Krogsgaard Thomsen, chief science officer of Novo Nordisk, underlines the implications for the future. "I think we'll see much less disability and mortality in the long term when NovoSeven® comes to ICH patients. We now have what we think is a major breakthrough in the management of a hitherto intractable disease."

### Saving lives from trauma

"When it comes to trauma," says Dr Hauser, "we're talking about the possibility of saving thousands of lives, perhaps tens of thousands."

Based on the results of clinical trials for the blunt trauma indication, NovoSeven® was submitted for the treatment of blunt trauma in Europe in January 2005. "We hope approval of NovoSeven® for the blunt trauma indication in Europe could come in 2005," says Dr Krogsgaard Thomsen.

The trial for the trauma indication was conducted on a group of

283 patients who were treated at trauma centres around the world. All were in danger of bleeding to death; on a random basis, each received either NovoSeven® or placebo plus standard therapy. In those receiving NovoSeven®, the study found that:

- NovoSeven® reduced the need for red blood cell transfusion
- NovoSeven® has the potential to reduce complications such as multiple organ failure and acute respiratory distress syndrome
- adverse events such as thromboembolic events showed no higher rate of incidence than for placebo.

It is particularly important to note that a massive transfusion can itself put a trauma patient at risk of infection, multiple organ failure and hypothermia, which inhibits normal coagulation. Thus, reducing the need for transfusion reduces other risks.

A study on the use of NovoSeven® in trauma patients in the US will start in 2005.

### Weighing the ethical issues

Novo Nordisk has undertaken an internal ethical review of



# 250,000

people in North America, Europe and Japan experience intracerebral haemorrhage each year.

# 15

years of research was undertaken before NovoSeven® was launched in Europe in 1996.

NovoSeven® to explore any potential issues so that they can be addressed proactively.

Ethical dilemmas exist around any pharmaceutical product, most often relating to access and price, and NovoSeven® is no exception, says Lars Rebien Sørensen, president and CEO of Novo Nordisk.

The key dilemma concerning NovoSeven® is how to price it in its new indications to reach the most people who need it, while maintaining a profitable and healthy business.

“While we don’t yet have all the answers, pricing is an issue we take seriously and intend to address as regards these new indications,” says Mr Rebien Sørensen. The potential cost of using NovoSeven® in Europe for the treatment of ICH is approximately 3,000–3,800 euros per patient and for trauma in the range of 7,500–19,000 euros per patient (average body weight of 70 kg) depending on how fast the bleeding can be stopped (depending on its severity). “I think Novo Nordisk has priced NovoSeven® appropriately for catastrophic or rescue use for the developed world. But that pricing structure is not sustainable in the developing world. If there is a price differentiation between the wealthier and poorer parts of the world, it must be with the understanding that the developed world will foot the research bill.”

According to Dr Mayer, the cost of NovoSeven® should be viewed in terms of overall medical costs. Stopping or slowing life-threatening bleeding during trauma, surgery or ICH can, for example, reduce the need and cost of blood transfusions and medical intervention in the hospital or trauma centre.

In addition, use of NovoSeven® has the potential to prevent future disabilities or deaths, which are extremely costly to society, he adds.


“The use of NovoSeven® gives us the chance to avert disaster – the subsequent deterioration that leads people to bleed and die, or end up so physically and mentally impaired that they must spend the rest of their lives in a nursing home,” says Dr Mayer.

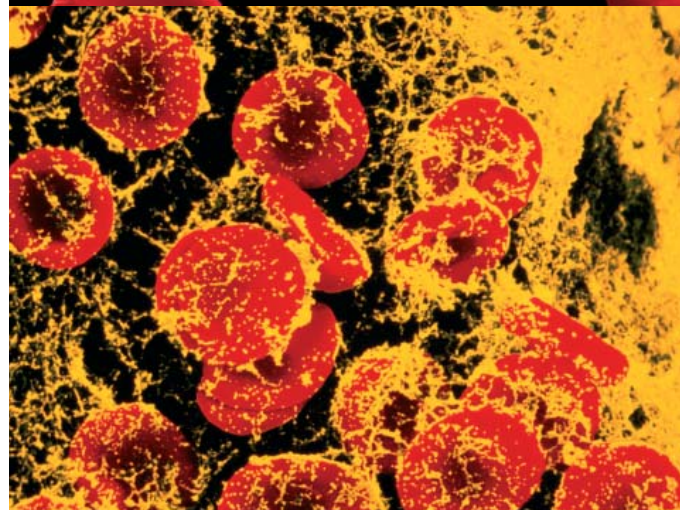
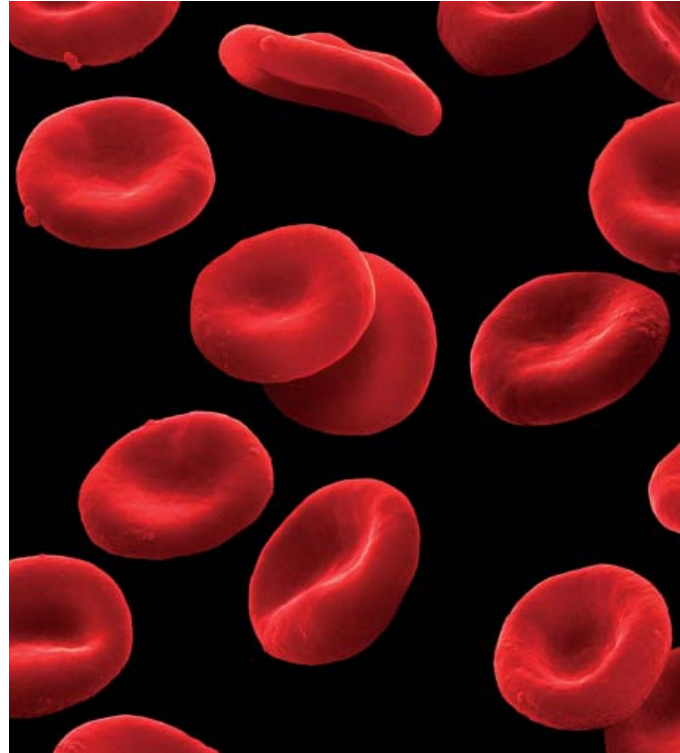
According to the National Institute of Neurological and Stroke Statistics of the National Institutes of Health in the US, the national cost of lost productivity due to stroke (that is, lost family income) runs into billions of dollars a year. Many persons who suffer stroke end up in chronic care facilities such as nursing homes, which, in the US, cost thousands of dollars a year. “So from a socio-economic point of view, we believe the potential cost of using NovoSeven® is appropriate,” explains Mr Rebien Sørensen.

### Bleeding in surgery

In addition to trauma and ICH, there are other potential indications for NovoSeven® currently being tested in clinical trials. Some of those relate to bleeding that occurs during surgery, which can cause complications during or after surgery, such as cardiac surgery, spinal surgery and liver transplantation, as well as for upper gastrointestinal bleeding in people with cirrhosis.

Those are just a few of the ways NovoSeven® could begin to serve as the world’s first general haemostatic agent for critical bleeding.

For more information, visit [novonordisk.com/therapy\\_areas](http://novonordisk.com/therapy_areas) \* 



Top: Scanning electron micrograph of human red blood cells. Red blood cells have no nucleus and contain haemoglobin pigment. Their primary function is to transport oxygen from the lungs to the rest of the body, and carbon dioxide from the body back to the lungs for expulsion. Bottom: Scanning electron micrograph of a blood clot. Red blood cells enmeshed in fibrin, a protein. A clot is triggered by contact of blood with a foreign surface or damaged tissue, thereby preventing bleeding.

## Recombinant factor XIII: stabilising blood clots

Another interesting new opportunity within haemostasis management has emerged with new insight into protein recombinant factor XIII (rFXIII), which has been in-licensed from ZymoGenetics, Inc. rFXIII has a known mechanism for stabilising blood clots alone or in combination with other therapy.

With its leadership within proteins, Novo Nordisk expects initially to bring rFXIII to market for the benefit of people with FXIII deficiency. However, various settings of critical bleeding in other patient groups as well as combination therapy with rFXIII and NovoSeven® add to the potential of rFXIII.

# reflections

## Novo Nordisk cancer research moves forward

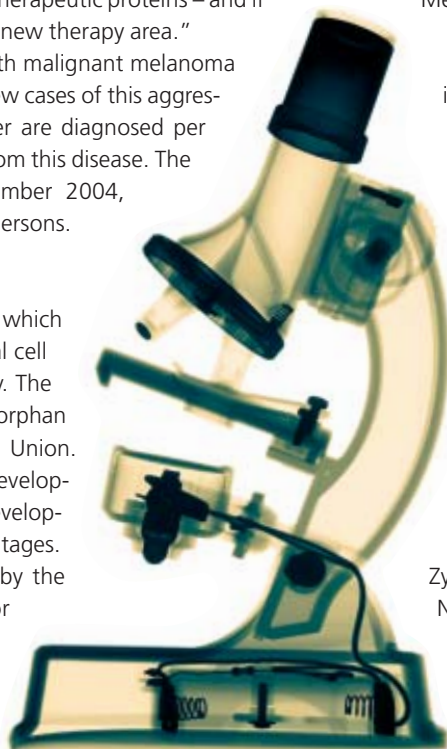
Novo Nordisk has begun clinical testing in humans of a potential cancer drug, interleukin-21 (IL-21). The phase 1/2 study, which is being conducted in Australia, is part of what could become a new therapy area for the company.

Peter Kurtzhals, senior vice president of Discovery, explains: "We cannot say that we have a new therapy area until we have an approved product. But we have previously stated that our research strategy is aimed at maximising the value of our competences in therapeutic proteins – and if this goes well, it will invariably result in a new therapy area."

The drug is being tested on people with malignant melanoma – in the Western world around 90,000 new cases of this aggressive, life-threatening form of skin cancer are diagnosed per year and around 15,000 die every year from this disease. The clinical testing, which began in September 2004, will be conducted on a maximum of 40 persons.

### Kidney cancer

Another possible indication for IL-21 which Novo Nordisk plans to investigate is renal cell carcinoma, a cancer affecting the kidney. The company has applied for and received orphan drug status for IL-21 in the European Union. Orphan drug status can speed up the development process for a drug and allows its developers certain financial and marketing advantages. However, the designation is only given by the authorities to drugs being developed for the treatment of serious, rare diseases for which little financial return is expected and where few other treatment options are available.



Renal cell carcinoma qualifies for this designation because, in addition to its life-threatening nature, it affects relatively few patients (3.21 cases per 10,000 persons in the EU); moreover, there is at present little possibility of effective treatment.

Orphan drug status for IL-21 was approved by the EU Commission on 2 September, based on a recommendation by the European Medicines Agency's Committee for Orphan Medicinal Products.

Peter Kurtzhals notes that, as research proceeds, other indications such as colorectal cancer and ovarian cancer may be developed for the drug.

### Suppressing the tumour

IL-21 is a novel protein which appears to stimulate the immune system to kill cancer cells.

The protein was discovered by scientists at the American biopharmaceutical company ZymoGenetics; Novo Nordisk has been investigating IL-21 in collaboration with this firm. In March 2004, this collaboration became a clinical data-sharing agreement in which the two companies make results available to each other, says Global Regulatory Affairs Project Manager Anita Osborne of the IL-21 team.

According to the terms of the agreement, ZymoGenetics has commercialisation rights for IL-21 in North America, while commercialisation rights in the rest of the world are licensed to Novo Nordisk.

## Making growth disorder treatment easier

For people with growth disorders, administering growth hormone by injection is part of daily life. Norditropin NordiFlex®, the world's first liquid growth hormone in a disposable pen, makes that way of life easier and simpler.

The product was first introduced by Novo Nordisk in Denmark in 2003 and launched in Japan and several European countries in 2004. In 2004, it received US Food and Drug Administration approval for the long-term treatment of children who have growth failure due to inadequate secretion of endogenous growth hormone and for the long-term treatment of growth hormone deficient adults.

Since Norditropin NordiFlex® is prefilled, there is no loading of cartridges. Other key features include:

- ◉ ease of use: no loading, no mixing (reconstitution)
- ◉ ease of training – for the healthcare professional to teach, and the caregiver and patient to use

- ◉ easy dial-back reset
- ◉ disposable – made of environmentally friendly materials that when burned release only water and carbon dioxide.

Norditropin NordiFlex® is based on FlexPen®, the successful pre-filled delivery device for insulin for the treatment of diabetes.

Novo Nordisk first produced biosynthetic growth hormone in 1985. In 1999, Novo Nordisk introduced a premixed liquid growth hormone and a new pen system to Europe and Japan. The premixed Norditropin® cartridge and NordiPen® delivery system were introduced in the US in 2000, and the NordiPenMate® auto-insertion device became available in 2001.

For more information, visit [novonordisk.com/therapy\\_areas](http://novonordisk.com/therapy_areas)



Afghan construction workers toss mud onto the roof being built at the Rabia Balkhi Women's Hospital in Kabul, Afghanistan.

## When war takes a toll on health

In war-ravaged countries, getting medicines and treatment to people in desperate need of healthcare is a considerable challenge. Novo Nordisk is doing what it can to help people with diabetes in two such countries: Afghanistan and Iraq.

An estimated 917,000 people in Afghanistan have diabetes, most of them undiagnosed and untreated. To begin to address this critical gap in care, in October 2004 the World Diabetes Foundation, an independently governed foundation established by Novo Nordisk in 2001, and the Afghan Ministry of Health initiated a new project: the Diabetes Control and Treatment Programme for Afghanistan. The agreement provides 400,000 US dollars to renovate and equip four diabetes centres in Kabul over the next two years.

In addition, the company arranged a training seminar in June 2004 for 20 Afghan doctors, including three directors from the Ministry of Health. A follow-up session was held in November. Novo Nordisk also established the Afghan Medical Relief Foundation. The goal of this new non-profit organisation is to bring life-saving medicines to Afghanistan. The foundation will raise money through fundraising, buy life-saving medicines including insulin, antibiotics, vaccines and other medicines, and donate these to hospitals and diabetes centres throughout Kabul and eventually, when security and infrastructure allows, throughout the country.

In Iraq, the current prevalence of diabetes is unknown but it is believed to be a large-scale problem. The International Diabetes Federation estimated in 2003 that 7.7% of the population has diabetes.

Novo Nordisk has been supplying insulin to Iraq since 1972 and, since 1991, the company has been virtually the sole supplier of insulin to the Iraqi people.

Beyond meeting the immediate needs of Iraqi patients, Novo Nordisk also arranges for the training of Iraqi doctors and nurses in diabetes care, in cooperation with the Iraqi Diabetes Association. It is working with the Ministry of Health to create a national diabetes programme that will include the development of diabetes centres and public clinics, continuous education for doctors and nurses, and patient awareness programmes.

“Living with diabetes for a week at the diabetes camp has totally changed my perception.”

Marta Wielondek, Novo Nordisk

## Children teach life lessons in TakeAction! project

Marta Wielondek, senior product manager in the Region Europe office of Novo Nordisk, thought she knew all about diabetes after three years with the company. But spending a week at a summer camp for children with diabetes in Poland as part of the company's TakeAction! programme made her realise how much she still has to learn.

“Living with diabetes for a week at the diabetes camp has totally changed my perception,” says Ms Wielondek.

Marta Wielondek is one of 21 Novo Nordisk employees from Region Europe who volunteered to spend part of their summer working hours at a summer camp for children with diabetes. The idea was to give employees an insight into the lives of children with diabetes, develop relationships with local diabetes associations to promote future collaboration, and to offer extra help in the camps free of charge to the camp organisers.

The TakeAction! programme, launched in 2003, encourages employees to carry out individual or team activities in the name of sustainable development. This includes working at diabetes clinics in developing countries, participating in walkathons to raise money for diabetes, and taking steps to improve the environment. For more information on the TakeAction! programme, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)



# Looking to the future

## Diabetes care

### **Levemir® (insulin detemir)**

*Indication* Type 1 and 2 diabetes

*Description* A weight-neutral soluble basal insulin analogue with neutral pH and a unique mechanism of protraction providing a smooth and more predictable action profile and offering a longer duration of action compared to conventional NPH insulin

*Phase* Approved in the EU, Switzerland and Australia; approvable letter obtained in the US; phase 3 in Japan

### **NovoMix® 50 and 70**

*Indication* Type 1 and 2 diabetes

*Description* Premixed formulations of the rapid-acting insulin analogue, insulin aspart. Provide a combined rapid- and intermediate-acting insulin effect (at the ratio of 50/50 or 70/30)

*Phase* NovoMix® 50 filed in EU and Japan, phase 3 in the US; NovoMix® 70 filed in the EU, phase 3 in the US and Japan

### **AERx® iDMS (NN1998)**

*Indication* Type 1 and 2 diabetes

*Description* The AERx® insulin Diabetes Management System is a delivery system for administering insulin to people with type 1 and 2 diabetes by inhalation

*Phase* Phase 2

### **Liraglutide (NN2211)**

*Indication* Type 2 diabetes

*Description* A once-daily, long-acting derivative of the natural human hormone GLP-1 for treatment of type 2 diabetes. In studies so far liraglutide has been shown to lower blood glucose with little or no risk of inducing hypoglycaemia, and is expected to affect appetite regulation leading to weight management. Liraglutide may also have beta-cell regenerative capacity

*Phase* Phase 2

### **NN344**

*Indication* Type 1 and 2 diabetes

*Description* A soluble, long-acting human insulin analogue for treatment of diabetes, which seems to have a long duration of action and a very predictable response

*Phase* Phase 1

### **NN2501**

*Indication* Type 2 diabetes

*Description* An oral tablet for the treatment of type 2 diabetes, which inhibits excessive hepatic glucose production

*Phase* Phase 1

# Biopharmaceuticals

## **Activelle® low dose**

*Indication* Oestrogen deficiency symptoms in women more than one year after menopause. Prevention of osteoporosis in postmenopausal women at high risk of future fractures who are intolerant of, or contraindicated for, other medicinal products approved for the prevention of osteoporosis

*Description* Low-dose continuous combined HRT within the ultra low-dose class

*Phase* Phase 3

## **NovoSeven®: intracerebral haemorrhage**

*Indication* Bleeding in emergencies, intracerebral haemorrhages

*Description* Phase 2b studies of NovoSeven® as a general haemostatic agent for treatment of intracerebral haemorrhages have been completed. Filing in the EU is anticipated in mid-2005. A second study will be initiated in the US

*Phase* Not applicable

## **NovoSeven®: trauma**

*Indication* Bleeding in emergencies, trauma

*Description* Phase 2 studies of NovoSeven® as a general haemostatic agent for bleedings related to traumatic injuries have been completed. Filing for blunt trauma in the EU took place in January 2005. A study in the US will be initiated in 2005

*Phase* Not applicable

## **NovoSeven®: variceal bleedings**

*Indication* Bleeding in emergencies, upper gastrointestinal bleeds in cirrhotic patients

*Description* NovoSeven® is being tested as a general haemostatic agent for treatment of bleedings from oesophageal varices in connection with liver cirrhosis

*Phase* Phase 2

## **NovoSeven®: cardiac surgery**

*Indication* Cardiac surgery

*Description* NovoSeven® is being tested as a general haemostatic agent for treatment of bleedings in connection with cardiac surgery

*Phase* Phase 2

## **NovoSeven®: traumatic brain injury**

*Indication* Bleeding in emergencies, traumatic brain injury

*Description* Traumatic brain injury (TBI) occurs as a result of a sudden injury to the head. TBI is most commonly caused by road traffic accidents and is primarily affecting younger men

*Phase* Exploratory phase 2

## **NovoSeven®: spinal surgery**

*Indication* Critical bleeding in surgery, spinal surgery

*Description* NovoSeven® is being tested as a general haemostatic agent for treatment of bleedings in connection with spinal surgery

*Phase* Exploratory phase 2

## **rFXIII**

*Indication* Haemostasis management

*Description* FXIII stabilises blood clots, indicating that FXIII alone or in combination with other therapy might become an interesting new opportunity within haemostasis management

*Phase* Phase 2 is in planning

## **IL-21**

*Indication* Cancer (malignant melanoma)

*Description* A study testing interleukin 21 (IL-21) for the treatment of the cancer malignant melanoma

*Phase* Phase 1/2

## From idea to treatment

In the healthcare industry, the road from idea to treatment for a new product is highly complex and time-consuming.

Industry estimates that out of 10,000 ideas that begin in the lab, just 10 will ever reach the stage where they are tested on people. Out of those, one may reach the market. The entire process represents some of the largest investments Novo Nordisk makes, both in terms of capital and manpower.

### **PHASE 1**

Phase 1 studies test a potential new drug with a small number of volunteers, usually between 10 and 100, for best dosage and potential side effects.

### **PHASE 2**

Phase 2 studies test a drug with known dose and side effects with a larger number of volunteers, usually between 50 and 300, to learn more about side effects, how the body uses the drug, and how the drug helps the condition.

### **PHASE 3**

Phase 3 studies compare the new drug with a commonly used drug for both safety and efficacy. The trials typically involve between 1,500 and 4,000 people who have the disease. If phase 3 results are successful, a New Drug Application is submitted and reviewed by the various government regulatory agencies.

### **PHASE 4**

Phase 4 studies, which are conducted after a drug is approved and launched, continue to evaluate a drug's long-term effects. We involve 500–3,000 patients or more, depending on scope.

80%

of all people with diabetes in 2025 will be in areas that today have limited access to health.



During her visit to Tanzania, Clare Rosenfeld visited the Morogoro hospital and met a 17-year-old boy who had been newly diagnosed with diabetes.

# Time to act

For the developing world, diabetes is not just a present-day misery. It's a future time bomb as well. With two-thirds of future diabetes cases expected to occur in this part of the world, Novo Nordisk believes it has a responsibility to act.

**C**lare Rosenfeld considers herself lucky. While she has had type 1 diabetes since the age of seven, the 18-year-old from Eugene, Oregon in the US, has always had access to the medicine and the doctors she needs to cope with her condition. But as Ms Rosenfeld, who is the founder of the International Diabetes Youth Advocacy Group, found out on a Novo Nordisk-sponsored tour of its projects in Tanzania, El Salvador and Bangladesh in 2004, that kind of access is rare for children and adults with diabetes in the developing world.

"There is no reason why people who by all rights should be living normal, healthy, productive lives should die when treatment is available. Something must be done," Ms Rosenfeld writes, after meeting many children, young people and adults who struggled – and some-

times failed – to cope with their diabetes because of lack of access to treatment.

## A complex challenge

Seeing the world in a new context can be an eye-opening experience. For Novo Nordisk, the challenging state of diabetes care in the developing world has long been apparent.

Meeting this challenge is complicated. Low- and middle-income countries often lack the healthcare infrastructure to meet the needs of a growing number of people with diabetes. Lack of awareness and education about diabetes is a serious problem. Many experts believe that the only way to fight diabetes, in the developing world as elsewhere, is by taking an approach that combines increased awareness, education and prevention with improved access to treatment.

93

million people with diabetes are diagnosed. Just as many are not.

33

of the 50 Least Developed Countries buy insulin from Novo Nordisk under its best possible pricing scheme.

213

activities under Novo Nordisk's National Diabetes Programmes reach out to stakeholders in 46 countries.

50,000

doctors in eight developing countries have been trained by Novo Nordisk to diagnose and treat people with diabetes.

“There is no reason why people who by all rights should be living normal, healthy, productive lives should die when treatment is available. Something must be done.”

Clare Rosenfeld

“By working together with governments, patient organisations and other partners to improve diabetes care in poorer countries, we can use our expertise and competence in diabetes to address some of these issues,” says Lise Kingo, executive vice president for people, reputation and relations at Novo Nordisk. “At the same time, we build a long-term sustainable business advantage as a leader in diabetes care.”

Investors are increasingly paying attention to how companies act to address the public health crisis in the developing world because they fear that not acting will damage companies’ societal licence to operate – and thus, profitable returns in both the short and long term.

“I think investors do care about a company’s social, ethical and environmental performance because it is an indicator of two things: the quality of management and the risk profile. If a company responds to these issues, it will probably have less risk associated with it,” says Analyst Benjamin Yeoh of ABN-AMRO, a major investment bank.

### Bridges to better care

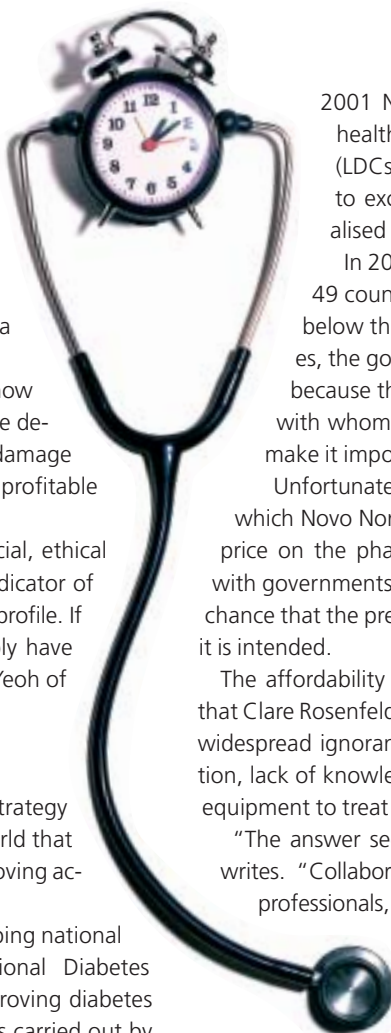
Since 2001, Novo Nordisk has had a four-pronged strategy to addressing access to health in the developing world that builds on the WHO’s four major focus areas for improving access to healthcare.

Building national healthcare capacity and developing national disease strategies is at the heart of the National Diabetes Programme (NDP), a collaborative approach to improving diabetes care globally. Today there are 213 separate activities carried out by Novo Nordisk affiliates in 46 countries, in both the developed and the developing world. Activities include educating nurses, doctors and patients, supporting diabetes patient organisations, equipping diabetes clinics and working with governments to design national diabetes strategies.

The NDP is setting up diabetes activities in eight developing or emerging economies: India, Bangladesh, China, Costa Rica, El Salvador, Malaysia, Tanzania and Zambia. As a result, there has been an increase in the number of people reporting to diabetes clinics, a greater proportion being treated, and more newly diagnosed persons with diabetes reporting early; that is, before they have started developing severe complications. It is estimated that 50–80% of people with diabetes in the developing world are undiagnosed.

### More affordable pricing

Improving the affordability of essential drugs like insulin is also part of the solution to better access to care. In recognition of this, since



2001 Novo Nordisk has offered insulin to the public health systems in the 50 Least Developed Countries (LDCs), as defined by the United Nations, at prices not to exceed 20% of the average price in the industrialised countries of North America, Europe and Japan.

In 2004, Novo Nordisk offered this pricing scheme to 49 countries and sold insulin to a total of 33 LDCs at or below this price, compared to 16 in 2003. In several cases, the government has not responded to the offer; either because there are no private wholesalers or other partners with whom to work; or wars or political unrest sometimes make it impossible to do business.

Unfortunately, there is no way to guarantee that the price at which Novo Nordisk sells the insulin will be reflected in the final price on the pharmacist’s shelf. Novo Nordisk therefore works with governments to encourage tenders, so that there is a greater chance that the preferential price will benefit the patient for whom it is intended.

The affordability of medicine is just one of the many problems that Clare Rosenfeld encountered on her trip. Just as serious was the widespread ignorance about diabetes among the general population, lack of knowledge among doctors, and the lack of clinics and equipment to treat diabetes.

“The answer seems clear to me: collaboration,” Ms Rosenfeld writes. “Collaboration between patient associations, healthcare professionals, the government and the pharmaceutical companies can tackle all the problems in these

countries. I saw a lot of tough things, but I also saw the potential and the passion to make a difference.” For more information, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004) \*

### STRATEGIES FOR ACCESS TO HEALTH

WHO priorities		Novo Nordisk response
Development of national healthcare strategies	⇒	National Diabetes Programme and DAWN
Building national healthcare capacity	⇒	
Best possible pricing	⇒	Best possible pricing scheme in LDCs
Additional funding	⇒	World Diabetes Foundation

Novo Nordisk has built its strategy for improved access to diabetes care on WHO’s recommendations.

# reflections

## Sustainable supply chain management benefits bottom line

Working with suppliers on social and environmental issues can benefit a company's financial bottom line, according to a model commissioned by Novo Nordisk. The model indicates that the return on investment for sustainable supply chain management is created through financial and reputational benefits for both parties.

The model concludes that there are both direct and indirect implications which can be identified if not yet quantified. According to the model, effective sustainable supply chain management can affect the bottom line in two ways: through costs and through turnover. Total costs, in turn, are affected by production costs and cost of capital.

Benefits include higher product quality and reduced risk as well as a positive impact on the company brand. In a broader perspective there are benefits to society, such as reduced pollution and fewer work-related injuries and accidents. Suppliers can measure the effects of improving labour standards and environmental management in terms of fewer costs related to compensa-



Like ripples in the water: Novo Nordisk is encouraging its suppliers to look at their own supply chains.

tion, reduced pollution charges, etc. As important, perhaps, is closer collaboration and sharing of better practices between Novo Nordisk and its suppliers, and better self-regulation and documentation towards regulatory authorities.

Novo Nordisk has had a comprehensive supply chain management programme since 2001, when it began requiring its suppliers to complete a self-evaluation questionnaire regarding their environmental and social performance. The latter deals with treating employees fairly in terms of wage and benefits, working hours, child labour, collective bargaining and other issues described in The United Nations Universal Declaration of Human Rights and the International Labour Organisation's Core Conventions.

The programme, which now includes audits, is expected to cover all major areas of purchase by 2005.

Now reaching out to second-tier suppliers, Novo Nordisk has developed a new toolbox for its suppliers and other companies who intend to engage in a programme with their suppliers which is available at [suppliertoolbox.novonordisk.com](http://suppliertoolbox.novonordisk.com)

Read more, and see the research behind the model of the financial impacts, at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

## A catalyst for business' role in human rights

The observance of human rights is interwoven in the daily fabric of a company's operations – in everything from ensuring safe factories to fostering equal opportunities and guaranteeing basic labour rights for employees. But when a company is multinational, its obligation to protect human rights extends around the globe.

Defining the boundaries of a company's sphere of influence in protecting human rights is the task that Novo Nordisk and nine other companies have undertaken in the Business Leaders Initiative in Human Rights (BLIHR). The aim of the three-year initiative, launched in 2003, is to serve as a catalyst to further integrate human rights in business policies and practices.

The first item of business on BLIHR's agenda is for business to identify opportunities for action based on the United Nations Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights.

The Norms suggest the introduction of global binding standards and external monitoring to ensure that companies observe basic human rights in all their operations worldwide.

Novo Nordisk regards the Norms as a positive challenge to the

company's approach to addressing human rights. With the other members of BLIHR, it has agreed to 'road test' the Norms.

"As a result of our involvement with BLIHR, we expect to have an operational standard that will enable us to strengthen our work with human rights. We also wish to contribute to a broader understanding of the role of business in human rights by sharing our experiences with other companies," says Lise Kingo, executive vice president, people, reputation and relations, Novo Nordisk.

Novo Nordisk has worked closely with human rights since 1998 as part of its commitment to support the United Nations Universal Declaration of Human Rights. It is also a signatory to the UN Global Compact.

The company's approach to human rights has been to focus on key stakeholders and run projects on strategic issues.

Current focus areas are the right to health, equal opportunities and diversity, and privacy.

The Novo Nordisk position on human rights, and more information on its approach to human rights, can be found at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)



Novo Nordisk supports the principle of the three R's: to reduce, refine and replace animal experiments. [Lise Holst](#), Bioethics Management at Novo Nordisk

## Improving standards for experimental animals

Novo Nordisk actively practises a principle known collectively as the three R's – which means that the company attempts to reduce, refine and replace animal experiments with alternative procedures whenever possible. Novo Nordisk considers experiments on living animals to be a necessary component of the research and development process for new medicines for both scientific and mandatory reasons, and to satisfy expectations of drug regulatory authorities. In the past decade, Novo Nordisk has set new standards for housing, training and socialisation of laboratory animals and significantly reduced the number of animals used. Due to a higher research activity in early phases, this positive trend could not be maintained in 2004, as 10% more animals were purchased.

In 2004, both an approval by the US Food and Drug Administration (FDA) and the development and approval of a new test method will enable Novo Nordisk to reduce the number of animals used by the company even further:

- In the fourth quarter of 2004, the FDA approved a reduction in the numbers of animals required to test insulin-based products, resulting in a considerable reduction of rabbits used for this purpose.
- Novo Nordisk has developed a novel test for glucagon that utilises isolated cells *in vitro* rather than living animals, which was approved for use by the FDA in October 2003. Implementation of this new test was completed in the third quarter of 2004 and rabbits are no longer used for this purpose.

Novo Nordisk has committed itself to investigate further approaches to practising the three R's and, therefore, to reduce the use of living animals in the future, as and when this becomes possible due to establishment of newly emerging regulations and technologies. For more information, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

## A balanced view of HRT therapy

Menopause can have a severe adverse impact on the quality of life for some women. Despite this, use of hormone replacement therapy (HRT) medicine has declined since the release of the Women's Health Initiative (WHI) study in 2002 and the Million Women Study in 2003. Both studies reported potential health risks following long-term HRT use, and HRT sales worldwide declined. The controversy also resulted in some HRT users filing lawsuits against producers of HRT drugs, including Novo Nordisk (see page 19).

Novo Nordisk produces the low-dose HRT drugs Activelyl® and Vagifem®. The results of the studies, as is true of all studies involving HRT medicines produced by other companies, were of interest to Novo Nordisk. Specifically, these two studies found that HRT should not be initiated 10 years after menopause for prevention of cardiovascular diseases. Unfortunately, the study did not explore the cardiovascular effect of HRT in women in early menopause, when HRT is most commonly initiated. For example, the majority of women in the WHI study were well beyond menopause and experienced no climacteric symptoms.

"These and other questions need further study," says Camille Lee, vice president of Global HRT at Novo Nordisk. "But I feel that WHI and other studies support our position on HRT: that women needing HRT should start when they first experience severe menopausal symptoms and use the therapy for the shortest possible time in the lowest possible doses."

Research reported in 2004 has shown that HRT may save lives when taken by women under age 60 – but that the risks may outweigh the benefits for older women (according to the results from 30 clinical trials involving more than 26,000 women in a study led by Dr Shelley Salpeter at Santa Clara Valley Medical Center in San Jose, California). Also in 2004, a research team from the University of California led by Dr Judith L Turgeon found that the results of the WHI study, which only studied one product, should not be generalised to all forms of HRT therapy. Dr Turgeon's team found that knowledge of hormones and their effects has more than doubled in the last 10 years. This increase in knowledge over time and with additional experience is true for virtually all medicines.

Since the publication of the results of the WHI and Million Women Study, most health authorities recommend that the lowest effective dose is used to relieve symptoms of the menopause. Ms Lee adds: "Novo Nordisk offers a full low-dose HRT range and we also have even lower-dose compounds in our research and development pipeline." (See page 27.)



41%

of Novo Nordisk's employees work outside Denmark.

179

countries carry Novo Nordisk's products.

With offices or affiliates in 78 countries, a worldwide sales organisation, an increasingly international pool of employee talent and customers in every corner of the globe, Novo Nordisk is no longer solely a 'Danish' company. Yet the company has ambitions to further internationalise in the coming years.

# Global expansion

**M**ore than 99% of our sales are in countries outside Denmark," observes Chief Financial Officer Jesper Brandgaard. "Yet only 41% of our employees are working outside the country. We must internationalise to fulfil our vision and stay competitive in the pharmaceutical industry."

### Supporting the markets

Making the most of the US market is vital: sales in North America are expected to overtake Europe within the next 5–10 years, making it Novo Nordisk's largest region. To support US growth, Novo Nordisk will invest 100 million US dollars in expanding its insulin manufacturing plant in North Carolina (see box opposite) and has transferred some major development responsibilities from Danish headquarters to the US affiliate. Actions also include recruiting more US participants into its global trainee programmes.

Other efforts have targeted the International Operations region, where the growth potential is generally regarded to be greater than in Europe. Actions include major investments in new manufacturing facilities in Brazil and China which also comprises intensified talent recruitment.

### Costs, risks and innovation

But internationalisation is not just about sales growth.

"Increased activities outside Denmark provide Novo Nordisk with a more competitive cost base and a more balanced exposure to risks

such as currency fluctuations," notes Jesper Brandgaard. Novo Nordisk has already taken steps to outsource production of needles and plastic components for the pen systems. By choosing global partners when outsourcing, Novo Nordisk will ensure competitiveness and 'insource' knowledge from these key performers in the market.

Chief Science Officer Mads Krogsgaard Thomsen adds that internationalisation also potentially benefits the Novo Nordisk pipeline: "We need to increase our access to research and development conducted outside Denmark. To find all the skills needed for future development, it is essential that we recruit even more new, international talent," he says.

Mads Krogsgaard Thomsen is also convinced that international partnerships with companies outside Novo Nordisk will become increasingly important to the R&D pipeline – particularly in view of the company's growing focus on proteins outside the established therapy areas. Through agreements with partners including ZymoGenetics, Biostratum, Transition Therapeutics, Innate Pharma and Neose, Novo Nordisk currently has an exciting early-stage pipeline of eight projects targeting cancer or inflammatory diseases. As of September 2004, Novo Nordisk had established 26 discovery and early development partnerships and the company is seeking even more.

### New employment patterns

One area which has been at the forefront of internationalisation is Product Supply, which comprises all manufacturing in Novo Nordisk.

# 1,000

new jobs are expected to be created outside Denmark in the next five years through expansion of Novo Nordisk's production facilities.

# 20,725

people work for Novo Nordisk around the world (20,285 full-time equivalents).

# 100

million US dollars will be invested by Novo Nordisk in expanding its insulin manufacturing plant in North Carolina.

# 200

million US dollars will be invested by Novo Nordisk in the Montes Claros production plant in Brazil.

Expansion of production facilities is already taking place in Montes Claros, Brazil; Chartres, France; Tianjin, China; and Clayton, US. "We expect that the expansions will create approximately 1,000 new jobs outside Denmark in the coming five-year period," explains Senior Vice President Per Valstorp from Product Supply.

However, he continues: "While new jobs will be established abroad, employee numbers will most likely decrease in Denmark in the same period. To embrace the changes in employment patterns in Denmark, Product Supply has established a Job Transfer Centre which is operating in Denmark only. The system allows employees at downsized Danish production sites to register their skills and preferences at the centre, which can then refer them to jobs and relevant training within Novo Nordisk."

"The alternative to this would have been layoffs. So I think this is a good example of social responsibility on the part of the company," remarks union representative Jan Carstensen, who represents unskilled and semi-skilled workers at a number of Danish production sites.

### A strategy for people

In the company's philosophy, Novo Nordisk is its people. Its People Strategy supports the objectives of being an attractive and challenging workplace focused on high performance and equal opportunities for each to develop and grow.

**"We must internationalise to fulfil our vision and stay competitive in the pharmaceutical industry."**

Jesper Brandgaard, chief financial officer, Novo Nordisk

To better prepare the company for its international growth, the People Strategy now focuses on mobility: the ability to recruit and develop international talent.

"We want to put the best person into any job, regardless of where they come from; we also want to reduce the geographical barriers to talent movement," says Ginger Gregory, senior vice president of People and Organisation at Novo Nordisk.

To facilitate this, the new unit is developing a global system of job descriptions, remuneration and talent evaluation. This will ensure that mobility across Novo Nordisk's operating units globally becomes much smoother and that diversity increases across the organisation.

For more information, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

### Fulfilling a vision

When all else has been said, one final observation remains: Novo Nordisk must continue to increase its presence around the world to fulfil its vision of being the world's leading diabetes company.

Jesper Brandgaard sums it up: "The fulfilment of this aspiration will require Novo Nordisk to be present. Present with our customers where they live and work, present with regulators and other authorities, present with business partners, universities, investors and other stakeholders." \*

## Investing in the future

**China** Novo Nordisk is expanding its production facilities in Tianjin, China. The new plant will be built on Novo Nordisk's existing 40,000 square metres 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.

**US** Novo Nordisk's insulin manufacturing plant in Clayton, North Carolina, will be expanded to more than double its insulin-filling capacity, as well as include assembly and packaging facilities for FlexPen®, administration and storage space. This expansion will provide around 200 new jobs at the plant in Clayton for a total of 600 when fully operational.

**Brazil** One of Novo Nordisk's major international investments is a new production facility in Montes Claros, Brazil. The new facility will focus on formulation, filling and packaging of various insulin products, and is expected to create around 600 new jobs.



## PEOPLE

1,484

new positions were created in 2004 in Novo Nordisk.

122

of Novo Nordisk's senior managers are members of the company's talent pools.

49.1%

of Novo Nordisk's employees are female.

# Leading with passion

A company's commitment to sustainability starts with its people. For Novo Nordisk, that means developing talent and encouraging diversity in such a way that employees actually live the Triple Bottom Line.

**O**f course I know what the Triple Bottom Line means. But today, I really experienced it. And I know why Novo Nordisk has embraced it," remarks Finn Benned Hansen following his participation in the Lighthouse Programme's visit to Brazil in December 2004.

The Lighthouse Programme is an innovative way in which Novo Nordisk is developing the next generation of the company's leadership. 'Destination Brazil' brought 32 of the company's top talents together for seven days to experience economic, social and environmental conditions in Brazil – an important emerging market for the company. The main goal was to build a sense of community among a group of executives to enhance their understanding of one another, their ability to work together and their sense of the world around them. The journey was led by Lars Rebien Sørensen, president and



Community work at a paediatric clinic in São Paulo.



Visit to GRAACC, a children's cancer centre in São Paulo.

CEO of Novo Nordisk, and addressed global business and health challenges, doing business in emerging markets, sustainability as a business factor and leading with passion.

In this first Lighthouse journey, the 'classroom' stretched from crowded urban streets to the rainforest, and teachers included local business leaders, government ministers and representatives of indigenous peoples. The journey took employees from the relative comfort of their corporate jobs to the heart of the company's strategic agenda: globalising the business, improving access to health and dealing with thorny dilemmas posed by fulfilling its commitment to the Triple Bottom Line.

Developing talent is a top priority for Novo Nordisk if it is to continue to succeed in a highly competitive market. In March 2004, the company established a new centre of excellence called Global Talent Development to facilitate identification and development of talent throughout the organisation. This global oversight is a business

# 20%

of the employees in Novo Nordisk's talent pools are female.

# 69%

of new positions in Novo Nordisk in 2004 were based outside Denmark.

# 6.5

years is the average seniority in Novo Nordisk.

# 32%

of Novo Nordisk managers are female.



**'Life Line session' with Lars Rebieen Sørensen, president and CEO of Novo Nordisk.**

imperative at a time when the company is expanding internationally.

Talent is managed across Novo Nordisk in a number of talent pools that have been established during 2003 and 2004 to give people opportunities to develop their skills towards the next level in the organisation. This might take the form of opportunities to discuss strategic business issues with other company leaders, including top management, or taking on a challenging assignment with a real impact on the business. The Lighthouse Programme is just one of many initiatives to develop talent.

Lise Kingo, executive vice president for people, reputation and relations at Novo Nordisk, says: "It is too early to say how the Lighthouse journey will shape the next generation of Novo Nordisk leaders. But we expect that the participants will be driven to carry out their jobs with even greater passion and be able to cascade their new sense of vision throughout the organisation."

### A strategy for diversity

For companies to tap talent, the greatest opportunities are in diversity. Novo Nordisk operates in 78 countries and comprises a wide range of different nationalities. To achieve the full potential in talent management, it is important to ensure a level playing field. With its strategy for equal opportunities (EO) and diversity, Novo Nordisk is creating sound diversity in the organisation that can support internationalisation of business and spark continued innovation.

Novo Nordisk has made diversity an integral part of management training and incorporated targets on diversity into the corporate management tool, the Balanced Scorecard, and evaluates the performance on EO and diversity in the organisation each year.

Based on this evaluation, in 2004, Novo Nordisk began to see the first results of this strategy being embedded in the organisation. For example, in South Africa Novo Nordisk increased the diversity of its medical representative staff to better reflect the community it serves. In the US there were targeted efforts to reach out to minorities disproportionately affected by diabetes. Brazil is collaborating with organisations that work with disadvantaged sections of society.

In Denmark the affiliates NNE and NNIT are working to improve their ability to attract and develop talent from an increasingly diverse society. Both have broadened the recruitment base by focusing on values which appeal to different types of applicant. NNIT has found new channels of communication to reach new groups of potential candidates, and recruitment tests are now available in 80 languages. In 2004 NNE recruited an increased number of women compared to previous years.

### Women in management

Another focus area during 2004 was increasing the number of women in management, based on an analysis conducted in 2003. One initiative was the formation of a Sounding Board of women and men to discuss issues and coordinate activities relating to women in management.

Other activities launched in 2004 include:

- the formation of women's networks, in which women identified as leaders are invited to participate in network groups on women in management
- a mentoring programme in which women identified as potential leaders in the organisation are invited to be mentored by a member of senior management
- a review of the performance and succession management systems to achieve greater transparency, including looking at leadership competences from a gender perspective.

"Women often face informal rather than formal barriers in the workplace," says Kirstine Brown Frandsen, vice president of International Medical Affairs at Novo Nordisk and a member of the Sounding Board. "Women may have different ways of working, communicating and leading than men, and it is important that we talk about it openly so that these differences are understood and appreciated."

For more on equal opportunities and diversity, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004) \*



**Visit to indigenous tribe in Iguassu.**

253,000

tons of CO<sub>2</sub> were emitted from Novo Nordisk in 2004.

92%

of the energy produced at Novo Nordisk is based on natural gas.



The environmental team is discussing the future product design of Novo Nordisk's insulin delivery devices.

# Preparing for a low

Immediate and concerted action is required to combat climate change. Recognising that there are opportunities as well as challenges in that call for action, Novo Nordisk is preparing for a carbon-constrained future.

Climate change is one of the serious environmental challenges facing humankind. The rising level of greenhouse gases in the atmosphere is changing global climatic patterns, resulting in increased incidences of floods, storms and droughts, affecting habitats, biodiversity, food systems, economies and human life. Tackling an issue as complex as climate change requires a concerted effort from government, business and civil society.

The environmental strategy of Novo Nordisk, which determines the priorities and long-term strategic focus areas, has highlighted climate change, use of natural resources and management of pollution as the key long-term environmental challenges for its business. As a business committed to addressing climate change, Novo Nordisk is developing a strategy to reduce its emissions of CO<sub>2</sub>. In 2004 Novo Nordisk entered into a partnership with the WWF whereby it has committed to reduce its CO<sub>2</sub> emissions. During 2005, WWF will work with Novo Nordisk in setting a below stabilisation target for achieving an absolute reduction of CO<sub>2</sub> by 2014. Such a commitment will enable Novo Nordisk to become part of the WWF's Climate Savers initiative.

"We are initiating an assessment to identify our reduction opportunities and the measures we can undertake to reduce the carbon intensity of our products and the way we manufacture them. The Climate Savers partnership is an opportunity for us to go beyond regulation and be well prepared for a low-carbon future. This will

benefit both our company and the environment," says Per Valstorp, senior vice president of Product Supply, Novo Nordisk.

Installations for energy production at two Novo Nordisk sites in Denmark, Bagsværd and Hillerød are covered by the EU Emission Trading Scheme (ETS), which allocates allowances to emit CO<sub>2</sub>. As of 1 January 2005, installations whose CO<sub>2</sub> emissions exceed their allowances will have to purchase additional allowances from the market. Novo Nordisk's financial exposure to the ETS in the first period (2005–2007) is rather limited. In fact, the company will have a net surplus of allowances during the first ETS period.

## Energy efficiency and beyond

Novo Nordisk has a history of successfully optimising energy efficiency. Yet these initiatives have not resulted in an absolute reduction of its CO<sub>2</sub> emissions. A new approach to energy efficiency is required where the focus shifts: from optimising individual components of operations to taking the entire production operations as a whole system. Identifying new energy conservation measures using this approach can reveal opportunities for achieving significant CO<sub>2</sub> reductions, capturing synergies between different measures and obtaining multiple benefits from a single investment. Implementing these potential projects will also require that investments take into account both the financial and environmental benefit, thereby enabling the company to overcome the traditional investment barriers such as pay-back and ROIC.

2.408

million GJ of energy was consumed by Novo Nordisk in 2004.

82%

of Novo Nordisk's CO<sub>2</sub> emissions come from purchase of energy.

8%

improvement in energy efficiency in 2004.

2

Novo Nordisk sites in Denmark are covered by the EU Emission Trading Scheme.

0.7%

of the total Danish electricity consumption is used by Novo Nordisk.

0.06

MJ, equivalent to 0.11 litres of petrol, is the energy consumed over the life of a FlexPen® device.



Climate change is already happening in the Arctic, and puts polar bears at risk.

# - carbon future

Reducing emissions over a 10-year period will also require innovation in the way the company procures energy. In 2004, 82% of Novo Nordisk CO<sub>2</sub> emissions were associated with the external purchase of energy. During 2005, Novo Nordisk will investigate the possibilities of purchasing credible certified electricity from renewable sources and also enter into a dialogue with its utility providers on their fuel choices and emission factors.

Achieving absolute reductions of CO<sub>2</sub> presents both challenges and opportunities for a rapidly growing company. Given the expected rise in the number of people with diabetes, Novo Nordisk has to expand production to meet this increasing demand. The challenge lies in decoupling the direct link between volume growth and energy use and making energy less carbon intensive. Novo Nordisk's focus on implementing optimisation measures such as cLEAN™ – lean manufacturing principle – will definitely assist in the process but a more sustained decoupling will require the company to look beyond efficiency. This would include a shift to cleaner fuels, purchase of renewable energy and an even greater emphasis on environmentally sound design and development of future processes and products.

## Gene technology saves resources

Novo Nordisk uses gene technology and genetically modified organisms in biomedical research and pharmaceutical production. Safe use of gene technology can benefit both the environment and the financial bottom line. A new insulin production process, NN2000, based on genetic engineering, produces five times higher yield per cell compared to the existing production process.

“The only solution to the global climate problem is a conversion of our energy sources so that in the long run we do not emit CO<sub>2</sub> at all.”

Kim Carstensen, WWF Denmark

This translates into use of fewer raw materials such as sugar, water and energy and less waste per produced unit. In addition, to enhance safe use of gene technology, the NN2000 process has also eliminated the use of antibiotic resistance genes from the yeast cells, thereby reducing the risk of transfer of resistance genes to other organisms. Achieving reductions of CO<sub>2</sub> will require that the company develops and replicates similar processes.


This increased efficiency directly impacts the financial bottom line. That is the philosophy behind the Environmental Management Accounting used to assess the economic value of natural resources, and the business and financial value of good environmental performance.

## Sound product design

Rethinking product design is yet another way to prepare for a low-carbon future. Novo Nordisk recognises that its influence on the environmental impact of its products decreases throughout the product life cycle. Therefore it has initiated a project to systematically embed environmental

considerations in discovery, development and major support projects. In 2004 it established an environmental team in the device development area to develop a tool for systematic environmental evaluation of raw materials, components and processes of future devices. This team will work closely with the Environmental Devices and Packaging Group responsible for integrating environmental considerations in Novo Nordisk's devices and packaging strategies.

Only by taking such a holistic approach from development to disposal, and systematically undertaking a mix of options, can Novo Nordisk prepare itself for a carbon-constrained future.

For more information, visit [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004) \* 

## PERFORMANCE HIGHLIGHTS



### Financial performance

In 2004, Novo Nordisk's sales were 29,031 million Danish kroner (DKK), up 11% from DKK 26,158 million in 2003. Measured in local currencies this is an increase of 15%. Operating profit in 2004 increased by 9% from 2003 to DKK 6,980 million. A lower level of non-recurring income reduced operating margin in 2004 to 24.0% from 24.6% in 2003. Return on invested capital increased by 21% in 2004 from 20% in 2003. The cash to earnings ratio for 2004 ended at 85% up from 80% in 2003. Earnings per share (diluted) increased by 5% in 2004 to DKK 14.83 from DKK 14.15. For more information, see the full discussion on page 41.

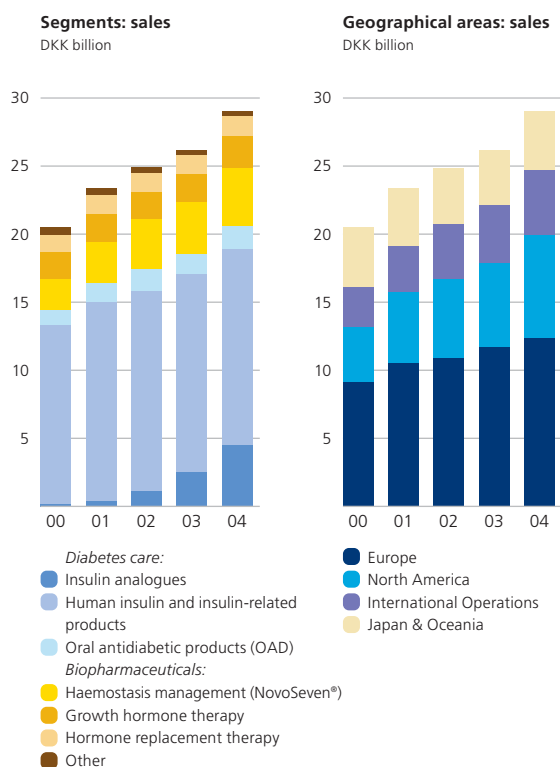


### Environmental performance

Novo Nordisk continued to produce 'more with less' in 2004. The eco-productivity indices, which express the ability to utilise resources effectively, showed an improvement of 7% for water and 8% for energy, and thereby reaching the targets for 2004. The implementation of certified environmental management in Japan is progressing according to plan. Detailed accounts for performance can be found at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

### Social performance

In 2004 Novo Nordisk created 1,484 new full-time positions, mainly outside Denmark. The year-end number of employees in 2004 was 20,725. The employee turnover rate for 2004 was 7.3%. The frequency of occupational injuries was 5.6 per million working hours, compared to 5.4 in 2003. Detailed accounts for performance can be found at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)



Photos: Getty Images and Novo Nordisk



## Business review 2004

### Product news

- Novo Nordisk's long-acting insulin analogue Levemir® was launched in Switzerland, the UK, Ireland, Denmark, Sweden, Norway, Finland, the Netherlands, Austria and Germany in 2004.
- Norditropin NordiFlex®, the world's first liquid growth hormone in a disposable pen, was rolled out across Europe and received FDA approval in the US.
- In February, NovoSeven® was approved to treat factor VII deficiency and Glanzmann's thrombasthenia.

### Research and development

- The results of a phase 2 study of NovoSeven® in the treatment of critically bleeding multi-trauma patients were announced in March.
- Novo Nordisk announced the results from the phase 2b study of NovoSeven® in the treatment of intracerebral haemorrhage in June.
- NovoMix® 50 and 70 files were sent to the European Medicines Agency (EMA) in July.
- In October, Novo Nordisk announced its decision to initiate an additional clinical study for its human GLP-1 analogue, liraglutide.



Long-term financial targets defined and communicated to the stock market in 2001:

**Operating profit (EBIT) growth of 15% per annum**

**Operating margin (EBIT margin) of 25%**

**Return on invested capital (ROIC) of  
25% per annum**

**Cash to earnings ratio of 60%  
as a three-year average**



The study will delay the start of phase 3 trials by approximately one year.

#### **Stakeholder innovation**

- At the Oxford Vision 2020 Summit in September, Novo Nordisk pledged 3 million British pounds to the ongoing global fight against chronic diseases, including diabetes.

#### **Agreements**

- Novo Nordisk entered a licensing agreement with Transition Therapeutics Inc in August to develop Islet Neogenesis Therapy for the treatment of diabetes.
- Novo Nordisk signed an agreement in September that gave the company expanded licensing rights to the AERx<sup>®</sup> iDMS inhaled insulin programme from Aradigm, and obtained full development and manufacturing rights.
- Novo Nordisk and Sumitomo Pharmaceuticals, Co, Ltd concluded a licence agreement in September for repaglinide, which enables Sumitomo to develop and market the type 2 diabetes tablet in Japan.

- Novo Nordisk and Medtronic, the world's leading manufacturer of insulin pumps, announced an agreement in November to develop prefilled insulin cartridges containing the rapid-acting insulin analogue NovoLog<sup>®</sup> (NovoRapid<sup>®</sup> outside the US).

#### **Investments**

- It was announced in October that Novo Nordisk's insulin manufacturing plant in Clayton, North Carolina, will be expanded (see page 32).
- Novo Nordisk announced in November that it is expanding its production facilities in Tianjin, China (see page 32).

#### **Environment**

- In 2004, Novo Nordisk had two accidental releases of materials containing GMOs at the production site in Bagsværd, Denmark. The incidents caused no harm to humans or the environment.
- Novo Nordisk and the WWF have entered into an agreement that will help Novo Nordisk to reduce its CO<sub>2</sub> emissions over a period of 10 years (see page 36).

**HILDA THANKS YOU FOR MAKING A REAL DIFFERENCE...**



**Three years ago Novo Nordisk's Board and its courageous shareholders decided to embark on a journey to prevent and treat diabetes in the developing world. This visionary initiative created the World Diabetes Foundation.**

In our first three years we have funded over 40 projects promoting treatment, awareness, prevention and education within diabetes care in some of the poorest countries in the world.

Hilda from Dar-es-Salaam in Tanzania is just one of many millions of people in the developing world, whose lives are potentially affected by our work.

We can all be proud of our results so far. We promise to keep up the good work.

Thank you for your support.



WORLD **DIABETES** FOUNDATION  
[www.worlddiabetesfoundation.org](http://www.worlddiabetesfoundation.org)

# Management report and discussion 2004

**N**ovo Nordisk is pleased to report satisfactory financial results for 2004, in spite of experiencing yet another year with adverse currency exposure. Looking to the future, the increasing demand for the company's products – especially insulin analogues and NovoSeven® – underpins our expectations for solid growth in 2005 also.

## Business performance and discussion

- Sales in 2004 increased by 15% measured in local currencies.
  - Sales of insulin analogues increased by 84%
  - Sales of NovoSeven® increased by 19%
  - Sales in North America increased by 32%
- Measured in Danish kroner sales increased by 11%.
- Underlying operating profit increased by more than 20%, and measured in Danish kroner operating profit increased by 9% to DKK 6,980 million.
- Net profit increased by 4% to DKK 5,013 million and earnings per share (diluted) increased by 5% to DKK 14.83.
- In 2005, the underlying operating profit is expected to grow by 15% in local currencies. Measured in Danish kroner the growth in operating profit is expected to be around 5%, reflecting a significant, negative currency impact and no major non-recurring income in 2005.

Operating profit increased by 9% to DKK 6,980 million from DKK 6,422 million in 2003, thereby exceeding the expectations for operating profit as expressed earlier in the financial year – despite a more challenging currency environment than anticipated. The main reason for exceeding expectations is better operational performance in terms of stronger sales growth, and improved product mix and lower cost consumption.

Measured in local currencies and excluding the impact from non-recurring items operating profit increased more than 20% – thereby exceeding the long term financial target of 15%, which formed the basis for the operating profit growth expectations to 2004.

Reported sales of DKK 29,031 million correspond to a sales growth of 11% over 2003 of DKK 26,158 million. Measured in local currencies sales increased 15%, thereby leaving the negative impact from depreciating foreign exchange rates at 4 percentage points.

Operating margin for 2004 was realised at 24.0% down from 24.6% in 2003. The lower operating margin reflects both a lower level of non-recurring income as well as a negative impact from depreciating foreign currencies. The foreign exchange rate development has impacted operating margin negatively by approximately 1 percentage point.

Novo Nordisk continuously hedges the cash flows for the main invoicing currencies to limit the short term negative impact on both earnings and cash flow arising from fluctuations in foreign exchange rates. As a consequence the negative impact from the decreasing value of the foreign exchange rates on operating profit is to a large extent countered by net financial hedging gains. With the

exchange rates prevailing in the beginning of February 2004 it was expected that a net financial income of DKK 250 million would be realised, including Novo Nordisk's share of the profit & loss from associated companies. As a result of the decreasing value of the US dollar and related currencies, net finance was realised at DKK 477 million in 2004.

The effective tax rate decreased to 33% from 34% in 2003, net profit increased to DKK 5,013 million up 4% compared to 2003 of DKK 4,833 million. Earnings per share (diluted) thereby increased from DKK 14.15 to DKK 14.83 in 2004, corresponding to a growth of 5%.

Return on invested capital (ROIC) ended at 21% up from 20% in 2003. A large proportion of Novo Nordisk's assets are denominated in Danish kroner or Euro and ROIC is very sensitive to fluctuations in foreign exchange rates. An increase in ROIC has been realised despite a continued depreciation in the key foreign exchange rates, especially the US dollar, impacting ROIC negatively by approximately 2 percentage points.

The cash to earnings ratio for 2004 ended at 85% up from 80% in 2003. The three-year average for cash to earnings ratio for 2004 increased from 32.3% in 2003 to 59.0% (see page 98). The free cash flow for 2004 was expected around DKK 3 billion, but was realised at a significantly higher level of DKK 4.3 billion, reflecting the higher realised result for 2004 and a continued reduction in the average number of credit days for trade debtors.

## Long-term financial targets

The long-term financial targets of Novo Nordisk were defined and communicated to the stock market in 2001. Below we have illustrated the reported average performance for the five year period 2000–2004 compared to the long-term financial targets:

Financial target	5 years' average 2000–2004	Long-term financial targets
Operating profit growth per annum	15%	15%
Operating margin	24%	25%
Return on invested capital per annum	21%	25%
Cash to earnings ratio as a three-year average	54%	60%

The targets were selected to ensure management focus on long-term growth of the business, transformation of results into cash and a significant improvement in return on invested capital. The pursuit of these long-term targets will support the creation of a competitive shareholder return. As demonstrated by the moderate growth in operating profit in 2002, 2003 and 2004, the development in the exchange rates can have significant impact on the reported growth in operating profit in an individual year. In fact, if Novo Nordisk's main invoicing currencies remain at their current level throughout 2005, it is probable that in 2005 Novo Nordisk will also be unable to meet its 15% operating profit growth target. The company's view is, however, that the 15% growth target is a realistic target which Novo

# MANAGEMENT REPORT

Nordisk will be able to meet in most years, based on the performance of the recurring business and assuming that currencies are relatively stable. In other words, the company's ability to deliver on the target in a particular year will be impacted by significant changes in currency exchange rates or events of a non-recurring nature.

## Sales development by segments

Sales increased by 15% measured in local currencies. Growth was realised both within diabetes care and biopharmaceuticals – primarily driven by strategically important products such as the insulin analogues NovoRapid® and NovoMix® 30 as well as NovoSeven®.

Sales growth was realised in all regions, with the primary growth driver being North America, constituting 26% of total sales, but also International Operations, constituting 17% of total sales, showed solid growth rates.

### Diabetes care

Sales of diabetes care products grew by 15% measured in local currencies compared to 2003 and by 11% measured in Danish kroner to DKK 20,533 million. Novo Nordisk remains the global market leader in diabetes care (insulin and oral antidiabetic products) with an overall market share of 20%.

#### Insulin analogues, human insulin and insulin-related products

Sales of insulin analogues, human insulin and insulin-related products increased by 14% measured in local currencies and by 11% measured in Danish kroner to DKK 18,890 million. All regions contributed to growth both measured in local currencies and in Danish kroner.

Novo Nordisk is the global leader in the insulin market with a worldwide insulin volume market share of 50%, and within the ana-

logue segment Novo Nordisk continues to gain market share, now holding close to 30% of the world market.

Sales of insulin analogues increased by 84% measured in local currencies and by 77% in Danish kroner to DKK 4,507 million in 2004. Solid growth rates were realised in all regions, and North America continues to be the primary growth driver. Sales of insulin analogues contribute with 55% of the overall growth in local currencies and now constitute 24% of Novo Nordisk's total sales of all insulin products.

Levemir®, Novo Nordisk's long-acting insulin analogue, continues to gain market share in Europe and now holds 9% of the market for long-acting insulin analogues, less than a year after introduction in the first market. A continued roll-out of Levemir® in additional countries in 2005 is expected to underpin the solid development seen in the early launch phase.

### Europe

Sales in Europe increased by 6% measured in both local currencies and in Danish kroner, with growth being driven by the portfolio of insulin analogues, including Levemir®. Growth in insulin sales continues to be negatively impacted by price-focused healthcare reforms in some countries, while insulin sales in Germany in the fourth quarter were positively affected by an acceleration of purchasing by patients, primarily motivated by reimbursement considerations.

### North America

Sales in North America increased by 34% in local currencies in 2004 and by 22% measured in Danish kroner. The solid sales growth reflects underlying market growth and market share gains. The increased market share is driven by a solid penetration of the insulin analogues NovoLog® and NovoLog® Mix. Novo Nordisk now holds more than one-third of the US insulin market and 20% of the analogue market.

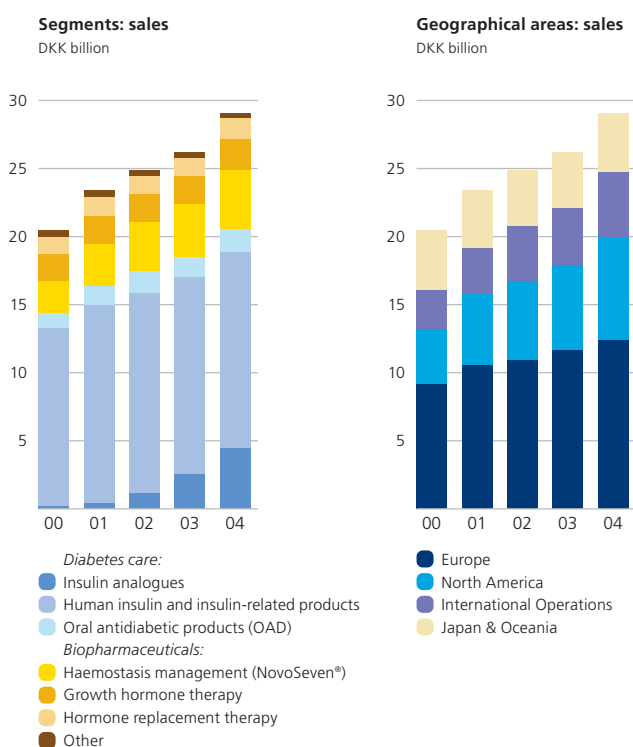
In December, Novo Nordisk's US affiliate Novo Nordisk Inc, was again awarded a national contract to provide the US Veterans Administration and Department of Defense (VA/DoD) with human insulin, now also including analogue insulin in both vials and delivery devices. The new contract is initially for one year with an option of prolongation for four additional option years, at the discretion of the VA/DoD. The VA/DoD announced the potential five-year value of the contract at just under USD 250 million.

### International Operations

Sales within International Operations increased by 20% in local currencies and by 14% measured in Danish kroner. The key growth driver continues to be sales of human insulin, driven especially by China. However, insulin analogues also continue to add to growth, driven especially by Turkey, and Novo Nordisk remains the overall market leader in the analogue segment in the International Operations region.

### Japan & Oceania

Sales in Japan & Oceania increased by 11% in local currencies and by 9% measured in Danish kroner. Growth is primarily due to increased sales of NovoRapid® and NovoRapid® Mix 30, supported by a continued conversion from durable to prefilled devices, with Novo Nordisk now holding more than 80% of the prefilled device market.



### Oral antidiabetic products

Sales of oral antidiabetic products increased in all regions and in total by 21% measured in local currencies and 15% measured in Danish kroner to DKK 1,643 million, with growth primarily driven by North America but also by International Operations.

### Biopharmaceuticals

Sales of biopharmaceutical products increased by 15% in local currencies compared to 2003 and by 11% measured in Danish kroner to DKK 8,498 million.

#### NovoSeven®

Sales of NovoSeven® increased by 19% in local currencies compared to 2003. Measured in Danish kroner sales increased by 13% to DKK 4,359 million, with all regions contributing to growth, but with North America, Europe and International Operations as the major growth drivers. In the fourth quarter, sales were positively affected by a timing-related increase in sales to a number of countries in International Operations.

The sales growth of NovoSeven® was driven by several factors in 2004. Due to the high penetration within spontaneous bleeds in congenital inhibitor patients, the predominant part of the growth within the inhibitor segment has been generated by treatment of acquired haemophilia patients and usage of NovoSeven® in connection with elective surgery. Furthermore, the marketing approval in Europe in the first quarter of 2004 of NovoSeven® for the control of bleeding in patients with factor VII deficiency and Glanzmann's thrombasthenia added to growth. Treatment of spontaneous bleeds for congenital inhibitor patients remains the largest area of use. In addition, sales are perceived to have been positively affected by increased investigational use of NovoSeven® influenced by data from clinical trials from the NovoSeven® expansion programme.

#### Growth hormone therapy (Norditropin® and Norditropin® SimpleXx®)

In local currencies sales of Norditropin® and Norditropin® SimpleXx® products increased by 11% compared to 2003. Measured in Danish kroner sales increased by 9% to DKK 2,317 million and were driven

by Europe and North America. The prefilled delivery device NordiFlex® was launched in Japan and selected European countries during 2004 as well as in the US market in January 2005.

In Japan, the launch of NordiFlex® in July 2004 contributed to the positive development in Novo Nordisk's market share during the second half of 2004; however, the government-mandated reduction in reimbursement prices in April 2004 impacted sales negatively.

#### Other products

Sales of other products within the biopharmaceuticals segment, which predominantly consists of hormone replacement therapy (HRT) related products, grew by 11% in local currencies and by 7% in Danish kroner to DKK 1,822 million.

The sales growth in 2004 was positively impacted by the change in July 2003 of the US distribution set-up for Novo Nordisk's HRT products and by the continued market penetration of the low-dose continuous-combined product Activella® and the topical oestrogen product Vagifem®. However, global sales in 2004 were negatively impacted by the overall contraction of the HRT market.

### Costs, licence fees and other operating income

The cost of goods sold increased by 9% to DKK 8,050 million, representing a gross margin of 72.3%, an increase from 71.7% in 2003. Gains from an improved product mix as well as productivity increases, totalling slightly above 1 percentage point, were only partially offset by a negative currency impact.

Total non-production-related costs increased by 9% to DKK 14,576 million. The increase reflects especially costs related to sales and distribution, which increased in line with the growth in sales. The main drivers of sales and distribution costs in 2004 were, respectively, launch activities for Levemir® in Europe; an increased US sales force, primarily focusing on promotion of insulin products but also related to the changed set-up for HRT products; and costs related to an impairment charge on intangible assets in Brazil.

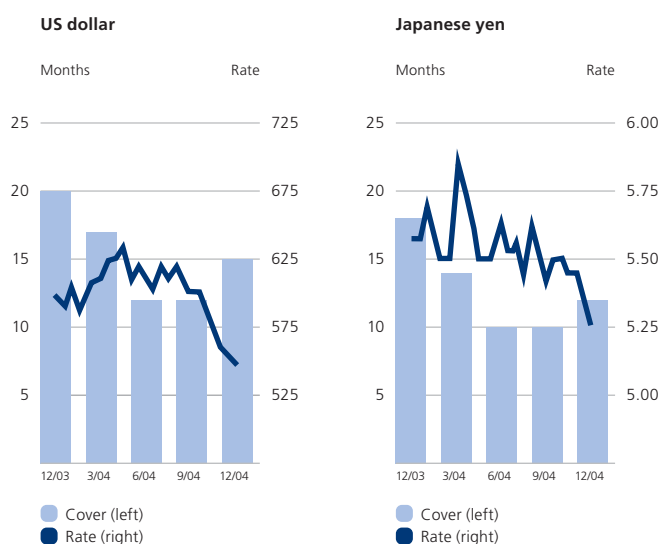
As a consequence of the implementation of IFRS 2 'Share-based payment', Novo Nordisk in 2004 expensed costs related to share-based programmes amounting to DKK 104 million. The comparable expense included in the IFRS-based statements for 2003 was DKK 76 million.

Total costs related to depreciation, amortisation and impairment losses in 2004 were DKK 1,892 million compared to DKK 1,581 million in 2003. The costs for 2004 include DKK 326 million in non-recurring impairment charges, compared to DKK 178 million in 2003.

Total income related to licence fees and other operating income was DKK 575 million in 2004 compared to DKK 1,036 million in 2003, primarily reflecting a lower level of non-recurring income in 2004.

### Net financials and tax

Net financials showed a net income of DKK 477 million in 2004 compared to DKK 954 million in 2003, reflecting a lower level of hedging income in 2004. The foreign exchange hedging gains, primarily related to the hedging of the US dollar, were DKK 663 million compared to DKK 1,195 million in 2003. Foreign exchange hedging gains in the fourth quarter of 2004 were positively impacted by un-



## MANAGEMENT REPORT

realised gains from the mark-to-market valuation of foreign exchange options, primarily related to the US dollar.

Novo Nordisk has as per 27 January 2005 hedged expected net cash flows in relation to US dollars, Japanese yen and British pounds for 14, 11 and 8 months, respectively.

The effective tax rate for 2004 was 33%, down from 34% in 2003, corresponding to a total tax expense of DKK 2,444 million in 2004.

### Capital expenditure

Net capital expenditure for property, plant and equipment for 2004 was realised at DKK 3.0 billion, compared to DKK 2.3 billion for 2003. The main investment projects in 2004 were the expansion of purification capacity for Levemir®, as well as expansion of filling capacity for insulin products, including FlexPen®.

### Free cash flow and financial reserves

Free cash flow for 2004 was realised at DKK 4,278 million compared to DKK 3,846 million for 2003. This is higher than previously anticipated and is primarily related to a reduction in the average number of credit days for trade receivables.

Novo Nordisk's financial resources at the end of 2004 were DKK 10.2 billion compared to DKK 11.4 billion in 2003. Included in the financial resources are undrawn committed credit facilities of close to DKK 6.7 billion.

### Non-financial performance: Progress towards sustainability

In managing its business with a Triple Bottom Line approach, Novo Nordisk is linking a set of key targets to sustainability goals. Twenty top-level indicators help track performance over time in regard to environmental, social and socio-economic goals. They relate to six areas of strategic importance: living our values, access to health, our employees, our use of animals, eco-efficiency and compliance, and economic contribution. The indicators have been defined through consultation with stakeholders, while methods of measuring and targets are set by Novo Nordisk's management. For details and comparative data, see page 50–51 and [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

#### Living our values

The employee survey, eVoice, is conducted annually and systematically measures the working climate. This includes a measure of the organisational support for and understanding of responsible business practices. In 2004, the average of respondents' answers – on a scale from 1–5, with 5 being the highest score – was 4.2. Regular independent facilitations assess compliance with the Novo Nordisk Way of Management. In 2004, 96% of identified corrective actions were accomplished. Performance on these indicators is stable over time and better than targets.

Novo Nordisk's commitment to social and environmental good practices extends throughout the supply chain. Suppliers are evaluated with respect to basic labour rights and environmental management. Due to the company's expanding global production, new sup-

pliers have been introduced to the company and its standards. To focus on key impacts, the triviality limit has been raised. During 2004 suppliers accounting for 20% of the total value of Novo Nordisk's purchases were evaluated. Of these, 72% reported a satisfactory performance. All suppliers with an unsatisfactory rating receive a feedback letter from Novo Nordisk, and when needed an action plan is agreed upon. In 2004, nine key suppliers were audited, following similar processes as Novo Nordisk's regular quality audits.

#### Access to health

Novo Nordisk has built its strategy for improved access to diabetes care on the World Health Organization's (WHO) key priorities: national healthcare strategies, national healthcare capacity, best possible pricing and additional funding. Novo Nordisk serves around 20% of the global diabetes care market, supplying insulin to 11–13 million people. The global health programmes, providing awareness, education or treatment of diabetes, are reaching out to at least 21 million people.

The best possible pricing scheme, offered by Novo Nordisk to 49 of the least developed countries (LDCs) in the world, was monitored closely in 2004 to ensure that sales offers were followed up and realised purchase prices were at or below the level at 20% of average prices in the industrialised countries. As a result, 33 LDCs chose to buy insulin under this pricing scheme, as compared with 16 LDCs in 2003.

#### Our employees

Since 2003 efforts to improve health and safety have focused on prevention. As a result, the frequency of occupational injuries per million working hours has gone down; from 8.9 in 2002 to 5.6 in 2004. Regrettably, Novo Nordisk had one fatal accident in 2004 in connection with a social team event. Steps have been taken to ensure that employees' safety is properly considered before embarking on such activities.

Employee turnover at Novo Nordisk was 7.3% in 2004, which is satisfactory compared to the industry.

#### Our use of animals

Novo Nordisk sets goals to reduce, refine and replace animal experiments and to improve animal welfare. Hence, despite a significantly higher research activity in early phases, when animal experimentation is required, the number of animals purchased in 2004 only rose by 10% to 47,311 animals, of which 96% are mice, transgenic mice and rats.

The goal to totally remove animal test types for biological product control by 2004 had to be postponed until 2005. An FDA approval, obtained in 2004, enables Novo Nordisk to considerably reduce (by approximately 80%) the number of animals used for biological product control in one of the two remaining tests. A 60% reduction in the use of rabbits has already been achieved by the end of 2004. A novel test for glucagon was fully implemented in the third quarter of 2004. The test uses isolated cells in vitro rather than living animals, and rabbits are therefore no longer used for this purpose.

#### Eco-efficiency and compliance

The 2003–2008 environmental strategy identified eight focus areas, of which climate change has key priority. Novo Nordisk has agreed

to set the goal for absolute reductions of its net CO<sub>2</sub> emission by 2014. The year 2004 will serve as the basis for evaluation of the target achievement.

In 2004, CO<sub>2</sub> emissions were 253,000 tons. This is a significant increase from previous years. There are two reasons: First, the emission factors from electricity purchased in Denmark have increased by approximately 15%. Secondly, Novo Nordisk no longer purchases green electricity certificates for its site in Kalundborg. The company is currently investigating in detail the renewable energy market, product offerings and the possibilities to purchase credible certified electricity from renewable sources.

Eco-productivity is a means of measuring the ability to 'produce more with less'. The medium-term targets for 2001–2005 are a 5% annual improvement in water efficiency and a 4% annual improvement in energy efficiency. In 2004 the achieved improvements were 7% and 8% respectively.

Compliance with regulatory requirements is a key indicator for the standards of environmental management at local production sites. In 2004, there were 76 breaches of regulatory limits, which is a marked improvement compared with 2003, with a record number of 105.

In 2004 there were 30 incidents of accidental releases, as compared with 20 in 2003. Immediate measures are taken to mitigate future events, including retraining of personnel. In August 2004, Novo Nordisk had two accidental releases of materials containing genetically modified organisms (GMOs) at the production site in Bagsværd. The affected areas were disinfected immediately, and no harm was done to humans or the environment.

However, since the goal remains to be zero breaches and zero accidental releases, this performance is not satisfactory. Steps are taken to improve compliance.

### **Economic contribution**

The 'footprint' model provides an understanding of Novo Nordisk's local and global contributions to society. In the reports from the largest production sites, the company's contribution to socio-economic growth is assessed and quantified. This includes job creation, local taxes paid and local procurement.

### **Knowledge assets**

Being a research driven and knowledge intensive company, knowledge is considered a key asset for further exploration. Novo Nordisk takes a strategic and systematic approach, viewing knowledge from a holistic approach that seeks to balance three perspectives: behaviour/culture, technology/communication and performance economics.

To ensure progress and report on the knowledge base, knowledge assets are defined as stakeholder resources (employees, customers, relationships and partnerships) and structural resources (technology and processes).

Novo Nordisk's exposure to patent expiry is significantly lower than that of industry peers. No major patents expire within a 5-year period. In 2004 Novo Nordisk had a total of 778 active patent families, as compared with 701 in 2003.

Two key elements of the patent strategy are to raise patent awareness internally, through training and the appointment of

'patent champions' in the R&D organisation, and to improve the intellectual asset management.

## **Research and development update**

### **Diabetes care**

In December, Novo Nordisk filed the amended New Drug Application related to Levemir® with the US regulatory authorities (FDA), and Novo Nordisk expects a US marketing approval around mid-2005, following an expected six months' review period by the FDA.

The liraglutide phase 2b study was, as expected, initiated in January 2005 and Novo Nordisk still expects to initiate the phase 3 clinical trial around the turn of the year 2005/6.

Novo Nordisk and the diabetes business unit of Medtronic Inc entered into an agreement in November, covering the US and Puerto Rico, to develop the world's first prefilled cartridge for use with Paradigm®, Medtronic's external insulin pumps. Prefilled cartridges containing NovoLog® are expected to offer a convenient treatment option for people using Paradigm® pump therapy.

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 programme as of 26 January 2005. Following the fulfilment of closing conditions, including approval by the US competition authorities as well as approval by Aradigm's shareholders, Novo Nordisk's wholly-owned affiliate Novo Nordisk Delivery Technologies, Inc now employs approximately 130 former Aradigm employees who have been dedicated to the AERx® iDMS programme.

In November, The University of Oxford Diabetes Trials Unit, in collaboration with Novo Nordisk, initiated the 4-T study (Treating To Target in Type 2 Diabetes). The study compares safety and efficacy of three different insulin treatment regimens in patients with type 2 diabetes, who are inadequately controlled with oral antidiabetic agents. The objective of this three-year study is to provide evidence and guidance on 'how best to treat people with type 2 diabetes with insulin', with the aim of preventing long-term complications and preserve quality of life. Initial results from the study, which includes approximately 700 patients, are expected during 2006, with final results expected during 2008.

### **Biopharmaceuticals**

Novo Nordisk submitted the regulatory dossier for marketing approval of the use of NovoSeven® for treatment of blunt trauma to the European Medicines Agency in early January 2005. The application is a supplemental new drug application with an expected six months' review time. Novo Nordisk still expects to initiate a US trauma trial in the second quarter of 2005. The study is expected to comprise some 600 blunt and penetrating trauma patients.

Following recent consultations with the FDA, Novo Nordisk expects to initiate a confirmatory clinical trial in the US and Europe as well as in other countries for the use of NovoSeven® in intracerebral haemorrhage (ICH) mid-2005, involving some 450 patients. Novo Nordisk expects this trial to generate further clinical documentation for filing with the FDA for regulatory approval in the US of NovoSeven® in connection with ICH. Novo Nordisk still expects to

## MANAGEMENT REPORT

file an application by mid-2005 for marketing approval in Europe for the use of NovoSeven® in connection with ICH.

In November, the Japanese Ministry of Health, Labour and Welfare granted approval of NovoSeven® for treatment of bleeding episodes in patients with acquired haemophilia, in addition to the existing approval for treatment of congenital haemophilia patients with inhibitors.

Also in November, Novo Nordisk was granted marketing authorisation in the US for Norditropin® for treatment of severe growth hormone deficiency in adults.

Following analysis of the phase 2 data on the use of human growth hormone in complicated fractures, further clinical development has been discontinued. The phase 2 data showed a significant acceleration of fracture healing; however, pharma-economic analysis did not justify further clinical development. Novo Nordisk will continue to develop human growth hormone for other new therapeutic indications.

### Equity

Total equity was DKK 26,504 million at the end of 2004, equal to 70.8% of total assets, compared to 71.7% at the end of 2003.

### Proposed dividend

At the Annual General Meeting on 9 March 2005, the Board of Directors will propose a 9% increase in dividend to DKK 4.80 per share of DKK 2, corresponding to a pay-out ratio of 31.8%, compared to 30.8% for the financial year 2003. No dividend will be paid on the company's holding of own shares.

### Treasury shares and share repurchase programme

As per 28 January 2005, Novo Nordisk A/S and its wholly-owned affiliates owned 22,585,129 of its own B shares, corresponding to 6.37% of the total share capital. During 2004, Novo Nordisk purchased 6,480,000 B shares at a cash value of DKK 2 billion, which is in line with the share repurchase programme as announced in April 2004. Novo Nordisk still expects to purchase additional B shares during 2005 equivalent to a cash value of DKK 2 billion, with the remaining shares under the total DKK 5 billion share repurchase programme to be acquired during 2006.

### Long-term share-based incentive programme

As from 2004, Novo Nordisk's Executive Management and Senior Management Board (26 in total) participate in a performance-based incentive programme where Novo Nordisk B shares are annually allocated to a bonus pool when certain predefined business-related targets have been achieved. The annual maximum allocation of shares to the bonus pool is capped at the equivalent of eight months of salary per participant. The shares in the bonus pool are locked up for a three-year period before they are transferred to the executives at the expiry of the three-year lock-up period. Based on an assessment of the economic value generated in 2004 as well as the performance of the R&D portfolio and key sustainability projects, the Board of Directors on 27 January 2005 approved the estab-

lishment of a bonus pool for 2004 by allocating a total of 126,344 Novo Nordisk B shares, corresponding to a cash value of DKK 33.7 million. This allocation amounts to seven months of salary on average per participant.

### Audit Committee

The Audit Committee, which was established by the Board of Directors in March 2004, continues to be responsible, on behalf of the Board, for a number of predefined tasks. These include overseeing the internal and external auditors, accounting policies and internal controls, as well as procedures for handling complaints regarding financial reporting matters.

### Legal issues

As of 27 January 2005, Novo Nordisk Inc, together with the majority of hormone therapy product manufacturers, is a defendant in 16 product liability lawsuits. Since the initiation of the lawsuits in July 2004, three cases against Novo Nordisk Inc have been dismissed by the courts. Novo Nordisk's hormone therapy products (Activella® and Vagifem®) have been sold and marketed in the US since 2000. Until July 2003, the products were sold and marketed exclusively in the US by Pharmacia & Upjohn Corporation (now Pfizer). The proceedings are in their preliminary stages; however, Novo Nordisk is not expecting the claims to impact Novo Nordisk's financial outlook.

In January 2005, Novo Nordisk, Teva and Savient (formerly known as Bio-Technology General) have agreed to a partial settlement of their disputes over human growth hormone (hGH) intellectual property. Under the terms of the agreement, the three parties have granted each other cross-licences to any patents covering the hGH-active ingredient. An appeal of a District Court judgment regarding one portion of the dispute will continue, as will an interference proceeding in the US Patent and Trademark Office. The financial terms of the agreement are not disclosed, but the financial impact has been included in this annual report.

### Outlook 2005

Novo Nordisk expects a 10–15 percentage-point growth in sales for 2005 measured in local currencies based on expectations of a strong market for insulin products in general and the continued market penetration of Novo Nordisk's insulin analogue portfolio, combined with expectations of increasing NovoSeven® and Norditropin® SimpleXx® sales. However, as a consequence of the continued challenging currency environment, primarily related to the US dollar and related currencies, the sales growth measured in Danish kroner is expected to be around 10%.

For 2005, operating profit growth measured in local currencies and excluding the impact from non-recurring items is expected to be in line with Novo Nordisk's long-term target of growing operating profit by 15%. Measured in Danish kroner the growth in operating profit is expected to be around 5%, reflecting a significant, negative currency impact and no major non-recurring income in 2005.

Novo Nordisk expects a net financial expense of DKK 100 million, reflecting:



- a financial income, net of around DKK 100 million (excluding Novo Nordisk's share of loss & profit in associated companies), primarily related to expected gains from foreign exchange hedging contracts; and
- a negative impact from losses in associated companies of around DKK 200 million, primarily reflecting Novo Nordisk's share of the expected loss in ZymoGenetics, Inc.

Given the prevailing Danish corporation tax regime, Novo Nordisk expects the tax rate to be 32%, 1 percentage point lower than the tax rate realised for 2004.

Novo Nordisk plans capital expenditures of close to DKK 4 billion in 2005, primarily related to the construction of production plants for Levemir® as well as additional filling capacity for insulin products. Capital expenditure will include purchase of fixed assets from Aradigm Corporation of approximately DKK 300 million related to the transfer of the AERx® iDMS project to Novo Nordisk. Depreciation, amortisation and impairment losses are expected to be around DKK 1.9 billion and the free cash flow to be more than DKK 2 billion.

All of the above expectations are provided that currency exchange rates remain at the current level for 2005. All other things being equal, movements in key invoicing currencies will impact Novo Nordisk's operating profit in 2005 as illustrated below. ✱

<b>Invoicing currency</b>	Annual impact on Novo Nordisk's operating profit in 2005 of a 5% movement in currency
USD	DKK 280 million
JPY	DKK 130 million
GBP	DKK 80 million
USD-related	DKK 70 million

Note: USD-related currencies include CNY, CAD, ARS, BRL, MXN, CLP, SGD, TWD and INR.

## Forward looking statement

This management report contains forward-looking statements as the term is defined in the US 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, changes in reimbursement rules and governmental laws and related interpretation thereof, and unexpected growth in costs and expenses.

Risks and uncertainties are further described in reports filed by Novo Nordisk with the US Securities and Exchange Commission (SEC) including the company's Form 20-F, which was filed on 27 February 2004. Please also refer to the article 'Risk Management' on page 56. 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.

## FINANCIAL HIGHLIGHTS

SALES	2000	2001	2002	2003	2004	2003–2004	2003	2004
	DKK million	DKK million	DKK million	DKK million	DKK million	Change	EUR million	EUR million
<i>Diabetes care:</i>								
Insulin analogues	142	459	1,187	2,553	<b>4,507</b>	77%	344	606
Human insulin and insulin-related products	13,161	14,533	14,651	14,492	<b>14,383</b>	(1%)	1,950	1,933
Oral antidiabetic products (OAD)	1,080	1,392	1,620	1,430	<b>1,643</b>	15%	192	221
<b>Diabetes care total</b>	<b>14,383</b>	<b>16,384</b>	<b>17,458</b>	<b>18,475</b>	<b>20,533</b>	11%	2,486	2,760
<i>Biopharmaceuticals:</i>								
Haemostasis management (NovoSeven®)	2,252	3,071	3,593	3,843	<b>4,359</b>	13%	517	586
Growth hormone therapy	2,008	2,055	2,061	2,133	<b>2,317</b>	9%	287	311
Hormone replacement therapy	1,298	1,426	1,333	1,322	<b>1,488</b>	13%	178	200
Other products	544	449	421	385	<b>334</b>	(13%)	52	45
<b>Biopharmaceuticals total</b>	<b>6,102</b>	<b>7,001</b>	<b>7,408</b>	<b>7,683</b>	<b>8,498</b>	11%	1,034	1,142
<b>Total sales by segments</b>	<b>20,485</b>	<b>23,385</b>	<b>24,866</b>	<b>26,158</b>	<b>29,031</b>	11%	3,520	3,902
Europe	9,093	10,562	10,889	11,697	<b>12,411</b>	6%	1,574	1,668
North America	4,028	5,167	5,786	6,219	<b>7,478</b>	20%	837	1,005
International Operations	2,869	3,395	4,099	4,227	<b>4,844</b>	15%	569	651
Japan & Oceania	4,495	4,261	4,092	4,015	<b>4,298</b>	7%	540	578
<b>Total sales by geographical areas</b>	<b>20,485</b>	<b>23,385</b>	<b>24,866</b>	<b>26,158</b>	<b>29,031</b>	11%	3,520	3,902
Price and volume/mix	16%	17%	11%	15%	<b>15%</b>			
Currency	11%	(3%)	(5%)	(10%)	<b>(4%)</b>			
<b>Total growth</b>	<b>27%</b>	<b>14%</b>	<b>6%</b>	<b>5%</b>	<b>11%</b>			

### KEY FIGURES

	DKK million	DKK million	DKK million	DKK million	DKK million	Change	EUR million	EUR million
Operating profit	4,703	5,410	5,927	6,422	<b>6,980</b>	9%	864	938
Net financials	181	285	401	954	<b>477</b>	(50%)	129	64
Profit before income taxes	4,884	5,695	6,328	7,376	<b>7,457</b>	1%	993	1,002
Net profit	3,154	3,620	4,116	4,833	<b>5,013</b>	4%	650	674
Equity	16,620	19,700	22,477	24,776	<b>26,504</b>	7%	3,328	3,563
Total assets	24,597	28,662	31,612	34,564	<b>37,433</b>	8%	4,643	5,033
Capital expenditure (net)	2,123	3,829	3,893	2,273	<b>2,999</b>	32%	305	403
Free cash flow	2,712	186	497	3,846	<b>4,278</b>	11%	517	575

### PER SHARE/ADR OF DKK 2

	DKK	DKK	DKK	DKK	DKK	Change	EUR	EUR
Earnings per share	9.03	10.47	11.87	14.17	<b>14.89</b>	5%	1.90	2.00
Earnings per share diluted	9.03	10.45	11.85	14.15	<b>14.83</b>	5%	1.90	1.99
Proposed dividend	2.65	3.35	3.60	4.40	<b>4.80</b>	9%	0.59	0.65
Quoted price at year-end for B shares	285	342	205	241	<b>299</b>	24%	32	40

### RATIOS

	%	%	%	%	%	Long-term financial target in %
Growth in operating profit	32.6	15.0	9.6	8.4	<b>8.7</b>	15
Growth in operating profit, three-year average	24.1	22.7	19.1	11.0	<b>8.9</b>	
Operating profit margin	23.0	23.1	23.8	24.6	<b>24.0</b>	25
Return on invested capital (ROIC)	22.3	22.7	20.5	19.5	<b>20.6</b>	25
Cash to earnings	86.0	5.1	12.1	79.6	<b>85.3</b>	
Cash to earnings, three-year average	66.3	56.2	34.4	32.3	<b>59.0</b>	60
Net profit margin	15.4	15.5	16.6	18.5	<b>17.3</b>	
Return on equity	19.6	19.9	19.5	20.5	<b>19.6</b>	
Equity ratio	67.6	68.7	71.1	71.7	<b>70.8</b>	
Change in market capitalisation	56.2	20.4	(40.4)	15.4	<b>21.9</b>	

Key figures and per share data are translated into EUR as supplementary information – the translation is based on the currency rate at 31 December 2004 (EUR 1=DKK 7.4381).

## ENVIRONMENTAL AND SOCIAL HIGHLIGHTS

ENVIRONMENTAL			2000	2001	2002	2003	2004
<b>Resources</b>	Water consumption	1,000 m <sup>3</sup>	1,429	1,790	2,044	2,621	<b>2,756</b>
	Energy consumption	1,000 GJ	1,732	1,838	2,083	2,299	<b>2,408</b>
	Raw and packaging materials	1,000 tons	76	88	93	110	<b>111</b>
<b>Wastewater</b>	Volume	1,000 m <sup>3</sup>	1,121	1,424	1,714	2,169	<b>2,226</b>
	COD	Tons	723	830	971	1,187	<b>1,448</b>
	Nitrogen	Tons	63	86	111	122	<b>121</b>
	Phosphorus	Tons	11	15	17	21	<b>21</b>
<b>By-products (biomass)</b>	Volume	1,000 m <sup>3</sup>	141	147	155	181	<b>155</b>
	Nitrogen	Tons	1,167	1,415	1,649	1,846	<b>1,876</b>
	Phosphorus	Tons	353	423	504	555	<b>530</b>
<b>Waste</b>	Waste (total)	Tons	10,551	14,866	12,935	21,356	<b>21,855</b>
	Non-hazardous waste	Tons	–	7,300	7,032	9,370	<b>9,203</b>
	Hazardous waste	Tons	–	7,566	5,903	11,986	<b>12,652</b>
	Recycling percentage of total waste	%	45	50	41	41	<b>40</b>
<b>Emissions to air</b>	Organic solvents	Tons	78	75	149	137 <sup>1)</sup>	<b>115</b>
	Ozone-depleting substances	Kg	1,561	915	1,351	1,047	<b>1,176</b>
	CO <sub>2</sub>	1,000 tons	139	143	149	153	<b>253</b>
	SO <sub>2</sub>	Tons	270	245	162	158	<b>288</b>
	NO <sub>x</sub>	Tons	272	251	283	291	<b>452</b>
<b>Environmental Impact Potentials</b>	Global warming	1,000 tons CO <sub>2</sub> -eqv	142	145	152	155	<b>255</b>
	Ozone layer depletion	Kg CFC <sub>11</sub> -eqv	153	41	83	43	<b>60</b>
	Acidification	Tons SO <sub>2</sub> -eqv	460	421	360	361	<b>604</b>
	Eutrophication	Tons NO <sub>3</sub> -eqv	1,040	1,291	1,417	1,598	<b>1,803</b>
<b>Eco-productivity indices (EPIs)</b>	EPI for water		110	102	116	110	<b>107</b>
	EPI for energy		111	114	115	124	<b>108</b>
<b>Compliance</b>	Breaches of regulatory limit values		9	68	30	105	<b>76<sup>2)</sup></b>
	Accidental releases		2	5	12	20	<b>30</b>
	Complaints		2	32	7	11	<b>13</b>
<b>SOCIAL</b>							
<b>Basic employee statistics</b>	Employees (total) <sup>3)</sup>		13,752	16,693	18,372	19,241	<b>20,725</b>
	Female	%	50.8	50.7	49.7	49.4	<b>49.1</b>
	Male	%	49.2	49.3	50.3	50.6	<b>50.9</b>
	Rate of absence <sup>4)</sup>	%	4.0	3.8	2.7	3.1	<b>3.2</b>
	Rate of employee turnover <sup>4)</sup>	%	10.6	7.7	6.4	7.1	<b>7.3</b>
<b>Health &amp; safety</b>	Frequency of occupational injuries	per million working hours	8.4	8.2	8.9	5.4	<b>5.6</b>
	Frequency of occupational illnesses	per million working hours	1.7	2.2	1.1	1.1	<b>1.3</b>
	Fatalities		–	–	–	0	<b>1</b>
<b>Training costs</b>	Annual training per employee <sup>5)</sup>	DKK	8,393	8,201	8,189	7,518	<b>8,992</b>
<b>OTHER</b>							
<b>Purchased animals</b>	Number of animals purchased		61,512	55,876	48,128	42,869	<b>47,311</b>
<b>Patent families</b>	Active patent families to date		526	590	654	701	<b>778</b>
	New patent families (first filing)		85	107	114	140	<b>145</b>
<b>Environmental costs and investments</b>	Environmental costs	DKK million	93.2	129.7	139.1	151.4 <sup>6)</sup>	<b>155.3</b>
	Environmental investments	DKK million	30.1	44.3	14.4	23.0	<b>54.0</b>
	as share of total investments in tangible assets <sup>7)</sup>	%	1.4	1.2	0.4	1.0	<b>1.8</b>
<b>Economics<sup>7)</sup></b>	R&D as share of sales	%	16.6	16.6	15.9	15.5	<b>15.0</b>
	Total corporate tax as share of sales	%	8.4	8.9	8.9	9.7	<b>8.4</b>
	Employee income taxes	DKK million	–	1,597	1,853	2,010	<b>2,065</b>
	Novo Nordisk exports as share of Danish exports	%	3.4	4.1	4.4	4.4	<b>3.9</b>

<sup>1)</sup> Was reported as 140. Reporting error now corrected.

<sup>2)</sup> Includes breaches that are also registered as accidental releases. Two of them are accidental releases of GMOs.

<sup>3)</sup> Headcount at the end of 2004. The full-time equivalent is 20,285.

<sup>4)</sup> 2002–2004 figures cover all employees, whereas figures for 2000–2001 comprise only employees in Denmark and employees at production sites outside Denmark.

<sup>5)</sup> Average spent on training costs per employee based on headcount.

<sup>6)</sup> Was reported as 149.8. Reporting error now corrected.

<sup>7)</sup> Financial figures 2001–2004 have been changed due to adoption of IFRS. See Note 1 on page 64.

# TRIPLE BOTTOM LINE PERFORMANCE INDICATORS

## STRATEGIC AREAS

### Living our values

Two indicators show how we live up to the company's values, as perceived by employees. This is measured as part of the climate survey, eVoice, conducted annually. Responses are given on a scale from 1 to 5, with 5 being the highest score. One indicator shows follow-up on the facilitation process.

### Access to health

Two indicators measure progress on one of the programmes for global access to health, the best possible pricing scheme in Least Developed Countries (LDCs). In 2004 there were 50 LDCs.

### Our employees

Four indicators measure standards of health and safety in the workplace, employee development and equal opportunities. Responses in the eVoice climate survey are given on a scale from 1 to 5, with 5 being the highest score.

### Our use of animals

Two indicators track efforts to reduce the number of experimental animals and improve their welfare.

### Eco-efficiency and compliance

Two environmental indicators, eco-productivity indices (EPIs), are based on eco-efficiency thinking and reflect internationally adopted views. Full compliance with local laws and regulations is a company policy. Certification of production facilities is instrumental to that end.

### Economic contribution

Five financial measures for reporting to shareholders and the financial markets serve as indicators for economic contribution.

## INDICATORS

Average of respondents' answers as to whether social and environmental issues are important for the future of the company.

Average of respondents' answers as to whether management demonstrates in words and action that they live up to our Values.

Percent of fulfilment of action points planned arising from facilitations of the Novo Nordisk Way of Management and Values.

Number of LDCs where Novo Nordisk operates.

Number of LDCs which have chosen to buy insulin under the best possible pricing scheme.

Frequency of occupational injuries.

Employee turnover rate.

Average of respondents' answers as to whether their work gives them an opportunity to use and develop their competences/skills.

Average of respondents' answers as to whether people from diverse backgrounds have equal opportunities (for example in terms of hiring, promotion and training) at Novo Nordisk, regardless of gender, race, ways of thinking etc.

Percent of animal test types removed from external and internal specification.

Housing conditions for experimental animals, considering the needs of the animals.

Annual improvement in water efficiency.

Annual improvement in energy efficiency.

Compliance.

ISO 14001 implementation.

Operating profit margin.

Growth in operating profit.

Total corporate tax as share of sales (corporation tax in profit and loss/sales).

Return on invested capital (ROIC).

Cash to earnings (three-year average).

IMPACT	2001 <sup>1)</sup>	2002	2003	2004	TARGETS 2004–2007
Organisational support for and understanding of responsible business practices.	4.3	4.1	4.0	<b>4.2<sup>2)</sup></b>	≥ 3.5
Integration of corporate values in all decisions.	3.6	3.5	3.5	<b>3.8<sup>2)</sup></b>	≥ 3.5
Corrective actions on values following facilitations.	90%	95%	99%	<b>96%</b>	80%
Access to essential medicines.	N/A	30	30	<b>35</b>	Best possible pricing scheme in all LDCs.
Affordability of essential medicines.	N/A	19	16	<b>33<sup>3)</sup></b>	Best possible pricing scheme in all LDCs.
Increased quality of life for employees, improved work flow and productivity, and less absence due to illness.	8.2	8.9	5.4	<b>5.6</b>	Continuous decrease.
Influx and outflux of knowledge.	7.7	6.4	7.1	<b>7.3</b>	Reduction of turnover.
Increased competence level for employees and increased competence capital in the company.	3.8	3.7	3.7	<b>3.8<sup>4)</sup></b>	≥ 3.5
Increased diversity in the workplace.	3.9	3.8	3.7	<b>3.8<sup>4)</sup></b>	≥ 3.5
Reduction and replacement of experimental animals.	18%	64%	73%	<b>82%</b>	Total removal of animal test types for biological product control by 2005. <sup>5)</sup>
Improved welfare of experimental animals.	Housing prototypes	New housing standards	New facilities in use	New facilities in use	Full implementation of new Novo Nordisk standards for optimal housing.
Water use efficiency.	2%	16%	10%	<b>7%</b>	5% improvement per annum 2001–2005
Energy use efficiency.	14%	15%	24%	<b>8%</b>	4% improvement per annum 2001–2005
Compliance with regulatory requirements.	68	30	105	<b>76</b>	Zero breaches.
Accidental releases.	5	12	20	<b>30</b>	Zero accidental releases.
Pollution prevention through decreased use of raw materials, water and energy, and decreased environmental impact per produced unit.	System described	6 facilities	6 facilities	<b>0 facilities</b>	ISO 14001 certification of all production facilities worldwide by 2007. The next is planned for 2005.
Contribution to company efficiency, growth and investors' economic capacity.	23.1%	23.8%	24.6%	<b>24.0%</b>	25% <sup>6)</sup>
Contribution to company growth and investors' economic capacity.	15.0%	9.6%	8.4%	<b>8.7%</b>	15% per annum <sup>6)</sup>
Contribution to national economic capacity.	8.9%	8.9%	9.7%	<b>8.4%</b>	
Efficiency of invested capital, contribution to asset base and investors' economic capacity.	22.7%	20.5%	19.5%	<b>20.6%</b>	25% per annum <sup>6)</sup>
Contribution to the company's degree of freedom in terms of available cash funds (resources).	56.2%	34.4%	32.3%	<b>59.0%</b>	60% as a three-year average <sup>6)</sup>

1) Comparable data for 2000 do not exist, as this set of indicators was defined in 2001.

2) The survey population was 21% of all employees. The population was small as the questions were not mandatory.

3) In 2004 a margin of +10% to the realised sales price (ie 20–22%) is permitted where exchange rates fluctuate. This occurred for three countries.

4) The survey population was 76% of all employees.

5) Target revised in 2004.

6) Long-term growth target. Financial figures have been changed due to adoption of IFRS. See Note 1 on page 64.

# Measuring contributions to society

**N**ovo Nordisk's business strategy aims to contribute to society in those areas where the company has outstanding knowledge and expertise. Access to health, ethical business practice, supply chain management and environmental management at all production sites are important for the institutional framework within which the markets work. The footprint model and the cash value distribution on the opposite page illustrate the relationship between Novo Nordisk and its economic stakeholders and their roles as drivers of economic activity in society.

The principles of economics have been justified by the success of the market economy, growth and societal wealth creation. Economic growth and trade combined with foreign investments that create employment are important factors in capacity building globally. Social indicators, though, show that the created wealth is unevenly distributed. In poor communities, investments and tax contributions are but one aspect of responsible business. Market failure, inadequate information and lack of societal institutions impede the workings of economic stakeholder mechanisms, in particular in the developing world. Performance-based principles, such as those developed by the Global Reporting Initiative, in conjunction with government regulation may be a way to ensure that the market economy is working for everyone.

## Direct and indirect local and global impact

To show the indirect impact of Novo Nordisk in Denmark (2004), we have estimated the indirect employment created by our production and by employees' consumption in Denmark and globally. The indirect effects are estimated by using production multipliers for the pharmaceutical industry and consumption multipliers from Statistics Denmark. A total of 11,839 direct jobs in Denmark translated into 42,673 global jobs in the supply chain due to production needs and the private consumption of employees in Denmark. The value of the jobs in Denmark is DKK 9.9 billion and DKK 3.9 billion in income taxes.

Key indicators of the company's direct economic and geographical impact are reported on page 53. Measured by sales, Novo Nordisk is the 11th largest Danish company. Most production facilities, 58% of the employees measured in full-time equivalents (FTE) and 88% of tangible assets are in Denmark. From 2003 to 2004, sales grew by 11%. 99% of sales are outside Denmark: 43% in

Europe, 26% in North America, 15% in Japan & Oceania and 16% in International Operations. 36% of the cash from customers goes to suppliers, who are primarily located in Denmark: The employee base (FTE) grew by 8%, primarily in North America (23%) followed by International Operations (19%) and Japan & Oceania (8%). 34% of the cash-added value was remuneration, mainly in the developed world, and particularly in Denmark. In 2004, total corporate taxes constituted 8% of sales. In Denmark 13% is paid as local taxes and 87% as state taxes. Most investors are Danish (59%), North American (25%) or British (13%). An estimated 60% of employees own a total of 1% of the shares.

## Value of knowledge and investments

Novo Nordisk's greatest value is societies' expectations of future products and solutions. This value originates from the skills, expertise and competences of the people at Novo Nordisk and is, although difficult to measure, of benefit to individuals as well as society. A rough measure of current values is wage share (54%) of the value added per employee (DKK 908,772 or USD 151,666). Expenditure on R&D is an important capacity builder for society and source of innovation creating future wealth for Novo Nordisk. The wage share (39%) of R&D is an indication of the company's impact as a capacity builder in the community. The level of investment is a measure of the company's future economic capacity. In 2004 Novo Nordisk invested DKK 3 billion in new production facilities, primarily in Brazil, Denmark, France and the US, as compared with DKK 2.3 billion in 2003.

## Contribution to society locally and impact globally

Measured as a share of Danish GDP, turnover in 2004 accounted for 2%, a rise from 1.9% in 2003. In 2004 economic contribution to overall economic wealth for society through the value added was 1.5% of Gross Value Added (GVA), 3.9% of Danish exports and 0.5% of Danish employment. In 2004 Novo Nordisk accounted for 4.3% of Danish corporate taxes and Novo Nordisk's employees accounted for 0.6% of total Danish income tax.

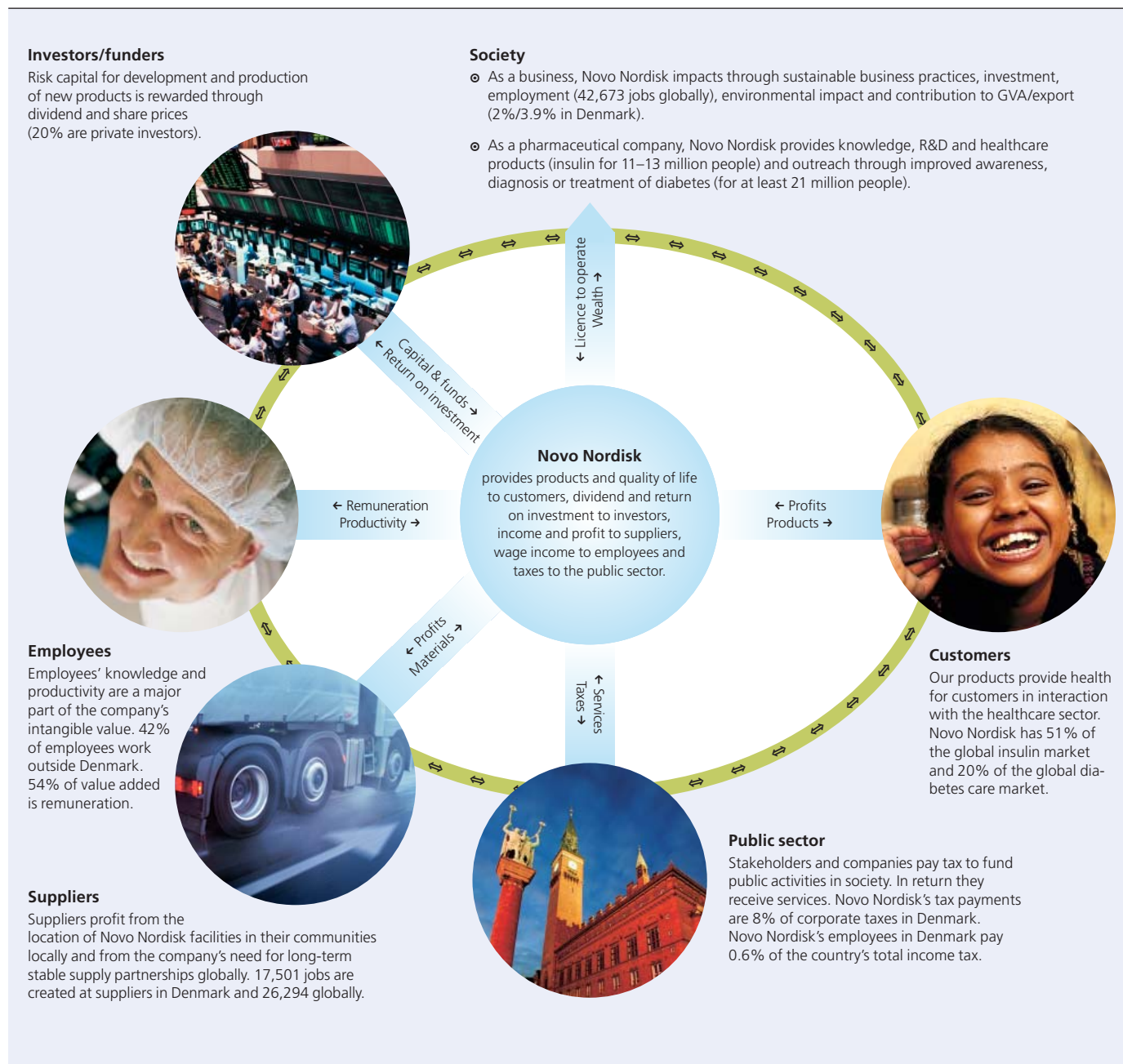
The company's impact on society through the value of products may be illustrated through the number of people reached globally. Novo Nordisk serves 20% of the diabetes care market and with an insulin market share of 51%, supplies insulin to 11–13 million people globally. These are primarily people with diabetes in the developed world, but Novo Nordisk is also supplying 3–5 million people in the developing world, in many countries as the only provider of insulin. The burden of diabetes is forecast to worsen in the future. It is not enough for companies to contribute to access to health in the developing world; products must be affordable and income must be generated in the local economies to generate funds for a sustainable healthcare system. During 2004 Novo Nordisk created new jobs and income opportunities both in China (118) and Brazil (253).

See the indicators of current and future global health at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004) and read more about the effect of creating jobs and income in the developing world. \*

IMPACTS (2004)	Jobs	Income	Tax
		DKK billion	DKK billion
Direct impact in Denmark	11,839	5.0	2.1
Indirect impact: suppliers	17,501	4.1	1.5
Indirect impact: employees	3,476	0.8	0.3
Impact in Denmark	32,816	9.9	3.9
Impact globally	42,673	–	–

## Novo Nordisk's economic stakeholder model

This model illustrates Novo Nordisk and its economic stakeholders and the interactions that drive economic growth in well-developed societies. When, for instance, investors provide risk capital so that Novo Nordisk can develop new products, it will benefit customers, employees and suppliers. For customers, in turn, the products from Novo Nordisk improve their ability to contribute to society. When employees, suppliers and investors spend their income to buy goods and services and make investments, they too contribute to wealth generation in society. And in their capacity as citizens in the local and global community, all economic actors pay taxes to the public sector in return for services. Our sustainable business practices are mechanisms that improve the outcome of the market economy model. The interactions and multiplier effects are illustrated by the green circle linking the stakeholders.



### CASH VALUE DISTRIBUTION (2004)

		DKK million	Cash received	Cash-added value
Customers	a: Cash received for products and services (from sales)	28,754	100%	
Suppliers	b: Cash payments for materials, facilities and services <sup>1)</sup>	10,320	36%	
Company cash	Cash-added value (a minus b)	18,434		100%
Employees	c: Remuneration	9,872	34%	54%
Investors/funders	d: Dividend and interest payments	3,560	13%	19%
Public sector	e: Taxes	2,866	10%	16%
Management	f: Future growth	2,136	7%	11%

<sup>1)</sup> Cash payments outside Novo Nordisk. The figure includes cash received from licence fees, realised exchange rate gains and interest income.

# Corporate governance on the agenda

In 2004 a number of new national and international guidelines emerged. In Denmark, the Nørby Committee II set up by the Copenhagen Stock Exchange published a draft revision of its recommendations for good corporate governance. The European Commission continued to launch initiatives under the Corporate Governance action plan.

As a company organised under Danish law and with a primary listing on the Copenhagen Stock Exchange, Novo Nordisk is guided by the Nørby recommendations and the EU initiatives. As an international company listed in New York and London, Novo Nordisk is in compliance with the US Sarbanes–Oxley Act as a foreign private issuer and will seek inspiration from internationally recognised standards.

### Organisational structure

Novo Nordisk is a public limited liability company. Within that framework, shareholders have the ultimate authority over the company, and they exercise their right to make decisions regarding Novo Nordisk at general meetings. The company has a two-tier board structure consisting of the Board of Directors and Executive Management. The Board of Directors supervises the performance of the company, its management and organisation on behalf of the shareholders. It also participates in determining the company strategy. Executive Management, in turn, has responsibility for the company's daily operations. The two bodies are separate, and no person serves as a member of both.

### Shares and voting rights

The share capital in Novo Nordisk is divided into A shares and B shares. The A shares, which are solely owned by the Novo Nordisk Foundation via Novo A/S, 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. According to the Articles of Association of the Foundation, the A shares cannot be divested by Novo A/S or the Foundation. The A shares represent 15.2% of the capital and 64.1% of the entire voting power in the company. The A shares are not listed, whereas the B shares are listed on the Copenhagen and London Stock Exchanges, and on the New York Stock Exchange in the form of ADRs. There are no transferability restrictions on the B shares. Novo Nordisk is of the opinion that the current ownership structure is appropriate and preferable for the long-term development of the company. A revocation of the current voting rights differentiation cannot be implemented as this would violate the Articles of Association of the Foundation as approved by the Danish authorities. For further information on shares, see page 104.

### The Novo Nordisk Foundation

The objective of the Foundation is to provide a stable basis for the commercial and research activities of Novo Nordisk and support scientific, humanitarian and social purposes. The Foundation may, in connection with a capital increase in Novo Nordisk or a merger of Novo Nordisk with other companies, waive its controlling interest in

Novo Nordisk if it is necessary to uphold and develop the commercial and research activities of Novo Nordisk as an internationally competitive business. However, the Foundation shall strive to maintain material influence in Novo Nordisk through Novo A/S.

The Foundation supports Novo Nordisk in achieving its vision, ensuring competitive financial results and adhering to the Charter for Companies in the Novo Group. All strategic and operational matters are solely decided by the Board and the management of Novo Nordisk. Overlapping board memberships ensure that the Foundation and Novo Nordisk share a common vision and strategy.

### Shareholders' general meeting

General meetings are called with approximately three weeks' notice, and the agenda is accompanied by proxy forms enabling the shareholder to vote specifically on each item. The annual general meeting approves the annual report.

The general meeting elects 4–10 directors, and the auditor(s). All shareholders may ask questions at the general meetings. Proposals for resolutions at the Annual General Meeting must be submitted in writing to the Board no later than 1 February of any given year.

### The Board of Directors

The Board currently consists of 10 directors. Seven are elected by shareholders at general meetings, and three are Novo Nordisk employees from Denmark, elected by Danish employees.

Shareholder-elected directors serve for a one-year term and can be re-elected at the general meeting. Directors must retire at the first general meeting after having reached the age of 70. The chairmanship recommends to the Board whether directors should be nominated for re-election – among other things on the basis of an evaluation of their performance. The aim is to compose a board consisting of persons who have such knowledge and experience that the Board can, in the best possible way, attend to the interests of the shareholders, the employees and other stakeholders. Descriptions of the candidates' qualifications accompany the agenda of the general meeting.

According to Danish law, Novo Nordisk employees in Denmark are entitled to be represented by half of the total number of directors elected at the general meeting. Thus, employees have among themselves elected three directors, each of whom serves for a four-year term as per the current legislation. Directors elected by the employees have the same rights and obligations as the directors elected by the shareholders. For information on each director, see page 106.

All directors receive induction on joining the Board, and regularly update and refresh their competences and knowledge. The Board ordinarily meet seven times a year including a 2–3 day strategic session. All directors attended all board meetings in 2004. The Board ensures via a fixed annual calendar that it addresses the main tasks in a timely manner. With the exception of agenda items reserved for the Board's internal discussion, executives attend and may speak at the board meetings ensuring that the Board is sufficiently informed of the operations of the company. Executives' regular feedback



from meetings with investors enables directors to have insight into major shareholders' views of Novo Nordisk.

### **Chairmanship**

The chairman and the deputy chairman form the chairmanship of the Board. They carry out administrative tasks, such as the planning of board meetings to ensure a balance between determination of strategy and the financial and managerial supervision of the company. Other tasks include recommending the remuneration of directors and executives, and suggesting candidates for election by the general meeting.

### **The Audit Committee**

The Board established an Audit Committee in March 2004, with three members. All members qualify as independent as defined by the US Securities and Exchange Commission (SEC). One member is designated as chairman and two members have been designated as Audit Committee Financial Experts.

The Audit Committee assists the Board with the oversight of a) the external auditors, b) the internal auditors, c) the procedure for handling complaints regarding accounting, internal controls, auditing or financial reporting matters ('whistleblower' system), d) the accounting policies, and e) the systems of internal controls.

### **Executive Management**

Executive Management is responsible for the day-to-day management of the company. It consists of the president and CEO, and five other executives. The Board appoints Executive Management and determines their remuneration. The chairmanship reviews the performance of the executives. As part of the Organisational Audit process, the chairmanship identifies successors to executives and presents the names of such candidates to the Board for approval. Executives must retire having reached the age of 62. For information on each executive, see page 107.

### **Remuneration Policy**

*Policy.* The Remuneration Policy is designed to attract, retain and motivate the directors and executives.

*Directors.* Each director receives a fixed fee per year at a competitive level. The chairmanship recommends to the Board the amount, which is reported in the annual report. The total remuneration of the directors is approved by the annual general meeting in connection with the approval of the annual report. Directors are not offered stock options, warrants or participation in other incentive schemes.

*Executives.* Executive remuneration is evaluated against a Danish benchmark of large companies with international activities. The remuneration package consisting of a base salary, cash bonus, pensions, non-monetary benefits and a long-term incentive is determined by the Board, and should align the interests of the executive with those of the shareholders.

For further information on remuneration, see Note 35 on page 87.

### **Assessment of the Board of Directors and Executive Management**

The Board of Directors annually conducts a self-assessment procedure to improve the performance of the Board and the cooperation

with Executive Management. This process is directed by the chairmanship and may be facilitated by an external consultant. Written questionnaires form the basis for the process that evaluates whether each director and executive participates actively in the Board discussions and contributes with independent judgement within, for example, organisation and management as well as financial and operational strategy. Further, assessment is made as to whether the director is inspirational and whether the environment supports open discussion at board meetings. The Board continuously assesses, formally once a year, the performance of each executive. The chairman also conducts an annual interview with each executive.

### **Risk management**

Executive Management is responsible for the risk management process, including risk identification, assessment of probability and potential impact, and initiation of risk-mitigating actions. Major risks are systematically identified and regularly reported to Executive Management and the Board of Directors. For details on risk management, see page 56.

### **Internal control**

The Board of Directors has overall responsibility for Novo Nordisk's system of internal controls and the Audit Committee reviews the adequacy of the internal controls over financial reporting. Among other things the review is based on reports from the organisation, internal audit function as well as the external auditors.

### **Audit**

The Annual General Meeting in 2004 elected two independent auditing firms, who act in the interest of the shareholders, as well as the public in general. The Board proposes at the Annual General Meeting 2005 to elect only one auditor, in line with the amended requirements for listed Danish companies. The auditors report any significant findings regarding accounting matters, internal control deficiencies etc via the Audit Committee to the Board and in the auditor's long-form report. A more detailed management report on internal controls and accounting issues is provided to Executive Management. The Audit Committee supervises the annual audit process, which includes meetings with the auditors. In order to safeguard independence and objectivity, the Audit Committee pre-approves services to be provided by the principal auditor. The principal auditor is restricted from providing certain non-audit services and, as from 2004, the lead partner is required to rotate every five years.

### **Corporate governance codes and practices**

Novo Nordisk is in general in compliance with the codes of good corporate governance designated by stock exchanges in Copenhagen, New York and London. For a detailed review of Novo Nordisk's compliance with the applicable codes and a more extensive review of Novo Nordisk's corporate governance practices, see [novonordisk.com](http://novonordisk.com) \*

# Managing risks

Exploiting business opportunities relies on effective management and mitigation of risks. With a formalised governance structure on risk management and disclosure in place, Novo Nordisk is better positioned to respond promptly to events that may have a significant negative impact on the company's ability to meet its objectives, both short term and long term.

There's a fine balance between taking calculated, entrepreneurial risks and being overly precautionous. This is particularly true for companies in the pharmaceutical industry, where the pipeline from hypothesis to successful market penetration typically runs over more than a 10-year period. To Novo Nordisk, risk management is about identifying and reducing risk to an acceptable level. Novo Nordisk defines risk as 'any event that could have a significant negative impact upon our ability to meet our objectives'. Not just in terms of pursuing the Vision and meeting long-term financial targets, but also to protect employees and reputation. Hence, risk management considers both financial and non-financial risks, and reports on key risks through one integrated and systematic approach.

### Risk alert

In the wake of Enron, companies were alerted to improving not only their disclosure of business risks, but also internal control procedures. Novo Nordisk generally complies with current national and international codes of good corporate governance and also works to improve internal processes to identify risks, monitor trends and respond to emerging issues. However, in 2002 the Board of Directors and Executive Management took the opportunity to proactively address the emerging requirements on managing and reporting on risks. Against that background, the company established a process to standardise and optimise the company's risk management system.

### Risk reporting

Today, a common, systematic risk reporting approach is in place which

identifies and assesses material risks associated with Novo Nordisk's business. In quarterly reports to Executive Management and the Board of Directors, long-term and short-term risks are assessed and quantified in terms of reputational damage and financial impact. For each risk factor the potential impact is detailed, as are mitigating actions. This is being aligned with long-existing management processes such as the annual strategic planning, balanced scorecards and budgeting.

A Financial Corporate Governance and Risk Office has been established to handle implementation of the Sarbanes–Oxley requirements in Novo Nordisk and improve risk management. Reporting to the CFO and with links to the legal Corporate Governance function and Group Internal Audit, this office drives and consolidates risk reporting from each of the five business areas: discovery and development; manufacturing, sales and marketing; quality, regulatory and business development; finance, legal and IT; and people, reputation and relations. This is done in a process of consultation with internal risk stakeholders to ensure monitoring, measuring and reporting of risks, as well as implementation of mitigating actions. Moreover, a thorough risk assessment is included in all major projects.

### Risk Management Group

Executive Management has established a dedicated Risk Management Group of senior executives, representing all key business areas, and reporting to Executive Management and the Board of Directors. It sets the strategic direction and challenges, and analyses the risk and control information generated by the individual business areas. This challenger function helps eliminate blind spots and that potential cross-functional impacts are considered.

### Current risk profile

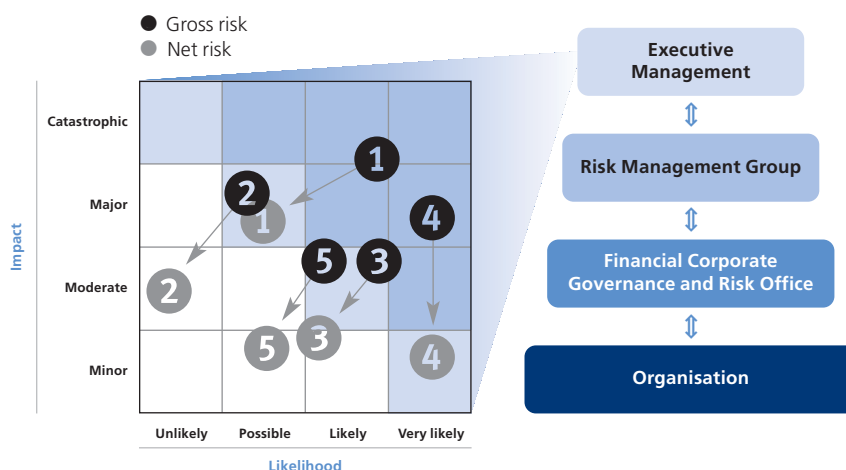
Key risks are mapped throughout the value chain of primary activities: from discovery and development, through manufacturing and logistics, and to marketing and sales. In addition, risks related to

## Risk management process

Examples of risk areas:

- ❶ Development of new drugs: strategic candidates in pipeline
- ❷ Manufacturing and quality: insufficient capacity
- ❸ Competition: new and stronger competitors
- ❹ Financial risks: foreign exchange rates
- ❺ Business ethics: reputational damage

Novo Nordisk's risk reporting matrix is updated on a quarterly basis. Two factors are considered: what is the likelihood of a negative event occurring, and what is the calculated impact on the business. Impacts are quantified and assessed in terms of potential financial loss and reputational damage.



support activities such as quality, regulatory and business development, finance, legal, IT and human resources are included. Below are examples of current key risks.

### Development of new drugs

Delays in the development of new drugs or failure to obtain approval from regulatory authorities could have a significant negative impact on Novo Nordisk's ability to maintain its position as a market leader in diabetes care and to reach its long-term financial targets. On the other hand, drug development requires taking calculated risks; statistically the industry must carry a 45% risk that drugs tested as far as into phase 3 studies will never reach the market.

An example of a current risk in this area is Novo Nordisk's investments in the development of the new pulmonary delivery system AERx®. To mitigate this risk, Novo Nordisk has expanded its licensing rights to AERx® iDMS inhaled insulin programme from Aradigm, and obtained full development and manufacturing rights. Under the agreement, Novo Nordisk has assumed all further responsibilities for AERx® iDMS development and funding.

### Manufacturing and quality

The major part of Novo Nordisk's manufacturing capacity is concentrated at a few sites in Denmark. While this entails a relatively low risk in terms of access to a skilled people base, natural disasters and political instability, the geographical concentration in itself poses a potential risk. Contingency planning includes preventive measures against major exposures, for example alternative stock facilities. In 2004 Novo Nordisk announced new investment projects in production facilities outside Denmark – in the US and China. This will not only reduce exposure in terms of production capacity, but will also facilitate better access to strategic markets and reduced currency risk exposure.

Based on the samples taken during internal quality audits and inspections by health authorities in 2004, Novo Nordisk's production is found to be in general compliance with international standards for good manufacturing practice (cGMP). In 2004 Novo Nordisk received four inspections by the FDA; only one of these resulted in written observations. Regulatory approval of production sites as well as of products for the market is a precondition for the company's long-term ability to supply medicines to the market. A global strategy to obtain and maintain market authorisation will mitigate risks in this area, for example in relation to approvals for Levemir® and future indications of NovoSeven®.

### Competition

The diabetes market is highly competitive and increasingly so. On the one hand, Novo Nordisk is facing increased competition with strong entrants to the market, while on the other hand the company is gaining market shares in the attractive US market. In addition, there is government-mandated pressure on prices, particularly in Europe. Here, current healthcare reforms are putting pressure on the industry's ability to produce pharmacoeconomic assessments.

### Security, litigation and financial risks

Non-compliance with international and local legislation is also a risk factor. One example is the ongoing dispute with Polish customs authorities, who have claimed that pharmaceutical companies that have

imported products to Poland in the period 1999–2001 have misstated customs values. This dispute concerns a number of pharmaceutical importers, including Novo Nordisk. Another example would be the tax risk related to fixing and approval of transfer pricing.

Novo Nordisk is involved in some legal proceedings, and risks related to these are closely monitored. One such example is claims on alleged product liability on HRT. Novo Nordisk Inc., together with the majority of hormone therapy product manufacturers, is a defendant in 16 product liability lawsuits. Since the initiation of the lawsuits in July 2004, three cases against Novo Nordisk Inc. have been dismissed by the courts (see page 92).

Foreign exchange risk is the principal financial risk factor for Novo Nordisk, as a major part of costs are being paid in euro and significant income in non-euro currencies, primarily US dollars and Japanese yen. To mitigate this exposure, financial hedging instruments are used (see Note 36 on page 90 and management report on page 41). In addition, the company's global expansion strategy entails carrying a higher share of production costs in foreign currencies.

### Business ethics and people

In a highly competitive business environment, protecting employees and reputation is vital. Novo Nordisk relies on its ability to attract and retain talented individuals, and this is known to be a function of the company's external reputation and stakeholder trust.

In 2004, Novo Nordisk's ethics were challenged on a number of occasions (see page 18). However, none of these constitute major financial or reputational issues. The introduction of a business ethics policy and guidelines for employees will serve as mitigation of such risks. There have been no incidents of problematic relationships with key non-financial stakeholder groups that posed any significant risk to the company. \*

## Quantitative and qualitative measures

The assessment of risks to financial stakeholders involves in-depth financial analysis of earnings, cash flows, balance sheets and off balance sheet risk exposures. Much of this analysis is quantitative in nature. At the same time a more qualitative analysis is often conducted, which focuses on other aspects of company performance, including country influences, industry factors, competitive dynamics, and company management and policy – all with regard to their impact on the quality and sustainability of a company's operating and financial performance.

Novo Nordisk's qualitative risk analysis aims to maximise shareholder value and enhance the quality of the company's transparency and disclosure. However, the company acknowledges that despite systematic risk identification, reporting, monitoring and mitigation, unforeseen adverse events can still occur. See page 47.

# Reporting against global standards

**N**ovo Nordisk holds itself accountable to stakeholders for the company's performance and seeks to report in a transparent way about the challenges and opportunities for its business today and in the longer term. In terms of reporting on social, environmental, ethical and economic issues Novo Nordisk has contributed to developing and driving emerging international standards and codes and continues its support to promote corporate responsibility and global sustainable development. In 2004 Novo Nordisk became engaged in the process of developing an international standard for social responsibility under the auspices of the ISO.

## AA1000 Framework

Novo Nordisk's non-financial reporting follows the AA1000 Framework, an accountability standard designed to improve accountability and performance by learning through stakeholder engagement. It states that reporting must provide a complete, accurate, relevant and balanced picture of the organisation's approach to and impact on society. To the best of our knowledge, this *Annual Report 2004* complies with these requirements.

## Global Reporting Initiative Guidelines

Novo Nordisk reports – and has done so since 2002 – in accordance with The Global Reporting Initiative's (GRI's) 2002 Sustainability Reporting Guidelines. The Guidelines require reporting in accord-

ance with 11 principles and against a list of 97 sustainability performance indicators, of which 50 are core indicators that must be reported on. On the website is a GRI index with an overview of the full 'in accordance' reporting. See more at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

## Global Compact

Novo Nordisk is a signatory to the United Nations Global Compact, a platform for encouraging and promoting good corporate principles and learning experiences in the areas of human rights, labour, environment and bribery & corruption. Novo Nordisk is working actively to implement the Global Compact principles in our business and within our sphere of influence. Reporting on actions taken during 2004 to implement the 10 principles of the Global Compact in a Communication on Progress, including performance metrics aligned with the GRI Guidelines, can be found at [novonordisk.com/annual-report-2004](http://novonordisk.com/annual-report-2004)

## Assurance after AA1000AS

The information provided in Novo Nordisk's annual reporting for 2004 and the underlying data sets have been assured according to the AA1000 Assurance Standard. This includes an assessment of Novo Nordisk's reporting 'in accordance' with the GRI Guidelines and Global Compact. See the Assurance statement on page 105. \*

### REPORTING IN ACCORDANCE WITH GLOBAL REPORTING INITIATIVE 2002 SUSTAINABILITY REPORTING GUIDELINES

	Section	Themes	Level of reporting
Vision and strategy	1.1, 1.2	Company activities, report scope, report profile	+
Profile	2.1–2.22		+
Governance structure and management systems	3.1–3.20	Structures and processes at board and executive level, stakeholder engagement policies and management systems	+
GRI Content Index	4.1		+
Performance indicators	5		
Economic performance	EC1–EC13	Direct impacts on: customers, suppliers, employees, providers of capital, public sector; Indirect economic impacts	+ /8 ✖ /3 – /2
Environmental performance	EN1–EN35	Materials, energy, water, biodiversity, emissions, effluents and waste suppliers, products and services, transport	+ /16 ✖ /5 – /14
Social performance	LA1–LA17	Employment, labour/management relations, health and safety, training and education, diversity and opportunity	+ /8 ✖ /5 – /4
	HR1–HR14	Human rights	+ /12 ✖ /2
	SO1–SO7	Society	+ /2 ✖ /1 – /4
	PR1–PR11	Product responsibility	+ /5 – /6

+ Fully reported /Number of indicators ✖ Partially reported /Number of indicators – Not reported /Number of indicators

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This Annual Report does not include the Financial Statements of the Parent Company, Novo Nordisk A/S. These have been prepared in a separate document, which can be obtained upon request from Novo Nordisk A/S and is available at [novonordisk.com](http://novonordisk.com)

The Financial Statements of the Parent Company, Novo Nordisk A/S, form an integral part of the complete Annual Report. The complete Annual Report including the Financial Statements of the Parent Company, Novo Nordisk A/S, will be filed with the Danish Commerce and Companies Agency where a copy also can be obtained. In note 15, page 76, the Appropriation of net profit incl proposed dividends of the Parent Company Novo Nordisk A/S is included.

The accounting policies of Novo Nordisk have been changed as of 1 January 2004 to comply with International Financial Reporting Standards (IFRS).

In note 1 – 'Changes in accounting policies – Adoption of IFRS' the effect of adopting IFRS is shown.

## CONSOLIDATED INCOME STATEMENT

DKK million	Note	2004	2003	2002
Sales	6	29,031	26,158	24,866
Cost of goods sold	7, 8	8,050	7,409	6,598
Gross profit		20,981	18,749	18,268
Sales and distribution costs	7, 8	8,280	7,451	7,187
Research and development costs	7, 8	4,352	4,055	3,952
Administrative expenses	7, 8, 9	1,944	1,857	1,960
Licence fees and other operating income (net)	10	575	1,036	758
Operating profit		6,980	6,422	5,927
Share of profit/(loss) in associated companies	8, 18	(117)	(59)	72
Financial income	11	898	1,482	1,046
Financial expenses	12	304	469	717
Profit before income taxes		7,457	7,376	6,328
Income taxes	13	2,444	2,543	2,212
<b>Net profit</b>		<b>5,013</b>	4,833	4,116
Basic earnings per share (DKK)	14	14.89	14.17	11.87
Diluted earnings per share (DKK)	14	14.83	14.15	11.85

## CONSOLIDATED BALANCE SHEET

DKK million	Note	31 Dec 2004	31 Dec 2003
<b>ASSETS</b>			
Intangible assets	16	314	331
Property, plant and equipment	17	17,559	16,342
Investments in associated companies	18	883	1,040
Deferred income tax assets	25	769	579
Other financial assets	18	159	80
<b>Total long-term assets</b>		<b>19,684</b>	18,372
Inventories	19	7,163	6,531
Trade receivables	20	4,062	3,785
Tax receivable		710	134
Other receivables	21	1,855	2,652
Marketable securities	22	526	1,828
Cash at bank and in hand	33	3,433	1,262
<b>Total current assets</b>		<b>17,749</b>	16,192
<b>Total assets</b>		<b>37,433</b>	34,564
<b>EQUITY AND LIABILITIES</b>			
Share capital	23	709	709
Treasury shares		(45)	(33)
Share premium account		2,565	2,565
Retained earnings		22,671	20,925
Other comprehensive income		604	610
<b>Total equity</b>		<b>26,504</b>	24,776
Long-term debt	24	1,188	753
Deferred tax liabilities	25	1,853	1,510
Provision for pensions	26	250	222
Other provisions	27	358	271
<b>Total long-term liabilities</b>		<b>3,649</b>	2,756
Short-term debt	28	507	975
Trade payables		1,061	1,008
Tax payables		631	643
Other liabilities	29	3,721	3,366
Other provisions	27	1,360	1,040
<b>Total current liabilities</b>		<b>7,280</b>	7,032
<b>Total liabilities</b>		<b>10,929</b>	9,788
<b>Total equity and liabilities</b>		<b>37,433</b>	34,564

## CONSOLIDATED CASH FLOW STATEMENT AND FINANCIAL RESOURCES

DKK million	Note	2004	2003	2002
<b>Net profit</b>		<b>5,013</b>	4,833	4,116
<b>Reversals with no effect on cash flow:</b>				
Income taxes		<b>2,444</b>	2,543	2,212
Depreciation, amortisation and impairment losses		<b>1,892</b>	1,581	1,293
Interest income and interest expenses		<b>(128)</b>	(101)	(54)
Other reversals with no effect on cash flow	30	<b>1,018</b>	365	291
Income taxes paid		<b>(2,866)</b>	(1,804)	(2,266)
Interest received and interest paid (net)		<b>109</b>	67	120
<b>Cash flow before change in working capital</b>		<b>7,482</b>	7,484	5,712
<b>Change in working capital:</b>				
(Increase)/decrease in trade receivables and other receivables		<b>211</b>	(721)	312
(Increase)/decrease in inventories		<b>(623)</b>	(571)	(1,131)
Increase/(decrease) in trade payables and other liabilities		<b>519</b>	(43)	(26)
<b>Cash flow from operating activities</b>		<b>7,589</b>	6,149	4,867
<b>Investments:</b>				
Divestment of subsidiaries	31	–	–	52
Acquisition of subsidiaries	32	–	10	(448)
Purchase of intangible assets and long-term financial assets		<b>(312)</b>	(40)	(81)
Sale of property, plant and equipment		<b>140</b>	185	50
Purchase of property, plant and equipment		<b>(3,139)</b>	(2,458)	(3,943)
Net change in marketable securities (over three months)		<b>1,310</b>	(1,516)	1,085
<b>Cash flow from investing activities</b>		<b>(2,001)</b>	(3,819)	(3,285)
<b>Financing:</b>				
New long-term debt		<b>505</b>	476	–
Repayment of long-term debt		<b>(574)</b>	(23)	(18)
Purchase of treasury shares		<b>(1,982)</b>	(1,619)	(386)
Sale of treasury shares		<b>87</b>	15	39
Dividends paid		<b>(1,488)</b>	(1,243)	(1,161)
<b>Cash flow from financing activities</b>		<b>(3,452)</b>	(2,394)	(1,526)
<b>Net cash flow</b>		<b>2,136</b>	(64)	56
Unrealised gain/(loss) on exchange rates and marketable securities included in cash and cash equivalents		<b>(14)</b>	(14)	(22)
<b>Net change in cash and cash equivalents</b>		<b>2,122</b>	(78)	34
Cash and cash equivalents at the beginning of the year		<b>841</b>	919	885
<b>Cash and cash equivalents at the end of the year</b>	33	<b>2,963</b>	841	919
Bonds with original term to maturity exceeding three months	22	<b>508</b>	1,810	301
Undrawn committed credit facilities	28	<b>6,694</b>	8,701	7,961
<b>Financial resources at the end of the year</b>		<b>10,165</b>	11,352	9,181
<b>Free cash flow</b>		<b>4,278</b>	3,846	497



## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Share capital	Treasury shares	Share premium account	Retained earnings	Other comprehensive income			Total
					Exchange rate adjustments	Deferred gain/loss on cash flow hedges	Other adjustments	
DKK million								
<b>2004</b>								
Balance at the beginning of the year	709	(33)	2,565	20,925	(79)	513	176	<b>24,776</b>
Exchange rate adjustment of investments in subsidiaries					39			<b>39</b>
Deferred (gain)/loss on cash flow hedges at the beginning of the year recognised in the Income statement for the year						(513)		<b>(513)</b>
Deferred gain/(loss) on cash flow hedges at the end of the year						461		<b>461</b>
Other adjustments							7	<b>7</b>
Net income recognised directly in equity	–	–	–	–	39	(52)	7	<b>(6)</b>
Net profit for the year				5,013				<b>5,013</b>
Total income for the year	–	–	–	5,013	39	(52)	7	<b>5,007</b>
Cost of share-based payment				104				<b>104</b>
Purchase of treasury shares		(13)		(1,969)				<b>(1,982)</b>
Sale of treasury shares		1		86				<b>87</b>
Dividends				(1,488)				<b>(1,488)</b>
Balance at the end of the year	709	(45)	2,565	22,671	(40)	461	183	<b>26,504</b>

At the end of the year proposed dividends of DKK 1,594 million are included in retained earnings. No dividend is declared on treasury shares.

<b>2003</b>								
Balance at the beginning of the year	709	(19)	2,565	18,849	(85)	391	67	22,477
Exchange rate adjustment of investments in subsidiaries					6			6
Deferred (gain)/loss on cash flow hedges at the beginning of the year recognised in the Income statement for the year						(391)		(391)
Deferred gain/(loss) on cash flow hedges at the end of the year						513		513
Other adjustments							109	109
Net income recognised directly in equity	–	–	–	–	6	122	109	237
Net profit for the year				4,833				4,833
Total income for the year	–	–	–	4,833	6	122	109	5,070
Cost of share-based payment				76				76
Purchase of treasury shares		(14)		(1,605)				(1,619)
Sale of treasury shares		–		15				15
Dividends				(1,243)				(1,243)
Balance at the end of the year	709	(33)	2,565	20,925	(79)	513	176	24,776

At the end of the year proposed dividends of DKK 1,488 million are included in retained earnings. No dividend is declared on treasury shares.

<b>2002</b>								
Balance at the beginning of the year	709	(16)	2,565	16,200	–	116	126	19,700
Exchange rate adjustment of investments in subsidiaries					(85)			(85)
Deferred (gain)/loss on cash flow hedges at the beginning of the year recognised in the Income statement for the year						(116)		(116)
Deferred gain/(loss) on cash flow hedges at the end of the year						391		391
Other adjustments							(59)	(59)
Net income recognised directly in equity	–	–	–	–	(85)	275	(59)	131
Net profit for the year				4,116				4,116
Total income for the year	–	–	–	4,116	(85)	275	(59)	4,247
Cost of share-based payment				38				38
Purchase of treasury shares		(4)		(382)				(386)
Sale of treasury shares		1		38				39
Dividends				(1,161)				(1,161)
Balance at the end of the year	709	(19)	2,565	18,849	(85)	391	67	22,477

At the end of the year proposed dividends of DKK 1,243 million are included in retained earnings. No dividend is declared on treasury shares.

# NOTES – ACCOUNTING POLICIES

## 1 CHANGES IN ACCOUNTING POLICIES – ADOPTION OF IFRS

As of 1 January 2004, the accounting policies have been changed to comply with International Financial Reporting Standards (IFRS). The date of transition is 1 January 2002 and all comparative figures for 2000–2003 have been restated. Following IFRS 1 all standards and interpretations effective at 31 December 2004 have been applied.

The following standards with effective date after 31 December 2004 have also been applied:

- IFRS 2 'Share-based Payment' (issued February 2004). IFRS 2 has been applied retrospectively to all grants of employee shares and share options from 1997 to 2004.
- The revised standards IAS 32 'Financial Instruments: Disclosure and Presentation' and IAS 39 'Financial Instruments: Recognition and Measurement'
- All the revised standards in the IASB's improvement project, ie: IAS 1, IAS 2, IAS 8, IAS 10, IAS 16, IAS 17, IAS 21, IAS 24, IAS 27, IAS 28, IAS 31, IAS 33 and IAS 40.

The standard IFRS 5 'Non-current Assets Held for Sale and Discontinued Operations' with effective date 1 January 2005 has not been applied. IFRS 5 will be applied in accordance with the effective date 1 January 2005. The standard will be applied prospectively and only affects future transactions. The impact of application is not expected to be significant.

The adoption of IFRS results in changes to the accounting policies in the following areas:

- a) **Accounting for associated R&D companies** – Novo Nordisk's share of profit or loss in associated research and development companies, including impairment losses, is included in share of profit and loss in associated companies and is therefore no longer included in research and development costs. Novo Nordisk's capital gains on dilution or sale of investments in associated research and development companies is included in share of profit or loss in associated companies and therefore no longer in Licence fees and other operating income (net). The method of calculating Novo Nordisk's share of profit or loss in an associated company is slightly changed.
- b) **Market value of currency options** – currency options hedging future cash flow are measured at market value at the balance sheet date. As a consequence of the detailed IFRS requirements for allowing hedge accounting for currency options, the current use does not qualify for cash flow hedge accounting. Value adjustments are therefore recognised in the Income statement under financial income or financial expenses.
- c) **Share-based payment** – in accordance with IFRS 2 'Share-based payment' the fair value of employee services received in exchange for the grant of share-based compensation plans is recognised as an expense, and allocated over the vesting period.

- d) **Provision for pensions** – provisions for pension commitments and similar obligations are calculated in accordance with IAS 19. All actuarial gains and losses are recognised in the balance sheet at 1 January 2002 in accordance with IFRS 1.
- e) **Borrowing costs** – all interest expenses are recognised as an expense in the period in which they are incurred. Interest expenses on loans financing construction of major investments are no longer included in the cost of the assets.
- f) **Cash discounts** – in line with the development in international practice, cash discounts are now classified as a deduction from sales. Previously, cash discounts were reported as Sales and distribution costs.
- g) **Long-term bonds** – cash and cash equivalents consist of cash and marketable securities which at the date of acquisition had a maturity not exceeding three months. The cash flow from marketable securities, which at the date of acquisition had a maturity exceeding three months, is included in cash flow from investing activities.
- h) **Deferred tax assets** are presented as long-term assets and are no longer offset in provisions for deferred tax.
- i) **Software** – development costs of software in relation to major IT projects for internal use are reclassified from property, plant and equipment to intangible assets.
- j) In the income statement **gains and losses on derivative financial instruments** are no longer offset in the gains and losses of the hedged items. This has the effect that a foreign exchange loss of DKK 229 million in 2003 (DKK 510 million in 2002) is reclassified from financial income to financial expenses.
- k) **Long-term employee benefits** – provisions are recognised for certain long-term employee benefits.
- l) **Diluted earnings per share** – are calculated in accordance with IAS 33, which causes a change in the calculation of the dilutive effect.
- m) **Other** minor effects from adopting IFRS.

The changes regarding share-based payment, cash discounts and long-term employee benefits were not included in the unaudited reconciliations to IFRS included in the Annual Financial Report 2003 and the Stock Exchange Announcement for the first three quarters of 2004.

To illustrate the effect of adopting IFRS in the Novo Nordisk Group, the following reconciliations of the reported figures for 2002 and 2003 under previous Danish GAAP to the IFRS figures have been prepared.

The letters a) to m) in the tables below refer to descriptions of the changes in accounting policies due to IFRS adoption mentioned above.

### Ratios

	2003		2002	
	Previous GAAP	IFRS	Previous GAAP	IFRS
Growth in operating profit	6.8%	8.4%	6.5%	9.6%
Operating profit margin	24.1%	24.6%	23.7%	23.8%
Return on invested capital (ROIC)	19.1%	19.5%	20.1%	20.5%
Cash/earnings, three-year average	32.0%	32.3%	34.9%	34.4%
Basic earnings per share (DKK)	14.24	14.17	11.81	11.87
Diluted earnings per share (DKK)	14.14	14.15	11.72	11.85

## NOTES – ACCOUNTING POLICIES

### 1 CHANGES IN ACCOUNTING POLICIES – ADOPTION OF IFRS (CONTINUED)

#### Consolidated income statement

DKK million	2003			2002		
	Previous GAAP	IFRS effect	IFRS	Previous GAAP	IFRS effect	IFRS
Sales	26,541	(383)	26,158	25,187	(321)	24,866
Cost of goods sold	7,439	(30)	7,409	6,633	(35)	6,598
Gross profit	19,102	(353)	18,749	18,554	(286)	18,268
Sales and distribution costs	7,799	(348)	7,451	7,479	(292)	7,187
Research and development costs	4,193	(138)	4,055	4,139	(187)	3,952
Administrative expenses	1,847	10	1,857	1,951	9	1,960
Licence fees and other operating income (net)	1,121	(85)	1,036	994	(236)	758
Operating profit	6,384	38	6,422	5,979	(52)	5,927
Share of profit/(loss) in associated companies	12	(71)	(59)	27	45	72
Financial income	1,214	268	1,482	475	571	1,046
Financial expenses	227	242	469	181	536	717
Profit before income taxes	7,383	(7)	7,376	6,300	28	6,328
Income taxes	2,525	18	2,543	2,205	7	2,212
<b>Net profit</b>	<b>4,858</b>	<b>(25)</b>	<b>4,833</b>	<b>4,095</b>	<b>21</b>	<b>4,116</b>

DKK million	2003	2002
Operating profit – previous GAAP	6,384	5,979
a) Accounting for associated R&D companies		
– reclassification of share of profit or loss	150	194
– reclassification of capital gain	(85)	(236)
c) Share-based payment	(76)	(38)
d) Provisions for pensions	10	(11)
e) Borrowing costs – depreciation	38	38
m) Other	1	1
Operating profit – IFRS	6,422	5,927

DKK million	2003	2002
Net profit – previous GAAP	4,858	4,095
a) Accounting for associated R&D companies		
– increased share of profit or loss	(9)	(9)
b) Market value of currency options	30	50
c) Share-based payment	(69)	(28)
d) Provision for pensions	6	(7)
e) Borrowing costs – depreciation	38	38
e) Borrowing costs – interest expenses as incurred	(10)	(14)
m) Other	(11)	(9)
Net profit – IFRS	4,833	4,116

#### Consolidated balance sheet

DKK million	2003			2002		
	Previous GAAP	IFRS effect	IFRS	Previous GAAP	IFRS effect	IFRS
Intangible assets	220	111	331	240	123	363
Property, plant and equipment	16,828	(486)	16,342	16,205	(524)	15,681
Investments in associated companies	1,009	31	1,040	1,202	47	1,249
Deferred income tax assets	–	579	579	–	559	559
Other financial assets	80	–	80	77	2	79
Inventories	6,531	–	6,531	5,919	–	5,919
Trade and other receivables	6,636	(65)	6,571	6,115	(91)	6,024
Marketable securities	1,828	–	1,828	315	–	315
Cash at bank and in hand	1,262	–	1,262	1,423	–	1,423
<b>Total assets</b>	<b>34,394</b>	<b>170</b>	<b>34,564</b>	<b>31,496</b>	<b>116</b>	<b>31,612</b>
Equity	25,224	(448)	24,776	22,928	(451)	22,477
Total liabilities	9,170	618	9,788	8,568	567	9,135
<b>Total equity and liabilities</b>	<b>34,394</b>	<b>170</b>	<b>34,564</b>	<b>31,496</b>	<b>116</b>	<b>31,612</b>

## NOTES - ACCOUNTING POLICIES

### 1 CHANGES IN ACCOUNTING POLICIES - ADOPTION OF IFRS (CONTINUED)

#### Consolidated balance sheet (continued)

DKK million	2003	2002	DKK million	2003	2002	1 Jan 2002
Total assets – previous GAAP	34,394	31,496	Equity – previous GAAP	25,224	22,928	20,137
a) Accounting for associated R&D companies	31	47	a) Accounting for associated R&D companies	31	47	57
d) Provisions for pensions	–	(43)	b) Market value of currency options – deferred tax effect	(35)	(22)	(22)
e) Borrowing costs	(382)	(410)	c) Share-based payment – deferred tax effect	100	92	82
h) Deferred tax assets	548	559	d) Provisions for pensions	(36)	(42)	(15)
m) Other	(27)	(37)	e) Borrowing costs	(268)	(287)	(297)
Total assets – IFRS	34,564	31,612	k) Long-term employee benefits	(211)	(211)	(211)
Total liabilities – previous GAAP	9,170	8,568	m) Other	(29)	(28)	(31)
h) Deferred tax assets	548	559	Equity – IFRS	24,776	22,477	19,700
Changes to deferred tax as a result of the other changes to accounting policies	(201)	(234)				
d) Provisions for pensions	52	14				
k) Long-term employee benefits	211	211				
m) Other	8	17				
Total liabilities – IFRS	9,788	9,135				

#### Consolidated cash flow statement

DKK million	2003			2002		
	Previous GAAP	IFRS effect	IFRS	Previous GAAP	IFRS effect	IFRS
Cash flow from operating activities	6,159	(10)	6,149	4,881	(14)	4,867
Cash flow from investing activities *)	(2,313)	(1,506)	(3,819)	(4,384)	1,099	(3,285)
Cash flow from financing activities	(2,394)	–	(2,394)	(1,526)	–	(1,526)
<b>Net cash flow</b>	<b>1,452</b>	<b>(1,516)</b>	<b>(64)</b>	<b>(1,029)</b>	<b>1,085</b>	<b>56</b>
Net change in cash and cash equivalents	1,435	(1,513)	(78)	(1,053)	1,087	34
Cash and cash equivalents at the beginning of the year	1,234	(315)	919	2,287	(1,402)	885
<b>Cash and cash equivalents at the end of the year</b>	<b>2,669</b>	<b>(1,828)</b>	<b>841</b>	<b>1,234</b>	<b>(315)</b>	<b>919</b>
<b>Free cash flow **)</b>	<b>3,846</b>	<b>–</b>	<b>3,846</b>	<b>497</b>	<b>–</b>	<b>497</b>

DKK million	2003	2002
Cash flow from operating activities – previous GAAP	6,159	4,881
e) Borrowing costs – cash flow effect of interest expenses	(10)	(14)
Cash flow from operating activities – IFRS	6,149	4,867
Cash flow from investing activities – previous GAAP	(2,313)	(4,384)
e) Borrowing costs – cash flow effect of interest expenses	10	14
g) Long-term bonds	(1,513)	1,087
g) Long-term bonds – unrealised gains/losses	(3)	(2)
Cash flow from investing activities – IFRS	(3,819)	(3,285)

DKK million	2003	2002
Cash and cash equivalents at the end of the year – previous GAAP	2,669	1,234
g) Long-term bonds – at the end of the year	(1,828)	(315)
Cash and cash equivalents at the end of the year – IFRS	841	919

\*) According to IFRS the cash flow from investments in long-term bonds (more than three months) is included in cash flow from investing activities. Excess liquidity is primarily invested in non-callable, high-rated, liquid bonds with solid credit rating.

\*\*\*) Free cash flow is not included as a subtotal in the cash flow statement according to IFRS. Free cash flow is calculated as the sum of Cash flow from operating activities and investing activities excluding Net change in marketable securities (more than three months). This leaves Free cash flow unaffected by the IFRS adoption.

**2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS). The Consolidated financial statements are prepared in accordance with the historical cost convention, as modified by the revaluation of available-for-sale financial assets, and financial assets and financial liabilities (including derivative financial instruments) at fair value through profit or loss.

To facilitate the reading of the Annual Report, part of the information required by IFRS has been included in the Management Report.

**CRITICAL ACCOUNTING POLICIES**

Novo Nordisk's management considers the following to be the most important accounting policies for the Group.

**Principles of consolidation**

The Consolidated financial statements include the financial statements of Novo Nordisk A/S (the Parent Company) and all the companies in which Novo Nordisk A/S directly or indirectly owns more than 50% of the voting rights or in some other way has a controlling influence (subsidiaries). Novo Nordisk A/S and these companies are referred to as the Group.

Companies that are not subsidiaries, but in which the Group holds 20% to 50% of the voting rights or in some other way has a significant influence on the operational and financial management, are treated as associated companies.

The Consolidated financial statements are based on the financial statements of the parent company and of the subsidiaries and are prepared by combining items of a uniform nature and eliminating intercompany transactions, share-holdings, balances and unrealised intercompany profits and losses. The Consolidated financial statements are based on financial statements prepared by applying the Novo Nordisk Group's accounting policies.

The purchase method of accounting is used to account for the acquisition of businesses by the Group. The cost of an acquisition is measured as the fair value of the assets given and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date, irrespective of the extent of any minority interest. The excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill.

Newly acquired and divested companies are included in the Income statement during the period of Novo Nordisk's ownership. Comparative figures are not adjusted for disposed or newly acquired companies.

**Sales and revenue recognition**

Sales represent the fair value of the sale of goods excluding value added tax and after deduction of provisions for returned products, trade discounts and allowances.

Provisions and accruals for rebates to customers are provided for in the period the related sales are recorded. Historical data are readily available and reliable, and are used for estimating the amount of the reduction in sales.

Revenue is recognised when it is realised or realisable and earned. Revenues are considered to have been earned when Novo Nordisk has substantially accomplished what it must do to be entitled to the revenues.

Revenue from the sale of goods is recognised when all the following specific conditions have been satisfied:

- Novo Nordisk has transferred to the buyer the significant risk and rewards of ownership of the goods
- Novo Nordisk retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold
- The amount of revenue can be measured reliably
- It is probable that the economic benefits associated with the transaction will flow to Novo Nordisk; and
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

These conditions are usually met by the time the products are delivered to the customers.

A reliable measurement of the amount of revenue requires that reliable estimates of discounts, rebates and product returns can be made.

Licence fees are recognised on an accrual basis in accordance with the terms and substance of the relevant agreement.

As a principal rule sale of intellectual property is recorded as income at the time of the sale. Where the Group assumes an obligation in connection with a sale of intellectual property, the income is recognised in accordance with the term of the obligation. On the sale of intellectual property where the final sale is conditional on future events, the amount is recorded as income at the occurrence of such future events.

Revenue is measured at the fair value of the consideration received or receivable.

**Research and development**

All internal research and development costs are expensed in the Income statement as incurred. Due to the long development period and significant uncertainties relating to the development of new products, including risks regarding clinical trials and regulatory approval, it is concluded that the Group's internal development costs in general do not meet the capitalisation criteria in IAS 38 'Intangible Assets'. Thus the technical feasibility criteria of IAS 38 are not considered fulfilled before regulatory approval is obtained.

For acquired in-process research and development projects the effect of probability is reflected in the cost of the asset and the probability recognition criteria are therefore always considered satisfied. As the cost of acquired in-process research and development projects can often be measured reliably, these projects fulfil the criteria for capitalisation. Please refer to the section 'Intangible assets' regarding the accounting treatment of intangible assets.

Property, plant and equipment used for research and development purposes are capitalised and depreciated in accordance with the Group's depreciation policy.

**Derivative financial instruments**

The Group uses forward exchange contracts, currency options and interest swaps to hedge forecasted transactions in foreign currencies.

Novo Nordisk applies hedge accounting under the specific rules of IAS 39 to forward exchange contracts and interest rate swaps. Upon initiation of the contract, the Group designates each derivative financial contract that qualifies for hedge accounting as a hedge of a specific hedged transaction: either i) a recognised asset or liability (fair value hedge), ii) a forecasted financial transaction or firm commitment (cash flow hedge), or iii) a hedge of a net investment in a foreign entity.

All contracts are initially recognised at cost and subsequently re-measured at their fair value at the balance sheet date. The value adjustments on forward exchange contracts, and interest rate swaps designated as hedges of forecasted transactions are recognised directly under equity, given hedge effectiveness. The cumulative value adjustment of these contracts is removed from equity and included in the Income statement under financial income and expenses when the hedged transaction is recognised in the Income statement.

Currency options are initially recognised at cost and subsequently re-measured at their fair value at the balance sheet date. While providing effective economic hedges under the Group's risk management policy, the current use of currency options does not meet the detailed requirements of IAS 39 for allowing hedge accounting. Currency options are therefore recognised directly in the Income statement under Financial income (or expenses).

Forward exchange contracts and currency swaps hedging recognised assets or liabilities in foreign currencies are measured at fair value at the balance sheet date. Value adjustments are recognised in the Income statement under Financial income or Financial expenses, along with any value adjustments of the hedged asset or liability that is attributable to the hedged risk.

# NOTES – ACCOUNTING POLICIES

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Currency swaps used to hedge net investments in subsidiaries are measured at fair value based on the difference between the swap exchange rate and the exchange rate at the balance sheet date. The value adjustment is recognised in equity.

All fair values are based on marked-to-market prices or standard pricing models.

The accumulated net fair value of derivative financial instruments is presented as Other receivables if positive or Other liabilities if negative.

### OTHER ACCOUNTING POLICIES

#### Translation of foreign currencies

##### Functional and presentation currency

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

##### Translation of transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the Income statement, except when deferred in equity as qualifying cash flow hedges and qualifying net investment hedges.

Translation differences on non-monetary items, such as equities held at fair value through profit or loss, are reported as part of the fair value gain or loss. Translation differences on non-monetary items, such as equities classified as available-for-sale financial assets, are included in the fair value reserve in equity.

##### Translation of group companies

Financial statements of foreign subsidiaries are translated into Danish kroner at exchange rates ruling at the balance sheet date for assets and liabilities and at average exchange rates for Income statement items.

All exchange rate adjustments are recognised in the Income statement with the exception of exchange gains and losses arising from:

- The translation of foreign subsidiaries' net assets at the beginning of the year translated at the exchange rates at the balance sheet date.
- The translation of foreign subsidiaries' income statements using average exchange rates whereas balance sheets are translated using the exchange rates ruling at the balance sheet date.
- The translation of long-term intercompany receivables which are considered to be an addition to net assets in subsidiaries.
- The translation of investments in associated companies.

The above exchange gains and losses are recognised in Other comprehensive income under equity.

#### Segment information

Novo Nordisk operates on a worldwide basis in two business segments, diabetes care and biopharmaceuticals, constituting the primary reporting format. Business segment information is disclosed in note 5. Within the business segments Novo Nordisk has more areas for which sales are disclosed in note 6.

Novo Nordisk operates in four main geographical areas: Europe, North America, International Operations and Japan & Oceania, constituting the secondary reporting format. Geographical segment information is disclosed in note 5.

The segment information is prepared applying the accounting policies of the Group.

#### 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 sale of intellectual property.

#### Intangible assets

##### Goodwill

Goodwill represents any cost in excess of identifiable net assets, measured at fair value, on the acquired company. Goodwill recorded under Intangible assets is related to subsidiaries. Goodwill on acquisitions of associates is included in Investments in associated companies.

Goodwill is measured at historical cost less accumulated impairment losses. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to cash-generating units for the purpose of impairment testing.

##### Patents, licences, and other intangibles

Patents and licences, and other intangibles are carried at historical cost less accumulated amortisation and any impairment loss.

Amortisation is provided under the straight-line method over the estimated useful life of the asset (up to 10 years).

Internal development costs and the related software in connection with major IT projects for internal use are capitalised under Other intangibles.

#### Property, plant and equipment

Property, plant and equipment are measured at historical cost less accumulated depreciation and any impairment losses. The cost of self-constructed assets includes costs directly attributable to the construction of the assets. Interest on loans financing construction of major investments is recognised as an expense in the period in which it is incurred.

Land is not depreciated. Depreciation is provided under the straight-line method over the estimated useful lives of the assets as follows:

- Buildings: 12–50 years.
- Plant and machinery: 5–16 years.
- Other equipment: 3–16 years.
- Minor fixed assets below DKK 100,000 and fixed assets with limited expected useful lives are charged to the Income statement in the year of acquisition.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is higher than its estimated recoverable amount.

#### Leases

Leases of assets whereby the Group assumes substantially all the risks and rewards of ownership are capitalised as finance leases under Property, plant and equipment and depreciated over the estimated useful lives of the assets, according to the periods listed above. The corresponding finance lease liabilities are included in liabilities.

Operating lease costs are charged to the Income statement on a straight-line basis over the period of the lease.

#### Investments in associated companies

Investments in associated companies are accounted for under the equity method of accounting, ie at the respective share of the associated companies' net asset value applying Group accounting policies.

Goodwill relating to associated companies is recorded under Investments in associated companies.

#### Impairment of assets

Property, plant and equipment, long-term financial assets and intangible assets, including goodwill, are reviewed for impairment losses when there is an indication that the carrying amount may not be recoverable. Goodwill is furthermore reviewed for impairment annually. An impairment loss is recognised for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of an asset's net selling price and value in use.

For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

**2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Financial assets**

The Group classifies its investments in the following categories: 'Marketable securities' (financial assets at fair value through the Income statement), Loans and receivables, and 'Long-term financial assets' (available-for-sale financial assets). The classification depends on the purpose for which the investments were acquired. Management determines the classification of its investments on initial recognition and re-evaluates this designation at every reporting date.

*Marketable securities*

Marketable securities consists of financial assets designated at fair value through profit or loss on initial recognition. Assets in this category are classified as current assets if they are expected to be realised within 12 months of the balance sheet date.

*Loans and receivables*

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables are included in Trade receivables and Other receivables in the balance sheet.

Trade receivables and Other receivables are stated at amortised cost less allowances for doubtful trade receivables. The allowances are based on an individual assessment of each receivable, which also include an assessment of payment risk associated with individual countries.

*Available-for-sale financial assets*

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in Long-term financial assets unless Management intends to dispose of the investment within 12 months of the balance sheet date.

*Recognition and measurement*

Purchases and sales of investments are recognised on settlement date. Investments are initially recognised at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss.

Investments are derecognised when the rights to receive cash flows from the investments have expired or have been transferred, and the Group has transferred substantially all risks and rewards of ownership.

Available-for-sale financial assets and financial assets at fair value through profit or loss are subsequently carried at fair value. Loans and receivables are carried at amortised cost using the effective interest method.

Realised and unrealised gains and losses arising from changes in the fair value of the 'Marketable securities' category are included in the Income statement in the period in which they arise. Unrealised gains and losses arising from changes in the fair value of securities classified as available-for-sale are recognised in equity. When securities classified as available-for-sale are sold or impaired, the accumulated fair value adjustments are included in the Income statement as gains and losses from investment securities.

The fair values of quoted investments are based on current bid prices. If the market for a financial asset (and for unlisted securities) is not active, the Group establishes fair value by using valuation techniques. These include the use of recent arm's length transactions, reference to other instruments that are substantially the same, discounted cash flow analyses, and option pricing models refined to reflect the issuer's specific circumstances.

The Group assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets has been impaired. In the case of equity securities classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is considered in determining whether the securities are impaired. If any such evidence exists for available-for-sale financial assets, the cumulative loss – measured as the difference between cost and the current fair value, less any impairment loss on that financial asset previously recognised in Income statement – is removed from equity and recognised in the Income statement. Impairment losses recognised in the Income statement on equity instruments are not reversed through the Income statement.

**Inventories**

Raw materials and consumables are measured at cost assigned by using the first-in, first-out method.

Work in progress and finished goods are stated at cost assigned by using the first-in, first-out method. Cost comprises direct production costs such as raw materials, consumables, energy and labour, and production overheads such as employee costs, depreciation, maintenance etc. The production overheads are measured based on a standard cost method which is reviewed regularly in order to ensure relevant measures of utilisation, production lead time etc.

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

**Tax**

Income taxes in the Income statement include tax payable for the year with addition of the change in deferred tax for the year.

Deferred income taxes arise from temporary differences between the accounting and tax balance sheets of the individual consolidated companies and from realisable tax-loss carry-forwards, using the liability method. Deferred income tax is furthermore provided for re-taxation of tax-deductible losses realised in non-Danish affiliated companies, if the re-taxation is expected to be realised by the withdrawal of affiliated companies from the Danish joint taxation scheme. The tax value of tax-loss carry-forwards will be included in deferred tax assets to the extent that the tax losses and other tax assets are expected to be utilised in the future taxable income. The deferred taxes are measured according to current tax rules and at the tax rates expected to be in force on the elimination of the temporary differences. Measurement of deferred taxes in Denmark is based on a tax rate of 30%.

Tax payable/receivable includes tax payable computed on the basis of the expected taxable income for the year and adjustments for tax payable for previous years.

**Employee benefits**

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

*Pensions*

The Group operates a number of defined benefit and defined contribution plans throughout the world.

The costs for the year for defined benefit plans are determined using the projected unit credit method. This reflects services rendered by employees to the dates of valuation and is based on actuarial assumptions primarily regarding discount rates used in determining the present value of benefits, projected rates of remuneration growth, and long-term expected rates of return for plan assets. Discount rates are based on the market yields of high-rated corporate bonds in the country concerned.

Differences between assumptions and actual events, and effects of changes in actuarial assumptions are allocated over the estimated average remaining working lives of employees, where these differences exceed a defined corridor.

Past service costs are allocated over the average period until the benefits become vested.

Pension assets and liabilities in different defined benefit schemes are not offset unless the Group has a legally enforceable right to use the surplus in one plan to settle obligations in the other plan. Pension assets are only recognised to the extent that the Group is able to derive future economic benefits in the way of refunds from the plan or reductions of future contributions.

The Group's contributions to the defined contribution plans are charged to the Income statement in the year to which they relate.

*Share-based compensation*

The Group operates equity-settled, share-based compensation plans. The fair value of the employee services received in exchange for the grant of the options or shares is recognised as an expense, and allocated over the vesting period.

# NOTES - ACCOUNTING POLICIES

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

The total amount to be expensed over the vesting period is determined by reference to the fair value of the options or shares granted, excluding the impact of any non-market vesting conditions. The fair value is fixed at grant date. Non-market vesting conditions are included in assumptions about the number of options that are expected to become exercisable. At each balance sheet date, the Group revises its estimates of the number of options that are expected to become exercisable. Novo Nordisk recognises the impact of the revision of the original estimates, if any, in the Income statement, and a corresponding adjustment to equity over the remaining vesting period. Adjustments relating to prior years are included in the Income statement in the year of adjustment 'truing up'.

### Provisions

Provisions are recognised where a legal or constructive obligation has been incurred, as a result of past events, and it is probable that it will lead to an outflow of resources that can be reliably estimated. Provisions are recognised for the estimated ultimate liability that is expected to arise, taking into account foreign currency effects and the time value of money.

Provisions for product returns cover expected lost contribution because of expected future returns and are measured at selling price value. The provisions have been calculated based on statistical measures of historical returns.

### Liabilities

Generally, liabilities are stated at amortised cost unless specifically mentioned otherwise.

### Treasury shares

Treasury shares are deducted from share capital at their nominal value of DKK 2 per share. Differences between this amount and the amount paid for acquiring, or received for disposing of, treasury shares are deducted from retained earnings.

### Dividends

Dividends are recognised as a liability in the period in which they are declared at the Annual General Meeting.

### 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 cash and cash equivalents at the beginning and the end of the year.

Cash and cash equivalents consist of cash and marketable securities, with original maturity of less than three months, less short-term bank loans. Besides cash and cash equivalents, undrawn committed credit facilities expiring after more than one year are included in financial resources.

### United States Generally Accepted Accounting Principles (US GAAP)

The Group prepares a reconciliation of the effect on sales, net profit, equity and balance sheet of the application of US Generally Accepted Accounting Principles (US GAAP) in lieu of International Financial Reporting Standards. Note 39 discloses the US GAAP reconciliation.

## DEFINITIONS

**ADRs:** American Depositary Receipts.

**Basic earnings per share (EPS):** Net profit divided by the average number of shares outstanding.

**Cash/earnings:** Free cash flow as a percentage of net profit.

**Diluted earnings per share:** Net profit divided by the sum of average number of shares outstanding including the dilutive effect of share options 'in the money' in accordance with IAS 33. The dilutive effect of share options in the money is calculated as the difference between the following:

- 1) the number of shares that could have been acquired at fair value with proceeds from the exercise of the share options and
- 2) the number of shares that would have been issued assuming the exercise of the share options.

The difference (the dilutive effect) is added to the denominator as an issue of shares for no consideration.

**Effective tax rate:** Income taxes as a percentage of profit before income taxes.

**Equity ratio:** Equity at year-end as a percentage of the sum of total liabilities and equity at year-end.

**Free cash flow:** The sum of Cash flow from operating activities and Cash flow from investing activities excluding Net change in marketable securities.

**Gross margin:** Gross profit as a percentage of sales.

**Market capitalisation:** Total number of 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 sales.

**Number of shares outstanding:** The number of shares outstanding is the total number of shares excluding the holding of treasury shares.

**Operating profit:** Earnings before tax, financial items and share of profit/loss in associated companies.

**Operating profit margin:** Operating profit as a percentage of sales.

**Payout ratio:** Total dividends for the year as a percentage of net profit.

**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.

**Quoted price at year-end for ADRs:** The quoted (closing) price at year-end for Novo Nordisk's ADRs 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 equity:** Net profit as a percentage of average equity (the sum of equity at the beginning of the year and at year-end divided by two).

**ROIC (return on invested capital):** Operating profit after tax (using the effective tax rate) as a percentage of average inventories, receivables, property, plant and equipment and as well as intangible assets less non-interest bearing liabilities including provisions (the sum of above assets and liabilities at the beginning of the year and at year-end divided by two).

**Weighted Average Cost of Capital (WACC):** WACC states the company's average cost of capital considering the capital structure.



## 3 CHANGES IN THE SCOPE OF CONSOLIDATION

In 2004, no changes in the scope of consolidation occurred.

In 2003, Novo Nordisk acquired 55% of the Algerian company Aldaph SpA for DKK 0. There is no goodwill related to the acquisition. Until the acquisition of these shares, Aldaph SpA was an associated company of Novo Nordisk and Novo Nordisk owned 45% of the share capital.

In 2002, Novo Nordisk acquired the Brazilian diabetes care company Biobrás (Novo Nordisk Produsao Farmacêutica Do Brasil). Novo Nordisk

Produsao Farmacêutica Do Brasil was included in the consolidation as from February 2002. Novo Nordisk Produsao Farmacêutica Do Brasil was acquired for DKK 423 million in cash (including transaction costs).

In April 2002, Novo Nordisk sold the Dutch wholesaler of medical devices Hermedico BV for DKK 63 million.

## 4 CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date(s) of the financial statements and the reported amounts of revenues and expenses during the reporting period(s). Management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the reported carrying amounts of assets and liabilities and the reported amounts of revenues and expenses that may not be readily apparent from other sources. Actual results could differ from those estimates. Novo Nordisk believes the following are the significant accounting estimates and related judgments used in the preparation of its consolidated financial statements.

### Accruals and provision for sales rebates

Accruals and provisions for sales rebates are established in the same period as the related sales. The accruals and provisions for sales rebates are recorded as a reduction in sales and are included in Other provisions and Other liabilities.

The accruals and provisions are based upon historical rebate payments. They are calculated based upon a percent of sales for each product as defined by the contracts with the various customer groups.

Factors that complicate the rebate calculations are identification of which products have been sold subject to a rebate, which customer or government price terms apply, and the estimated lag time between sale and payment of a rebate.

Novo Nordisk believe that the accruals established for sales rebates are reasonable and appropriate based on current facts and circumstances. However, actual amount of rebates and discounts may differ from the amounts estimated by Management.

### Indirect Production Costs (IPC)

Work in progress and finished goods are stated at cost assigned by using the first-in, first-out method. Cost comprises direct production costs such as raw materials, consumables, energy and labour, and IPC such as employee costs, depreciation, maintenance etc.

The IPC with a carrying amount of DKK 3,240 million at 31 December 2004 are measured based on a standard cost method which is reviewed regularly in order to ensure relevant measures of utilisation, production lead time and other relevant factors. Changes in the method for calculation of IPC, including utilisation levels, production lead time etc in the calculation of IPC, could have an impact on the gross margin and the overall valuation of inventories.

### Allowances for doubtful trade receivables

Trade receivables are stated at amortised cost less allowances for potential losses on doubtful debts.

Novo Nordisk maintains allowances for doubtful trade receivables for estimated losses resulting from the subsequent inability of the customers to make required payments. If the financial conditions of the customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required in future periods. Management specifically analyses trade receivables and analyses historical bad debt, customer concentrations, customer credit-worthiness, current economic trends and changes in the customer payment terms when evaluating the adequacy of the allowance for doubtful trade receivables.

Based on actual losses in the last three years, the uncertainty connected with the allowance for doubtful trade receivables is considered limited. The carrying amount of allowances for doubtful trade receivables is DKK 369 million at 31 December 2004.

### Deferred taxes

Management judgment is required in determining the Company's provision for income taxes, deferred tax assets and liabilities and the extent to which deferred tax assets can be recognised. Novo Nordisk recognises deferred tax assets if it is probable that sufficient taxable income will be available in the future against which the temporary differences and unused tax losses can be utilised. Management has considered future taxable income in assessing whether deferred tax assets should be recognised.

The carrying amount of deferred tax assets (net) and deferred tax liabilities is DKK 769 million and 1,853 respectively at 31 December 2004.

### Provisions and contingencies

As part of normal business Novo Nordisk issues credit notes for expired goods. Consequently a provision for future returns is made, based on historical statistical product returns. The pattern in returns in the future may be different from previous patterns.

The carrying amount of provision for returned products is DKK 403 million at 31 December 2004.

Management of the Company makes judgments about provisions and contingencies, including the probability of pending and potential future litigation outcomes that in nature are dependent on future events that are inherently uncertain. In making its determinations of likely outcomes of litigation and tax matters etc, management considers the evaluation of outside counsel knowledgeable about each matter, as well as known outcomes in case law. See note 37 for a description of the significant litigation.

# NOTES - CONSOLIDATED INCOME STATEMENT

## 5 SEGMENT INFORMATION

### Primary reporting format – BUSINESS SEGMENTS

At 31 December 2004, the Novo Nordisk Group operates on a worldwide basis in two business segments (the primary reporting format):

#### Diabetes care:

The business segment includes discovery, development, manufacturing and marketing of products within the areas of insulin and delivery systems and oral antidiabetic products (OAD).

#### Biopharmaceuticals:

The business segment includes discovery, development, manufacturing and marketing of products within the therapy areas haemostasis management (NovoSeven®), growth hormone therapy, hormone replacement therapy and other products.

The segments and regions are the same as those used for internal reporting, allowing a reliable assessment of risk and returns. There are no sales or other transactions between the business segments. Costs have been split between business segments based on a specific allocation with the addition of a minor number of corporate overheads allocated systematically to the segments. Segment assets comprise the assets which are applied directly to the activities of the segment, including intangible assets, property, plant and equipment, long-term financial assets, inventories, trade receivables and other receivables. Segment liabilities comprise liabilities derived from the activities of the segment, including provisions, trade payables and other liabilities.

Comparative figures for 2002 are presented even though in 2002 and previous years, Novo Nordisk comprised only one segment. The comparative figures for 2002 have been prepared based on allocations consistent with methods applied for 2003 and 2004.

<b>BUSINESS SEGMENTS RESULTS</b>	<b>2004</b>	2003	2002
DKK million		Diabetes care	
Segment results			
Sales	<b>20,533</b>	18,475	17,458
Change in DKK (%)	<b>11.1%</b>	5.8%	6.6%
Change in local currencies (%)	<b>14.7%</b>	16.0%	–
Operating profit	<b>3,404</b>	3,142	2,346
Share of profit in associated companies	<b>(81)</b>	(59)	(1)
Finance income net	–	–	–
Profit before income taxes	–	–	–
Income taxes	–	–	–
Net profit	–	–	–
Other segment items			
Research and development costs	<b>2,932</b>	2,805	3,064
Depreciation and amortisation	<b>1,312</b>	1,125	959
Impairment losses in the income statement	<b>320</b>	143	97
Additions to property, plant and equipment and intangible assets (net)	<b>2,652</b>	1,930	3,497
Investments in associated companies (net)	–	–	35
Long-term assets	<b>15,270</b>	14,405	13,793
Total assets	<b>24,997</b>	23,911	22,747
Total liabilities	<b>4,788</b>	4,241	4,323

<b>GEOGRAPHIC SEGMENTS RESULTS</b>	<b>2004</b>	2003	2002	<b>2004</b>	2003	2002
DKK million		Europe		North America		
Sales	<b>12,411</b>	11,697	10,889	<b>7,478</b>	6,219	5,786
Change in DKK (%)	<b>6.1%</b>	7.4%	3.1%	<b>20.2%</b>	7.5%	12.0%
Additions to property, plant and equipment and intangible assets (net)	<b>2,831</b>	2,137	3,883	<b>133</b>	63	74
Property, plant and equipment	<b>16,519</b>	15,510	14,777	<b>425</b>	366	425
Total assets	<b>31,198</b>	29,166	26,266	<b>2,725</b>	2,270	2,423

## NOTES - CONSOLIDATED INCOME STATEMENT

### 5 SEGMENT INFORMATION (CONTINUED)

#### Secondary reporting format – GEOGRAPHIC SEGMENTS

The Novo Nordisk Group operates in four main geographical areas (the secondary reporting format):

**Europe:** EU, EFTA

**North America:** USA and Canada

**Japan & Oceania:** Japan, Australia and New Zealand

**International Operations:** All other countries

Sales are attributed to geographical segments based on the location of the customer. There are no sales between segments. Total assets and additions to property, plant and equipment and intangible assets are based on the location of the assets.

	2004	2003	2002	2004	2003	2002	2004	2003	2002
	Biopharmaceuticals			Corporate/unallocated			Total		
	8,498	7,683	7,408	–	–	–	29,031	26,158	24,866
	10.6%	3.7%	5.8%	–	–	–	11.0%	5.2%	6.3%
	15.4%	14.0%	–	–	–	–	14.9%	15.0%	–
	3,576	3,280	3,581	–	–	–	6,980	6,422	5,927
	(25)	(12)	46	(11)	12	27	(117)	(59)	72
	–	–	–	594	1,013	329	594	1,013	329
	–	–	–	–	–	–	7,457	7,376	6,328
	–	–	–	2,444	2,543	2,212	2,444	2,543	2,212
	–	–	–	–	–	–	5,013	4,833	4,116
	1,420	1,250	888	–	–	–	4,352	4,055	3,952
	254	278	230	–	–	–	1,566	1,403	1,189
	6	35	7	–	–	–	326	178	104
	583	388	787	–	–	–	3,235	2,318	4,284
	–	–	–	18	–	18	18	–	53
	3,185	3,020	3,226	1,229	947	912	19,684	18,372	17,931
	5,644	5,495	5,519	6,792	5,158	3,346	37,433	34,564	31,612
	1,581	1,416	1,362	4,560	4,131	3,450	10,929	9,788	9,135

	2004	2003	2002	2004	2003	2002	2004	2003	2002
	International Operations			Japan & Oceania			Total		
	4,844	4,227	4,099	4,298	4,015	4,092	29,031	26,158	24,866
	14.6%	3.1%	20.7%	7.0%	(1.9%)	(4.0%)	11.0%	5.2%	6.3%
	252	83	315	19	35	12	3,235	2,318	4,284
	376	184	150	239	282	329	17,559	16,342	15,681
	2,387	2,260	2,086	1,123	868	837	37,433	34,564	31,612

## NOTES - CONSOLIDATED INCOME STATEMENT

### 6 SALES

DKK million	2004	2003	2002
Insulin analogues	4,507	2,553	1,187
Human insulin and insulin-related sales	14,383	14,492	14,651
Oral antidiabetic products (OAD)	1,643	1,430	1,620
Diabetes care total	20,533	18,475	17,458
Haemostasis management (NovoSeven®)	4,359	3,843	3,593
Growth hormone therapy	2,317	2,133	2,061
Hormone replacement therapy	1,488	1,322	1,333
Other products	334	385	421
Biopharmaceuticals total	8,498	7,683	7,408
Total sales	29,031	26,158	24,866

### 7 EMPLOYEE COSTS

DKK million	2004	2003	2002
Wages and salaries	8,119	7,657	7,199
Share-based payment costs (refer to note 34)	104	76	38
Pensions – defined contribution plans	592	516	401
Pensions – defined benefit plans (refer to note 26)	100	91	90
Other contributions to social security	488	483	444
Other employee costs	660	554	517
Total employee costs	10,063	9,377	8,689
Included in the Income statement under the following headings:			
Cost of goods sold	3,219	2,951	2,636
Sales and distribution costs	2,868	2,756	2,545
Research and development costs	1,713	1,516	1,394
Administrative expenses	1,523	1,479	1,458
	9,323	8,702	8,033
Included in the Balance sheet as:			
Capitalised employee costs related to assets in course of construction etc	598	524	482
Change in employee costs included in inventories	142	151	174
Total employee costs	10,063	9,377	8,689

For information on remuneration to the Board of Directors and Executive Management please refer to note 35.

	2004	2003	2002
Average number of full-time positions	19,520	18,381	17,073
Year-end number of full-time positions	20,285	18,756	18,005

### 8 DEPRECIATION, AMORTISATION AND IMPAIRMENT LOSSES

DKK million	2004	2003	2002
Included in the Income statement under the following headings:			
Cost of goods sold	1,322	1,076	810
Sales and distribution costs	226	116	94
Research and development costs	218	197	191
Administrative expenses	126	188	130
Share of profit in associated companies	–	4	68
Total depreciation, amortisation and impairment losses	1,892	1,581	1,293

### 9 FEES TO STATUTORY AUDITORS

DKK million	2004	2003	2002
PricewaterhouseCoopers:			
Statutory audit	17	15	14
Audit-related services	5	4	5
Tax advisory services	18	16	13
Other services	3	4	14
Total	43	39	46
Ernst & Young:			
Statutory audit	1	1	1
Other services	3	–	2
Total	4	1	3

### 10 LICENCE FEES AND OTHER OPERATING INCOME (NET)

DKK million	2004	2003	2002
Licence fees and settlements	382	901	559
Net income from IT, engineering and other services	58	43	55
Other income	135	92	144
Total licence fees and other operating income (net)	575	1,036	758

## NOTES - CONSOLIDATED INCOME STATEMENT

### 11 FINANCIAL INCOME

DKK million	2004	2003	2002
Interest income	235	285	164
Capital gain on investments etc (net)	-	2	-
Foreign exchange gain on derivative financial instruments (net)	663	1,195	882
<b>Total financial income</b>	<b>898</b>	<b>1,482</b>	<b>1,046</b>

### 12 FINANCIAL EXPENSES

DKK million	2004	2003	2002
Interest expenses	107	184	110
Capital loss on investments etc (net)	12	-	53
Foreign exchange loss	130	229	510
Other financial expenses	55	56	44
<b>Total financial expenses</b>	<b>304</b>	<b>469</b>	<b>717</b>

### 13 INCOME TAXES

DKK million	2004	2003	2002
Current tax on profit for the year	2,293	2,541	2,317
Deferred tax on profit for the year	125	(17)	(185)
<b>Tax on profit for the year</b>	<b>2,418</b>	<b>2,524</b>	<b>2,132</b>
Adjustments related to previous years (net)	26	19	80
<b>Income taxes in the Income statement</b>	<b>2,444</b>	<b>2,543</b>	<b>2,212</b>
Tax on entries in equity related to current tax	-	(150)	15
Tax on entries in equity related to deferred tax	8	44	(2)
<b>Tax on entries in equity</b>	<b>8</b>	<b>(106)</b>	<b>13</b>
Computation of effective tax rate:			
Statutory corporate income tax rate in Denmark	30.0%	30.0%	30.0%
Deviation in foreign subsidiaries' tax rates compared to Danish tax rate (net)	3.8%	5.7%	5.7%
Non-tax deductible expenses less non-taxable income	(0.5%)	(0.2%)	(0.6%)
Other	(0.5%)	(1.0%)	(0.1%)
<b>Effective tax rate</b>	<b>32.8%</b>	<b>34.5%</b>	<b>35.0%</b>

### 14 EARNINGS PER SHARE

		2004	2003	2002
Net profit	DKK million	5,013	4,833	4,116
Average number of shares outstanding	in 1,000 shares	336,628	341,173	346,685
Dilutive effect of outstanding options 'in the money'	in 1,000 shares	1,482	422	544
<b>Average number of shares outstanding incl dilutive effect of options 'in the money'</b>	<b>in 1,000 shares</b>	<b>338,110</b>	<b>341,595</b>	<b>347,229</b>
Basic earnings per share	DKK	14.89	14.17	11.87
Diluted earnings per share	DKK	14.83	14.15	11.85

## NOTES - CONSOLIDATED INCOME STATEMENT

### 15 APPROPRIATION OF NET PROFIT INCL PROPOSED DIVIDENDS

DKK million	2004	2003	2002
Proposed appropriation of net profit in the Parent Company, Novo Nordisk A/S:			
Dividends	1,594	1,488	1,243
Net revaluation reserve according to the equity method	3,377	166	2,688
Retained earnings	35	3,179	185
Net profit	5,006	4,833	4,116
Total equity in the Parent Company, Novo Nordisk A/S:			
Share capital	709	709	709
Share premium account	2,565	2,565	2,565
Net revaluation reserve according to the equity method	6,562	3,185	3,019
Retained earnings	16,701	18,396	16,269
Exchange rate adjustments	(40)	(79)	(85)
Total equity	26,497	24,776	22,477
Dividends per share	4.80	4.40	3.60

As the financial statements of the Parent Company Novo Nordisk A/S are prepared in accordance with Danish GAAP, including amortisation of goodwill, the net profit and equity in 2004 of Novo Nordisk A/S is DKK 7 million lower than the net profit and equity of the Group.

### 16 INTANGIBLE ASSETS

DKK million	Goodwill	Patents and licences	Other intangible assets	Total
<b>2004</b>				
Cost at the beginning of 2004	318	8	264	590
Additions during the year	–	170	66	236
Disposals during the year	–	(1)	–	(1)
Exchange rate adjustments	(4)	–	(3)	(7)
Cost at the end of 2004	314	177	327	818
Amortisation and impairment losses at the beginning of 2004	103	3	153	259
Amortisation for the year	–	5	56	61
Impairment losses for the year	188	–	–	188
Exchange rate adjustments	(2)	–	(2)	(4)
Amortisation and impairment losses at the end of 2004	289	8	207	504
Carrying amount at the end of 2004	25	169	120	314
<b>2003</b>				
Cost at the beginning of 2003	302	23	263	588
Additions during the year	8	–	37	45
Disposals during the year	–	(15)	(31)	(46)
Exchange rate adjustments	8	–	(5)	3
Cost at the end of 2003	318	8	264	590
Amortisation and impairment losses at the beginning of 2003	67	17	126	210
Amortisation for the year	–	1	54	55
Impairment losses for the year	36	–	–	36
Amortisation reversed on disposals during the year	–	(15)	(24)	(39)
Exchange rate adjustments	–	–	(3)	(3)
Amortisation and impairment losses at the end of 2003	103	3	153	259
Carrying amount at the end of 2003	215	5	111	331

In 2004, Novo Nordisk recognised an impairment loss of DKK 175 million related to goodwill recognised in connection with the acquisition of the Brazilian diabetes care company Biobrás (Novo Nordisk Producao Farmacêutica Do Brasil) in 2002. The impairment loss is caused by a decrease in market share for oral antidiabetic products due to generic competition, increased insulin competition and increased prices on raw materials.

## NOTES - CONSOLIDATED BALANCE SHEET

### 17 PROPERTY, PLANT AND EQUIPMENT

	Land and buildings	Plant and machinery	Other equipment	Payments on account and assets in course of construction	<b>Total</b>
DKK million					
<b>2004</b>					
Cost at the beginning of 2004	8,597	10,058	2,550	3,156	<b>24,361</b>
Additions during the year	63	384	135	2,557	<b>3,139</b>
Disposals during the year	(239)	(410)	(314)	–	<b>(963)</b>
Transfer from/(to) other items	643	1,153	(85)	(1,711)	–
Exchange rate adjustments	(34)	(23)	(14)	(5)	<b>(76)</b>
Cost at the end of 2004	9,030	11,162	2,272	3,997	<b>26,461</b>
Depreciation and impairment losses at the beginning of 2004	2,247	4,211	1,561	–	<b>8,019</b>
Depreciation for the year	344	931	230	–	<b>1,505</b>
Impairment losses for the year	8	127	3	–	<b>138</b>
Depreciation and impairment losses reversed on disposals during the year	(122)	(355)	(242)	–	<b>(719)</b>
Exchange rate adjustments	(10)	(17)	(14)	–	<b>(41)</b>
Depreciation and impairment losses at the end of 2004	2,467	4,897	1,538	–	<b>8,902</b>
Carrying amount at the end of 2004	6,563	6,265	734	3,997	<b>17,559</b>
<b>2003</b>					
Cost at the beginning of 2003	7,410	6,886	2,477	5,896	22,669
Changes in consolidation	4	–	4	4	12
Additions during the year	72	329	247	1,810	2,458
Disposals during the year	(200)	(181)	(258)	–	(639)
Transfer from/(to) other items	1,373	3,051	116	(4,540)	–
Exchange rate adjustments	(62)	(27)	(36)	(14)	(139)
Cost at the end of 2003	8,597	10,058	2,550	3,156	24,361
Depreciation and impairment losses at the beginning of 2003	2,016	3,517	1,470	–	7,003
Changes in consolidation	–	–	2	–	2
Depreciation for the year	313	795	240	–	1,348
Impairment losses for the year	16	66	56	–	138
Depreciation and impairment losses reversed on disposals during the year	(86)	(149)	(184)	–	(419)
Exchange rate adjustments	(12)	(18)	(23)	–	(53)
Depreciation and impairment losses at the end of 2003	2,247	4,211	1,561	–	8,019
Carrying amount at the end of 2003	6,350	5,847	989	3,156	16,342

## NOTES - CONSOLIDATED BALANCE SHEET

### 18 FINANCIAL ASSETS

DKK million	Investments in associated companies	Other financial assets		2004 Total	2003 Total
		Amounts owed by affiliated companies	Other securities and investments		
Cost at the beginning of the year	1,251	39	216	1,506	1,492
Additions during the year	19	5	88	112	16
Disposals during the year	(1)	(7)	(1)	(9)	(2)
Cost at the end of the year	1,269	37	303	1,609	1,506
Value adjustments at the beginning of the year	(211)	–	(175)	(386)	(173)
Net profit/(loss)	(212)	–	–	(212)	(140)
Impairment of goodwill	–	–	–	–	(4)
Exchange rate adjustments	(53)	–	–	(53)	(143)
Revaluation surplus transfer to equity	–	–	13	13	–
Other adjustments	90	–	(19)	71	74
Value adjustments at the end of the year	(386)	–	(181)	(567)	(386)
Carrying amount at the end of the year	883	37	122	1,042	1,120

Carrying amount of investments in associated companies includes net capitalised goodwill of DKK 13 million at the end of the year (DKK 13 million in 2003).

In 2004, Other adjustments includes unrealised capital gains amounting to DKK 95 million net related to ZymoGenetics Inc and Aradigm Corporation (DKK 94 million in 2003).

DKK million	2004	2003
Aggregated financial information of associated companies:		
Sales	2,687	2,571
Net profit	(590)	(560)
Total assets	5,350	5,326
Total liabilities	2,765	2,252
Market values of shareholdings in listed associated companies:		
– ZymoGenetics Inc	2,627	1,929
– Aradigm Corporation	74	80

Please refer to page 96–97 for a list of Novo Nordisk's associated companies.

Other securities and investments include the following:		
Listed shares	37	31
Unlisted shares	85	10
Total Other securities and investments	122	41



## NOTES – CONSOLIDATED BALANCE SHEET

### 19 INVENTORIES

DKK million	2004	2003
Raw materials and consumables	1,130	1,128
Work in progress	4,127	3,563
Finished goods	1,906	1,840
<b>Total inventories</b>	<b>7,163</b>	6,531
Indirect production costs included in work in progress and finished goods	3,240	2,780
Amount of write-down of inventories recognised as expense during the year	327	784
Amount of reversal of write-down of inventories during the year	30	32

### 20 TRADE RECEIVABLES

DKK million	2004	2003
Trade receivables (gross)	4,431	4,183
Allowances for doubtful trade receivables:		
Balance at the beginning of the year	398	456
Change in allowances during the year	(3)	(28)
Realised losses during the year	(26)	(30)
Balance at the end of the year	369	398
<b>Total trade receivables</b>	<b>4,062</b>	3,785
Trade receivables (net) are equal to an average credit period of (days)	51	53

The carrying amount of Trade receivables approximate their fair value.

#### Credit risk management

Novo Nordisk's principal financial assets are Trade and Other receivables, Marketable securities and Cash at bank and in hand. The credit risk is primarily attributable to Trade and Other receivables. The amounts presented in the balance sheet are net of allowances for doubtful trade receivables, estimated based on prior experience and assessment of the current economic environment.

The credit risk on Marketable securities is limited as investments are made in liquid bonds with solid credit-rating. The credit risk on bank balances and derivative financial instruments is limited as Novo Nordisk only uses banks with solid credit-ratings assigned by international credit-rating agencies. Novo Nordisk has no significant concentration of credit risk, with exposure spread over a large number of counterparties and customers. The Novo Nordisk Treasury Policy, which is approved by the Board of Directors covers credit risk.

### 21 OTHER RECEIVABLES

DKK million	2004	2003
Prepayments to public authorities	–	750
Prepayments	458	323
Interest receivable	23	72
Market value of financial instruments (refer to note 36)	815	1,051
Amounts owed by affiliated companies	101	110
Other receivables	458	346
<b>Total other receivables</b>	<b>1,855</b>	2,652

The carrying amount of Other receivables approximate their fair value.

### 22 MARKETABLE SECURITIES

DKK million	2004	2003
Bonds	508	1,810
Unit trusts and shares	18	18
<b>Total marketable securities</b>	<b>526</b>	1,828
At original acquisition cost	592	1,902
Bonds with maturity exceeding 12 months from the balance sheet date	508	1,108
Duration of the Group's bond portfolio (years)	1.0	0.7
Redemption yield on the Group's bond portfolio	2.5%	2.6%

#### Interest rate risk management

Novo Nordisk is mainly exposed to interest rate risk through interest-bearing assets and liabilities. The overall objective of the interest rate risk management is to limit the negative impact on earnings and on the balance sheet from interest rate fluctuations. Excess liquidity is primarily invested in short-term, credit-rated, liquid bonds denominated in DKK or EUR or in money market deposits likewise in DKK or EUR. The interest rate risk of the investments is managed based on duration measured against a predefined benchmark. The Investment Policy forms part of Novo Nordisk's Treasury Policy, which is approved by the Board of Directors.

## NOTES - CONSOLIDATED BALANCE SHEET

### 23 SHARE CAPITAL

DKK million	2004	2003
Development in share capital:		
A share capital	107	107
B share capital	602	602
At the end of the year	709	709

The A share capital remained DKK 107 million from 2000 to 2004. The B share capital was DKK 647 million in 2000. In 2001 the B share capital was reduced by DKK 45 million to DKK 602 million and remained that amount in 2002, 2003 and 2004.

At the end of 2004 the share capital amounted to DKK 107,487,200 in A share capital (equal to 53,743,600 shares of DKK 2) and DKK 601,901,120 in B share capital (equal to 300,950,560 shares of DKK 2).

	Number of B shares of DKK 2	In % of share capital	Market value DKK million
Treasury shares:			
Holding at the beginning of the year	16,542,841	4.66%	3,987
Purchase during the year	6,480,000	1.83%	1,982
Sale during the year	(437,712)	(0.12%)	(87)
Value adjustment			871
Holding at the end of the year	22,585,129	6.37%	6,753

Acquisition of treasury shares during the year is part of the share buy-back programme 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. Sale of treasury shares primarily relates to exercised share options.

Of the treasury B share holding at the end of the year 4,445,651 shares are regarded as hedge for the share options issued, please refer to note 34.

### 24 LONG-TERM DEBT

DKK million	2004	2003
Mortgage debt and other secured loans with terms to maturity between 2007–2016 and a weighted average interest rate of 2.3% to 5.1%	659	661
Unsecured loans and other long-term loans with terms to maturity between 2007–2011 and a weighted average interest rate of 0.5% to 3.4%	529	92
At the end of the year	1,188	753

The debt is payable within the following periods as from the balance sheet date:

Between one and two years	26	46
Between two and three years	13	34
Between three and four years	153	16
Between four and five years	–	153
After five years	996	504
	1,188	753

The debt is denominated in the following currencies:

DKK	3	3
EUR	655	655
USD	492	3
JPY	37	75
Other currencies	1	17
	1,188	753

Adjustment of the above loans to market value at year-end 2004 would result in a cost of DKK 2 million (a cost of DKK 1 million in 2003).

## NOTES - CONSOLIDATED BALANCE SHEET

### 25 DEFERRED TAX LIABILITIES

Deferred income taxes arise from temporary differences between the accounting and tax balance sheets of the individual consolidated companies and from realisable tax-loss carry-forwards, using the liability method. The deferred taxes are measured according to current tax rules and at the tax rates expected to be in force on the elimination of the temporary differences. Measurement of deferred taxes in Denmark is based on a tax rate of 30%.

Unremitted earnings have been retained by subsidiary companies for reinvestment. No provision is made for income taxes that would be payable upon the distribution of such earnings. If the earnings were remitted, an immaterial income tax charge would result, based on the tax statutes currently in effect.

No deferred tax has been calculated on differences associated with investments in subsidiaries, branches and associates, as the differences by nature are permanent differences. However, deferred tax has been calculated, if the differences are tax deductible.

DKK million	2004	2003
At the beginning of the year	931	887
Deferred tax on profit for the year	125	(17)
Adjustment relating to previous years	(8)	(36)
Tax on entries on equity	8	44
Exchange rate adjustments	28	53
<b>Total deferred tax liabilities (net)</b>	<b>1,084</b>	931

DKK million	Assets	Liabilities	2004 Total	Assets	Liabilities	2003 Total
<b>Specification</b>						
The deferred tax assets and liabilities are allocable to the various balance sheet items as follows:						
Property, plant and equipment	(100)	1,443	1,343	(67)	1,586	1,519
Indirect production costs	-	998	998	-	834	834
Unrealised profit on intercompany sales	(908)	-	(908)	(854)	-	(854)
Allowances for doubtful trade receivables	(83)	-	(83)	(77)	-	(77)
Tax-loss carry-forward	(1)	-	(1)	(15)	-	(15)
Other	(1,237)	972	(265)	(816)	340	(476)
	<b>(2,329)</b>	<b>3,413</b>	<b>1,084</b>	(1,829)	2,760	931
Offset of deferred tax assets and deferred tax liabilities related to income taxes levied by the same tax authority	1,560	(1,560)	-	1,250	(1,250)	-
	<b>(769)</b>	<b>1,853</b>	<b>1,084</b>	(579)	1,510	931

#### Tax-loss carry-forward

Deferred tax assets are recognised on tax loss carry-forwards that represent income likely to be realised in the future. The deferred tax of a tax loss of DKK 70 million has not been recognised in the Balance sheet. This tax-loss expires after more than five years.

## NOTES - CONSOLIDATED BALANCE SHEET

### 26 PROVISIONS FOR PENSIONS

Most employees in the Novo Nordisk Group are covered by retirement plans in the form of primarily defined contribution plans or alternatively defined benefit plans. Group companies sponsor these plans either directly or by contributing to independently administered funds. The nature of such plans varies according to legal regulations, fiscal requirements and economic conditions of the countries in which the employees are employed, and the benefits are generally being based on the employees' remuneration and years of service. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees. Other post-employment benefits consist mostly of post-retirement healthcare plans, principally in the United States.

DKK million	2004	2003
The amounts recognised in the Income statement regarding post-employment defined benefit plans are as follows:		
Current service cost	<b>84</b>	67
Interest cost	<b>19</b>	17
Expected return on plan assets	<b>(9)</b>	(3)
Amortisation of actuarial gains/losses recognised	<b>(3)</b>	6
Past service cost	<b>9</b>	4
<b>Total expenses included in employee costs</b>	<b>100</b>	91

The actual return on plan assets was a gain of DKK 11 million in 2004 (a gain of DKK 4 million in 2003).

The movements in the net (assets)/liabilities recognised in the Balance sheet for post-employment defined benefit plans are as follows:		
At the beginning of the year	<b>222</b>	291
Total expenses included in employee costs	<b>100</b>	91
Employer contributions to plan assets	<b>(46)</b>	(180)
Benefits paid to employees	<b>(10)</b>	(9)
Exchange rate adjustments	<b>(16)</b>	29
<b>At the end of the year</b>	<b>250</b>	222

Amounts recognised in the Balance sheet for post-employment defined benefit plans are as follows:		
Present value of funded obligations	<b>364</b>	314
Fair value of plan assets	<b>(313)</b>	(246)
	<b>51</b>	68
Present value of unfunded obligations	<b>245</b>	186
Unrecognised actuarial (gains)/losses	<b>(39)</b>	(6)
Unrecognised past service costs	<b>(7)</b>	(26)
<b>Liability in the balance sheet (net)</b>	<b>250</b>	222

Post-employment benefit plans are usually funded by payments from Group companies and by employees to funds independent of the Group. Where a plan is unfunded, a liability for the retirement obligation is recognised in the Group's Balance sheet. The costs recognised for post-employment benefits are included in production costs, sales and distribution costs, research and development costs or administrative expenses.

DKK million	2004	2003
The liability (net) include non-pension post-retirement benefit plans, principally medical plans as follows:		
Actuarial present value of obligations due to past and present employees	<b>171</b>	125
Unrecognised actuarial (gains)/losses	<b>(49)</b>	(49)
<b>Net recognised (assets)/liabilities</b>	<b>122</b>	76

Amounts recognised in the Balance sheet for post-employment defined benefit plans are predominantly non-current and are reported as either long-term assets or long-term liabilities.

The actuarial assumptions used in the actuarial computations and valuations vary from country to country due to local economic and social conditions. The range of assumptions used is as follows:	
Discount rate	2.0% to 5.8%
Projected return on plan assets	3.0% to 4.8%
Projected future remuneration increases	2.0% to 3.0%
Healthcare cost trend rate	5.5% to 11.0%
Inflation rate	2.3% to 5.5%

For all major defined benefit plans actuarial computations and valuations are performed annually.

## NOTES - CONSOLIDATED BALANCE SHEET

### 27 OTHER PROVISIONS

DKK million	Provisions for returned products	Other provisions	<b>2004 Total</b>	2003 Total
At the beginning of the year	371	940	<b>1,311</b>	1,163
Additional provisions	208	1,458	<b>1,666</b>	404
Unused amounts reversed	–	(3)	<b>(3)</b>	(6)
Used during the year	(176)	(1,024)	<b>(1,200)</b>	(159)
Exchange rate adjustments	–	(56)	<b>(56)</b>	(91)
At the end of the year	403	1,315	<b>1,718</b>	1,311
Specification of other provisions:				
Long-term	–	358	<b>358</b>	271
Current	403	957	<b>1,360</b>	1,040
	403	1,315	<b>1,718</b>	1,311

#### Provision for returned products:

Novo Nordisk issues credit notes for expired goods as a part of normal business. Consequently, a provision for future returns is made based on historical statistical product returns, which represents management's best estimate.

#### Other provisions:

Other provisions consist of various different types of provisions, which represents managements' best estimate. The majority relates to certain pricing provisions. In some countries the actual rebates depend on which customers the products are sold to. Factors that complicate the rebate calculations are identification of which products have been sold subject to a rebate, which customer or government price terms apply, and the estimated lag time between sale and payment of the rebate.

### 28 SHORT-TERM DEBT

DKK million	<b>2004</b>	2003
Bank loans and overdrafts	<b>470</b>	421
Long-term debt, amounts falling due within one year	<b>37</b>	554
Total short-term debt	<b>507</b>	975
The debt is denominated in the following currencies:		
DKK	<b>5</b>	68
EUR	<b>87</b>	455
USD	<b>373</b>	158
JPY	<b>34</b>	254
Other currencies	<b>8</b>	40
Total short-term debt	<b>507</b>	975

At year-end the Group had undrawn committed credit facilities amounting to DKK 6,694 million (DKK 8,701 million in 2003). The undrawn committed credit facilities consist of a EUR 500 million and a EUR 400 million facility which are committed by a number of Danish and international banks. The facilities mature in 2007 and 2009 respectively.

### 29 OTHER LIABILITIES

DKK million	<b>2004</b>	2003
Employee costs payable	<b>1,513</b>	1,321
Taxes and duties payable	<b>317</b>	197
Accruals and deferred income	<b>110</b>	810
Amounts owed to affiliated companies	<b>65</b>	53
Other payables	<b>1,716</b>	985
Total other liabilities	<b>3,721</b>	3,366

## NOTES - CONSOLIDATED CASH FLOW AND FINANCIAL RESOURCES

### 30 OTHER REVERSALS WITH NO EFFECT ON CASH FLOW

DKK million	2004	2003	2002
Share-based payment costs	104	76	38
Increase/(decrease) in provisions	501	56	256
Loss from sale of tangible fixed assets	104	35	48
Allowances for doubtful trade receivables	(10)	(28)	(29)
Unrealised (gain)/loss on shares and bonds etc	(8)	8	36
Unrealised foreign exchange (gain)/loss	204	207	25
Share of (profit)/loss in associated companies	212	149	99
Unrealised capital gain on investments in associated companies	(95)	(94)	(239)
Other	6	(44)	57
Other reversals with no effect on cash flow	1,018	365	291

### 31 CASH FLOWS FROM DIVESTMENT OF SUBSIDIARIES

DKK million	2004	2003	2002
Property, plant and equipment	-	-	4
Current assets	-	-	31
Long-term liabilities	-	-	(2)
Current liabilities	-	-	(8)
Net assets divested	-	-	25
Divestment gains	-	-	38
Consideration received	-	-	63
Less divested cash and cash equivalents	-	-	(11)
Net cash flow	-	-	52

### 32 CASH FLOWS FROM ACQUISITION OF SUBSIDIARIES

DKK million	2004	2003	2002
Property, plant and equipment	-	(10)	(104)
Current assets	-	(54)	(178)
Long-term liabilities	-	-	103
Current liabilities	-	64	102
Net assets acquired	-	-	(77)
Goodwill on acquisition	-	-	(346)
Consideration paid	-	-	(423)
Acquired cash and cash equivalents	-	10	(25)
Net cash flow	-	10	(448)

### 33 CASH AND CASH EQUIVALENTS

DKK million	2004	2003	2002
Cash at the end of the year	3,433	1,262	1,423
Short-term bank loans and overdrafts at the end of the year	(470)	(421)	(504)
Cash and cash equivalents at the end of the year	2,963	841	919

At the end of 2004, 2003 and 2002 there were no marketable securities with original maturity of less than three months.

34 SHARE-BASED PAYMENT SCHEMES

**Employee shares**

In 2004 there has been no employee share programme.

**Share options**

Novo Nordisk has established share option schemes with the purpose of motivating and retaining qualified management and to ensure common goals for management and the shareholders. Each option gives the right to purchase one Novo Nordisk B share, and in total approximately 400 employees in Novo Nordisk hold share options. All share options are hedged by treasury shares.

*Ordinary share option plans*

The granting of share options under the Group's ordinary share option plans is subject to the achievement of shareholder value-based goals decided by the Board of Directors aligned with the Group's long-term financial targets.

The options are exercisable three years after the issue date and will expire after eight years. For options granted based on performance targets for the financial years 1997–1999, the exercise price was equal to the market price of the Novo Nordisk B share at the time of issuance. The exercise price for options granted based on performance targets for the financial years 2000–2004 was equal to the market price of the Novo Nordisk B share at the time when the plan was established. The options can only be settled in equity.

For 2004 the maximum number of options was granted. The exercise price is 267. The exercise price is fixed during the lifetime of the share option plan.

*Launch-share option plan*

In connection with the demerger of Novozymes A/S, a specific share option plan was established for Executive Management and Senior Management Board, where the granting of the options was subject to the successful and timely completion of the demerger. The options are exercisable three years after the issue date and will expire after six years. The exercise price corresponds to the market price for the Novo Nordisk B share at the time when the plan was established.

As a prerequisite to receiving the options, each participant had to establish an investment in Novo Nordisk B shares equal to one year's gross salary. For each Novo Nordisk share invested under the scheme, four options were received and the Novo Nordisk B share investment must be maintained at least until the end of the vesting period for the options, ie 31 January 2004. After this date the investment in Novo Nordisk B shares was no longer required and the Novo Nordisk B shares could be sold by the individual launch-share option plan participant, whereas the launch-share options may be exercised within a period of three years.

The participants in the launch-share option plan held 149,740 shares. Of these 86,880 were sold during 2004.

The launch scheme was mandatory for members of Executive Management and voluntary for Senior Management Board. In 2001 and 2002 a launch-option incentive programme was also offered to newly appointed members of Senior Management Board.

*Share options on Novozymes share*

Options granted prior to the demerger of Novozymes A/S in 2000 have been split into one Novo Nordisk option and one Novozymes option. At the end of the year the Group's outstanding Novozymes options amount to 189,758 with an average exercise price of DKK 97 per share of DKK 10 and a market value of DKK 34 million. These options are hedged by the Group's holding of Novozymes A/S B shares.

*Assumptions*

The market value of the share options has been calculated using the Black-Scholes option pricing model.

The assumptions used are shown in the table below:

	2004	2003	2002
Expected life of the option in years (average)	6	4	4
Expected volatility (based on four years' historical volatility)	35%	35%	39%
Expected dividend per share (in DKK)	4.80	4.40	3.60
Risk-free interest rate (based on Danish government bonds)	3.5%	3.8%	3.8%
Novo Nordisk B share price at the end of the year	299	241	205

**Long-term share-based incentive programme**

As from 2004, the six members of Executive Management and twenty members of the Senior Management Board are no longer included in Novo Nordisk's share option plan. The option plan has been replaced by a share-based incentive programme. This incentive programme is based on an annual calculation of shareholder value creation compared to the planned performance for the year.

In line with Novo Nordisk's long-term financial targets, the calculation of value creation is based on reported operating profit after tax reduced by a WACC-based return requirement on average invested capital. A proportion of the marginal value creation will be transferred to a bonus pool for participating executives. The calculated bonus pool may, subject to the Board of Directors' assessment, be reduced by a lower than expected performance on significant research and development projects and key sustainability projects.

The bonus pool will operate with a maximum contribution per participant equal to eight months of salary. Once the performance-based bonus pool has been approved by the Board of Directors, the bonus pool is converted into Novo Nordisk A/S B shares at the market price prevailing when the financial results for the year prior to the bonus year were released. The bonus pool of shares will be established when approved by the Board of Directors, but will be locked-up for three years before it is transferred to the participants at the end of the three-year period.

In the lock-up period, the bonus pool may potentially be reduced due to lower than planned value generation in subsequent years. The participant will have to be employed by Novo Nordisk at the end of the lock-up period to be eligible for the transfer of shares from the bonus pool. In 2004, the allocation to the bonus pool amounts to DKK 33.7 million, corresponding to 7 months of salary. This amount was expensed in 2004. The cash amount has been converted into 126,344 Novo Nordisk B shares using a share price of DKK 267, equal to the average trading price for Novo Nordisk B shares on the Copenhagen Stock Exchange from 6 to 20 February 2004. Based on the split of participants at the establishment of the bonus pool, approximately 40% of the pool will be allocated to the members of Executive Management and 60% to the members of the Senior Management Board.

As the long-term share-based incentive programme is evaluated by the Board of Directors to have worked successfully in 2004, it will continue in 2005 with an unchanged structure.

## NOTES - ADDITIONAL INFORMATION

### 34 SHARE-BASED PAYMENT SCHEMES (CONTINUED)

Outstanding share options in Novo Nordisk	Share options	Average exercise price per option DKK	Market value per option DKK	Market value DKK million
Outstanding at the end of 2001	3,125,094	220	163	509
Launch-share options granted in 2002 (issued 7 February 2003)	26,024	322	60	2
Exercised in 2002	(51,750)	125	163	(8)
Expired/cancelled in 2002	(45,415)	220	163	(7)
Value adjustment				(319)
Outstanding at the end of 2002	3,053,953	223	58	177
Granted in respect of 2003 (issued on 6 February 2004)	1,092,500	195	86	94
Exercised in 2003:				
of 1998 Ordinary share option plan	(20,000)	125	58	(1)
of 1999 Ordinary share option plan	(51,000)	198	58	(3)
Expired/cancelled in 2003	(37,750)	223	58	(2)
Value adjustment				42
Outstanding at the end of 2003	4,037,703	216	75	307
Granted in respect of 2004 (issued on 31 January 2005)	809,416	267	104	84
Exercised in 2004:				
of 1997 Ordinary share option plan	(5,500)	190	75	(1)
of 1998 Ordinary share option plan	(55,083)	125	75	(4)
of 1999 Ordinary share option plan	(99,166)	198	75	(7)
of 2000 Ordinary share option plan	(143,083)	198	75	(11)
of Launch-share option plan	(92,280)	198	75	(7)
Expired/cancelled in 2004	(6,356)	216	75	(1)
Value adjustment				79
Outstanding at the end of 2004	4,445,651	227	99	439

Exercisable and outstanding share options in Novo Nordisk	Issued share options	Exercised share options	Expired/cancelled	Outstanding/exercisable share options	Exercise price DKK	Exercise period
1997 Ordinary share option plan	104,500	(54,500)	(27,000)	23,000	190	19/2 2001 – 18/2 2006
1998 Ordinary share option plan	355,000	(126,833)	(51,917)	176,250	125	25/3 2002 – 24/3 2007
1999 Ordinary share option plan	687,500	(150,166)	(81,334)	456,000	198	24/3 2003 – 23/3 2008
2000 Ordinary share option plan	763,000	(143,083)	(25,793)	594,124	198	22/2 2004 – 21/2 2009
2000 Launch-share option plan	718,600	(92,280)	–	626,320	198	1/2 2004 – 31/1 2007
Exercisable at the end of 2004	2,628,600	(566,862)	(186,044)	1,875,694		
2001 Ordinary share option plan	684,980	–	(37,394)	647,586	332	8/2 2005 – 7/2 2010
2001 Launch-share option plan	10,764	–	–	10,764	332	8/2 2005 – 7/2 2010
2002 Launch-share option plan	26,024	–	–	26,024	322	7/2 2006 – 6/2 2011
2003 Ordinary share option plan	1,092,500	–	(16,333)	1,076,167	195	6/2 2007 – 5/2 2012
2004 Ordinary share option plan	809,416	–	–	809,416	267	31/1 2008 – 30/1 2013
Outstanding at the end of 2004	5,252,284	(566,862)	(239,771)	4,445,651		

Average market price of Novo Nordisk B shares per trading period in 2004	Average market price DKK	Exercised share options
February	267	88,376
May	288	123,958
August	322	121,860
November	299	60,918
Total exercised options		395,112



### 35 MANAGEMENT'S REMUNERATION, SHARE OPTIONS AND SHAREHOLDINGS

For information on the Board of Directors, the members of Executive Management and of Senior Management Board, please refer to pages 106–107.

#### Remuneration

It is the policy of Novo Nordisk that remuneration to the Board of Directors (ten in total), Executive Management (six in total) and Senior Management Board (twenty in total) must be at a competitive level compared to other major Danish companies and similar international pharmaceutical companies.

#### Fee to the Board of Directors and the Audit Committee

The fee to the Board of Directors and the Audit Committee is a fixed annual fee. Directors receive a fixed amount while the chairmanship receives a multiplier thereof: The Chairman (2.5 times) and the Vice Chairman (1.5 times). The Audit Committee also receives a multiplier thereof in addition to the director fee: The audit Committee chairman (1.25 times) and an Audit Committee member (0.5 times). In 2004, the base fee was DKK 300.000. In addition to the fee the members' costs in connection with participation in the meetings, such as travel and hotel expenses etc, are refunded. Besides this, no other amounts or benefits are paid to the Board members or Audit Committee members.

DKK million	Board of Directors		Audit Committee	
	2004	2003	2004	2003
Chairman	0.8	0.6	0.4	–
Vice chairman	0.4	0.4	–	–
Other Board of Directors/Audit Committee members	2.4	1.9	0.3	–
Total	3.6	2.9	0.7	–

#### Executive Management and Senior Management Board

The remuneration to Executive Management and Senior Management Board is based on a fixed salary, a potential cash bonus of up to four months' salary, pension contributions of 20% to approx 30% of the cash salary including bonus and non-monetary benefits in the form of car and phone. Additionally, Executive Management and Senior Management Board participate in a long-term share-based incentive programme. The performance-based incentive programme is based on long-term value creation where Novo Nordisk B shares will annually be allocated to a shared bonus pool when predefined overall business-related targets have been achieved. The maximum annual allocation is capped. Subject to satisfactory subsequent performance, the bonus pool of shares may be paid out to the executives following a three year lock up period. The size of the cash bonus depends on the achievement of individual performance targets whereas the incentive from the long term share based programme is based on an annual calculation of shareholder-value creation compared to planned performance for the year for the group.

The remuneration package for members of Senior Management Board employed in foreign subsidiaries differ from the general package in respect of other benefit and bonus schemes included in the package in order to ensure an attractive package compared to local conditions. In addition, Executive Management and Senior Management Board members receive ordinary allowances in connection with business travelling, conferences and education etc, which are based on refunding of actual costs.

DKK million	Fixed salary	Cash bonus	Pensions	Non-monetary benefits	Share-based payment	Total remuneration
<b>2004</b>						
<b>Executive Management:</b>						
Lars Rebieen Sørensen	5.3	1.5	1.6	0.1	–	8.5
Jesper Brandgaard	2.6	0.9	0.8	0.2	–	4.5
Lars Almbloom Jørgensen	2.6	0.6	0.9	0.3	–	4.4
Lise Kingo	2.6	0.9	0.8	0.2	–	4.5
Kåre Schultz	2.9	0.9	1.0	0.2	–	5.0
Mads Krogsgaard Thomsen	2.6	0.4	0.8	0.2	–	4.0
Executive Management in total	18.6	5.2	5.9	1.2	–	30.9
Senior Management Board in total	39.4	11.3	11.1	5.3	–	67.1
Share bonus pool *)					33.7	33.7

\*) The share bonus pool is locked up for three years before it is transferred to the participants employed at the end of the three-year period. The value is the cash amount of the share bonus granted in 2004. Based on the split of participants at the establishment of the bonus pool, approximately 40% of the pool will be allocated to the members of Executive Management and 60% to the members of the Senior Management Board. In the lock-up period, the bonus pool may potentially be reduced due to lower than planned value generation in subsequent years.

## NOTES - ADDITIONAL INFORMATION

### 35 MANAGEMENT'S REMUNERATION, SHARE OPTIONS AND SHAREHOLDINGS (CONTINUED)

DKK million	Fixed salary	Cash bonus	Pensions	Non-monetary benefits	Share-based payment	Total remuneration
<b>2003</b>						
<b>Executive Management:</b>						
Lars Rebien Sørensen	4.6	0.9	1.2	0.1	1.7	8.5
Jesper Brandgaard	2.5	0.6	0.6	0.2	0.9	4.8
Lars Almbloom Jørgensen	2.5	0.4	0.9	0.3	0.9	5.0
Lise Kingo	2.0	0.3	0.5	0.2	0.9	3.9
Kåre Schultz	2.5	0.6	0.8	0.2	0.9	5.0
Mads Krogsgaard Thomsen	2.5	0.4	0.7	0.2	0.9	4.7
Executive Management in total	16.6	3.2	4.7	1.2	6.2	31.9
Senior Management Board in total	29.1	9.3	8.6	4.5	6.6	58.1

In relation to severance payment, the members of Executive Management are, in the event of termination by the Company or by the individual due to a merger, acquisition or takeover by an external company, entitled to a severance payment of up to 36 months' salary plus pension contribution. This equals amounts between DKK 10.2 million and DKK 20.7 million.

Lars Rebien Sørensen serves as a member of the Board of Directors of Scandinavian Airlines and ZymoGenetics Inc and retains the remuneration received from Scandinavian Airlines which amounts to SEK 0.3 million in 2004 (SEK 0.3 million in 2003) and has declined compensation from ZymoGenetics Inc.

#### Management's share options

Share options in Novo Nordisk	At the beginning of the year	Exercised during the year	Additions during the year	At the end of the year	Market value*) DKK million
<b>Executive Management:</b>					
Lars Rebien Sørensen	115,500	–	–	115,500	11.9
Jesper Brandgaard	65,280	–	–	65,280	6.8
Lars Almbloom Jørgensen	66,780	–	–	66,780	6.9
Lise Kingo	37,520	–	–	37,520	3.9
Kåre Schultz	67,280	–	–	67,280	7.0
Mads Krogsgaard Thomsen	65,280	–	–	65,280	6.8
	417,640	–	–	417,640	43.3
<b>Former members of Executive Management **):</b>					
Mads Øvlisen	98,580	–	–	98,580	10.4
Kurt Anker Nielsen ***)	37,840	–	–	37,840	4.0
	136,420	–	–	136,420	14.4
Senior Management Board in total ****)	601,724	(81,970)	66,000	585,754	60.8
Total	1,155,784	(81,970)	66,000	1,139,814	118.5

\*) Calculation of market values at year-end has been based on the Black-Scholes option pricing model applying the assumptions shown in note 34.

\*\*) Mads Øvlisen and Kurt Anker Nielsen are now members of the Board of Directors.

\*\*\*) In addition, Kurt Anker Nielsen has share options in Novo Nordisk, issued by Novo A/S. At the end of 2004, 26,000 of these options were outstanding.

\*\*\*\*) Additions during the year covers the holdings of share-options by Senior Management Board members appointed in 2004.

## NOTES - ADDITIONAL INFORMATION

### 35 MANAGEMENT'S REMUNERATION, SHARE OPTIONS AND SHAREHOLDINGS (CONTINUED)

#### Management's holding of Novo Nordisk shares

The internal rules on board members, executives and certain employees' trading in Novo Nordisk securities only permit trading in the 15-calendar-day period following each quarterly announcement.

Shares in Novo Nordisk	At the beginning of the year	Purchased during the year	Sold during the year	At the end of the year	Market value *) DKK million
<b>Board of Directors:</b>					
Mads Øvlisen	51,525	–	(34,195)	17,330	5.2
Sten Scheibye	400	–	–	400	0.1
Kurt Anker Nielsen	33,440	3,172	(9,000)	27,612	8.3
Kurt Briner	2,400	–	–	2,400	0.7
Johnny Henriksen	300	–	–	300	0.1
Niels Jacobsen	11,000	–	–	11,000	3.3
Ulf J Johansson	–	–	–	–	–
Anne Marie Kverneland	1,600	–	–	1,600	0.5
Stig Strøbæk	400	–	–	400	0.1
Jørgen Wedel	5,555	–	–	5,555	1.7
	106,620	3,172	(43,195)	66,597	20.0
<b>Executive Management:</b>					
Lars Rebien Sørensen	12,800	–	(9,000)	3,800	1.1
Jesper Brandgaard	8,545	–	(3,000)	5,545	1.7
Lars Almbloom Jørgensen	8,775	–	(4,085)	4,690	1.4
Lise Kingo	4,355	–	(2,800)	1,555	0.5
Kåre Schultz	8,690	–	(3,690)	5,000	1.5
Mads Krogsgaard Thomsen	8,835	–	(8,735)	100	–
	52,000	–	(31,310)	20,690	6.2
Senior Management Board in total	83,276	6,257	(33,029)	56,504	16.9
Share bonus pool 2004 for Executive Management and Senior Management Board **)	–	126,344	–	126,344	37.8
<b>Total</b>	<b>241,896</b>	<b>135,773</b>	<b>(107,534)</b>	<b>270,135</b>	<b>80.9</b>

The requirement for share ownership for Executive Management and former members of Executive Management linked to the participation in demerger-launch incentives expired in January 2004. The reduced holding of shares should be seen in this context.

\*) Calculation of the market value is based on the quoted share prices at the end of the year.

\*\*) The share bonus pool is locked up for three years before it is transferred to the participants employed at the end of the three-year period. The value is the cash amount of the share bonus granted in 2004. Based on the split of participants at the establishment of the bonus pool, approximately 40% of the pool will be allocated to the members of Executive Management and 60% to the members of the Senior Management Board. In the lock-up period, the bonus pool may potentially be reduced due to lower than planned value generation in subsequent years.

## NOTES - ADDITIONAL INFORMATION

### 36 DERIVATIVE FINANCIAL INSTRUMENTS

The major part of Novo Nordisk's sales are in EUR, USD, JPY and GBP while a predominant part of production, research and development costs are carried in DKK. As a consequence Novo Nordisk's foreign exchange risk is most significant in USD, JPY and GBP, leaving out EUR for which the exchange risk is regarded as low. Novo Nordisk hedges existing assets and liabilities in major currencies, as well as future expected cash flow up to 24 months forward. During the year the hedging levels have been relatively high and at year-end Novo Nordisk had covered the foreign exchange exposure on the balance sheet together with 15 months of expected future cash flow in USD. For JPY and GBP the similar cover was 12 months and 8 months of future expected cash flows respectively. Novo Nordisk has centralised management of the Group's financial risks. The overall objectives and policies for Novo Nordisk's financial risk management, including foreign exchange risk management are outlined in the Novo Nordisk Treasury policy which is approved by the Board of Directors. Novo Nordisk hedges commercial exposure only. All financial positions are recognised at mark to market basis and financial risk is assessed using generally accepted standards. Novo Nordisk's currency hedging activities are categorised into hedging of forecasted transactions (cash flow hedges), hedging of assets and liabilities (fair value hedges) and hedging of net investments.

#### Hedging of forecasted transactions

The table below shows the fair value of cash-flow hedging activities for 2004 and 2003 specified by hedging instrument and major currencies. The fair value of the financial instruments qualifying for hedge accounting under IAS 39 are recognised directly under equity until the hedged items are recognised in the Income statement. At year end DKK 461 million are deferred via equity (DKK 513 million in 2003). The fair value of the financial instruments not qualifying for hedge accounting under IAS 39 are recognised directly in the Income statement.

#### Financial instruments hedging forecasted transactions qualifying for hedge accounting under IAS 39:

DKK million	2004			2003		
	Contract amount at year-end	Positive fair values at year-end	Negative fair values at year-end	Contract amount at year-end	Positive fair values at year-end	Negative fair values at year-end
Forward contracts, net sales:						
USD	4,526	375	–	5,362	450	–
JPY	1,382	65	–	1,510	49	–
GBP	567	14	–	599	5	–
Other	201	7	–	283	9	–
	6,676	461	–	7,754	513	–
Interest rate swaps:						
DKK/DKK	310	–	34	310	–	22
EUR/EUR	501	–	6	501	–	–
JPY/JPY	422	–	–	445	–	–
	1,233	–	40	1,256	–	22
Total hedging of forecasted transactions qualifying for hedge accounting under IAS 39	7,909	461	40	9,010	513	22

#### Financial instruments hedging forecasted transactions, but not qualifying for hedge accounting under IAS 39:

Currency options:						
EUR/USD (purchased USD put)	1,424	84	–	2,675	161	–
EUR/JPY (purchased JPY put)	372	12	–	1,381	24	–
Total hedging of forecasted transactions not qualifying for hedge accounting under IAS 39	1,796	96	–	4,056	185	–
Total hedging of forecasted transactions	9,705	557	40	13,066	698	22

	2004	2003
The financial contracts existing at the end of the year cover expected cash flow of key currencies in the following number of months:		
USD	15 months	20 months
JPY	12 months	15 months
GBP	8 months	8 months
At the end of the year the financial contracts (cash flow hedges) are expected to be recognised in the Income statement within the following number of months:		
USD	15 months	17 months
JPY	12 months	9 months
GBP	10 months	11 months

The term to maturity of the swaps existing at the end of 2004 is September 2006 and December 2012 (December 2007 and December 2012 at the end of 2003) and the interest margins are (3.20%) to (0.27%) ((3.19%) to (0.26%) at year-end 2003).

## NOTES - ADDITIONAL INFORMATION

### 36 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

#### Hedging of assets and liabilities

The table below shows the fair value of fair-value hedging activities for 2004 and 2003 specified by hedging instrument and the major currencies. All changes in fair values are recognised in the Income statement which amounts to a gain of DKK 284 million in 2004 (a gain of DKK 285 million in 2003).

DKK million	2004			2003		
	Contract amount at year-end	Positive fair values at year-end	Negative fair values at year-end	Contract amount at year-end	Positive fair values at year-end	Negative fair values at year-end
Forward contracts:						
USD	1,687	180	–	1,648	202	–
JPY	485	20	–	26	1	–
GBP	268	10	–	161	9	–
Other	88	–	3	233	12	–
	2,528	210	3	2,068	224	–
Currency swaps:						
EUR/USD	492	–	10	–	–	–
JPY/DKK	314	87	–	314	61	–
	806	87	10	314	61	–
Total hedging of assets and liabilities	3,334	297	13	2,382	285	–

The term to maturity of the swaps existing at the end of 2004 is December 2011 (December 2011 at the end of 2003) and the interest margins are (0.90%) to 4.05% (4.05% at year-end 2003).

The financial contracts existing at the end of the year hedge the currency exposure on assets and liabilities in the Group's major currencies other than DKK and EUR, ie assets and liabilities in USD, JPY and GBP.

#### Hedging of net investments in foreign subsidiaries

The table below shows the fair value of hedging activities relating to net investments in foreign subsidiaries for 2004 and 2003 specified by hedging instrument and the major currencies. All changes in fair values relating to currency are recognised directly under equity amounting to DKK 13 million in 2004 (DKK 83 million in 2003). All changes relating to interest rates are recognised in the Income statement amounting to DKK 1 million in 2004 (DKK 7 million in 2003).

DKK million	2004			2003		
	Contract amount at year-end	Positive fair values at year-end	Negative fair values at year-end	Contract amount at year-end	Positive fair values at year-end	Negative fair values at year-end
Currency swaps:						
USD/DKK	–	–	–	216	69	–
JPY/DKK	145	14	–	294	21	–
	145	14	–	510	90	–

The term to maturity of the swaps existing at the end of 2004 is September 2006 (June 2004 – September 2006 at the end of 2003) and the interest margin is 2.69% (0.68% to 2.93% at year-end 2003).

The financial contracts existing at the end of the year hedges the following share of the major net investments:

DKK million	2004		2003	
	Net investment	% covered	Net investment	% covered
USD	1,126	0%	1,149	13%
JPY	544	24%	457	61%
GBP	141	0%	117	0%
EUR *)	2,380	0%	1,580	0%
Other	1,477	0%	1,023	0%
	5,668		4,326	

\*) including subsidiaries with EUR as functional currency regardless of the local currency in the subsidiary.

## NOTES - ADDITIONAL INFORMATION

### 37 COMMITMENTS AND CONTINGENCIES

DKK million	2004	2003
<b>Commitments</b>		
<b>Operating lease commitments</b>		
The operating lease commitments below are related to non-cancellable operating leases primarily related to premises, company cars and office equipment. Approximately 68% of the commitments are related to leases outside Denmark. The lease costs for 2004 and 2003 were DKK 662 million and DKK 586 million respectively.		
<b>Lease commitments expiring within the following periods as from the balance sheet date:</b>		
Within one year	349	290
Between one and two years	278	239
Between two and three years	202	172
Between three and four years	164	124
Between four and five years	135	118
After five years	450	327
	<b>1,578</b>	1,270
<b>Purchase obligations</b>	<b>1,274</b>	1,517
The purchase obligations primarily relate to contractual obligations to investments in property, plant and equipment including purchase agreements regarding medical equipment and consumer goods. Novo Nordisk expects to fund these commitments with existing cash and cash flows from operations.		
<b>Obligations relating to research and development projects</b>	<b>674</b>	604
Novo Nordisk has engaged in research and development projects with a number of external corporations. The major part of the obligations include development obligations relating to the AERx® iDMS project; option fee on proteins developed by ZymoGenetics Inc; fees on the NovoSeven® expansion programmes and fees on the Levemir® phase 3 clinical trials.		
<b>Other guarantees</b>	<b>224</b>	153
Other guarantees primarily relate to guarantees issued by Novo Nordisk in relation to rented property.		
<b>Security for debt</b>	<b>1,722</b>	1,713
Land, buildings and equipment etc at carrying amount.		

#### Business combinations after the balance sheet date

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 programme as of 26 January 2005. Following satisfaction of closing conditions, including approval by the US competition authorities as well as approval by Aradigm's shareholders, Novo Nordisk's wholly owned affiliate, Novo Nordisk Delivery Technologies, Inc, now employs approximately 130 former Aradigm employees who have been dedicated to the AERx® iDMS programme. Novo Nordisk acquired fixed assets and related intellectual property from Aradigm Corporation of approximately DKK 300 million. No goodwill arose from the business combination.

#### World Diabetes Foundation

At the Annual General Meeting of Novo Nordisk A/S in 2002 the shareholders agreed on a donation to the World Diabetes Foundation obligating Novo Nordisk A/S for a period of 10 years from 2002 to make annual donations to the Foundation of 0.25% of the net insulin sales of the Novo Nordisk Group in the preceding financial year. However, annual donations shall not exceed the lower of DKK 65 million or 15% of the taxable income of Novo Nordisk A/S in the financial year in question. The donation of DKK 45 million in 2004 is recognised in the Income statement.

#### Contingencies

##### Pending litigation

In Poland the local customs authorities have investigated a number of international companies, alleging misstatement of customs values regarding the period until April 2002 when new legislation came into effect. Regarding Novo Nordisk the authorities have investigated 1999, 2000 and part of 2001 and claimed misstatement of approximately DKK 360 million. Including potential penalties and interest, the total litigation may be up to DKK 900 million. Novo Nordisk has not received claims regarding the rest of 2001 and 2002. In the opinion of management, Novo Nordisk has acted in compliance with Polish legislation. In spite of that, there is a risk of further legal actions against Novo Nordisk from the Polish authorities. The outcome of possible legal actions and consequences hereof are uncertain.

As of 31 December 2004, Novo Nordisk Inc, together with the majority of hormone therapy product manufacturers, is a defendant in 16 product liability lawsuits. Since the initiation of the lawsuits in July 2004, three cases against Novo Nordisk Inc have been dismissed by the courts. Novo Nordisk's hormone therapy products (Activella® and Vagifem®) have been sold and marketed in the US since 2000. Until July 2003, the products were sold and marketed exclusively in the US by Pharmacia & Upjohn Corporation (now Pfizer). The proceedings are in their preliminary stages; however, Novo Nordisk is not expecting the claims to have a material impact on Novo Nordisk's financial position.

In addition, 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 effect on the financial position of the Group.

##### Liability for the debts and obligations of Novozymes following the demerger of Novozymes in 2000.

Novo Nordisk A/S and Novozymes A/S are subject to joint and several liability for any obligation which existed at the time of the announcement of the demerger in 2000. At the end of the year the remaining part of the joint and several liability in Novozymes A/S amounted to DKK 557 million.

Debts and obligations pertaining to the period before 1 January 2000, which are recognised after 1 January 2000 and which cannot be clearly attributed to either Novo Nordisk A/S or Novozymes A/S, will be distributed proportionally between the two companies according to an agreement established in connection with the demerger in November 2000.

### 38 RELATED PARTY TRANSACTIONS

Novo Nordisk A/S is controlled by Novo A/S (incorporated in Denmark), which owns 26% of the shares in Novo Nordisk A/S. The remaining shares are widely held. The ultimate parent of the Novo Nordisk Group is the Novo Nordisk Foundation (incorporated in Denmark).

Other related parties are considered to be the Novozymes Group due to joint ownership, associated companies, the directors and officers of these entities and management of Novo Nordisk. Following the demerger, Novo Nordisk has access to certain assets of and may 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 main part of these agreements are for one year.

The Novo Nordisk Group has had the following material transactions with related parties:

DKK million	2004 Purchase/ (sale)	2003 Purchase/ (sale)
<b>Novo A/S</b>		
Services provided by the Novo Nordisk Group	(5)	(9)
Facilitation and stakeholder relation services etc provided by Novo A/S	34	53
<b>The Novozymes Group</b>		
Services provided by the Novo Nordisk Group	(363)	(366)
Services provided by the Novozymes Group	158	155
Sales of assets to the Novozymes Group	(7)	–
<b>Associated companies</b>		
Purchased intangible assets, fees and royalties etc paid to associated companies by Novo Nordisk	415	356

There have not been any material transactions with the Novo Nordisk Foundation, or with any director or officer of Novo Nordisk A/S, the Novozymes Group, Novo A/S, the Novo Nordisk Foundation or associated companies. For information on remuneration to management of Novo Nordisk A/S, please refer to note 35.

Apart from the balances included in the Balance sheet under Other financial assets, Other receivables and Other liabilities there are no unsettled transactions with related parties at the end of the year.

### 39 RECONCILIATION TO US GAAP

As of 1 January 2004, the accounting policies have been changed from Danish GAAP to comply with International Financial Reporting Standards (IFRS). The impact on the Group's assets, liabilities, equity and net profit is illustrated in note 1 'Changes in accounting policies – Adoption of IFRS'. A description of the Group's accounting policies is set out in notes 2, 3 and 4.

US GAAP differ within certain areas from the Group's accounting policies. The principal areas for which US GAAP differ can be summarised as follows:

- a) **Borrowing costs** – under IFRS an entity can choose whether to capitalise or expense borrowing costs. Novo Nordisk has chosen to expense borrowing costs, whereas according to US GAAP borrowing costs have to be capitalised.
- b) **Financial instruments** – as from 1 January 2004, Novo Nordisk complies with both IFRS and US GAAP hedge accounting requirements regarding forward contracts and swaps. However, historically Novo Nordisk has not complied with US GAAP hedge accounting requirements.
- c) **Acquired in-process research and development projects** – under IFRS, acquired in-process research and development projects have to be capitalised as intangible assets at the price paid given they meet certain criteria. According to US GAAP, such projects always have to be expensed.
- d) **Unrealised capital gain on investments in research and development companies** – according to IFRS, the gain on a capital injection, where the shareholding of Novo Nordisk is diluted, is recognised in the Income statement. Under US GAAP, the gain is recognised in equity where the issued securities are not common stock or the main activity of the investee is research and development.
- e) **Goodwill on investments in research and development companies** – according to IFRS, goodwill is capitalised irrespective of the nature of the business acquired. Under US GAAP, costs in excess of net assets (goodwill) relating to acquired research and development companies are considered to be in-process research and development costs, which are expensed in the Income statement immediately.
- f) **Accounting for associated R&D companies** – The method of calculating Novo Nordisk's share of profit or loss in an associated company have historically been slightly different between IFRS and US GAAP. The methods have been aligned in 2004 and no difference exists.
- g) **Sale and lease back transactions on operating leases** – under IFRS, gains on assets sold in a sale and lease back transaction resulting in an operating lease are recognised immediately, whereas US GAAP require the gains to be amortised over the lease term.
- h) **Restructuring costs** – under IFRS, costs in connection with the restructuring were taken to the Income statement when obligated. Under US GAAP, such costs can only be charged to the Income statement when the costs have been incurred.
- i) **Impairment of goodwill** – the impairment test models under IFRS and US GAAP are different, and can lead to different impairment losses.
- j) **Other minor differences** – there are also differences between historically reported US GAAP figures and IFRS in relation to finance lease and currency option premiums. Novo Nordisk has adjusted its accounting policies in 2004 to eliminate differences between the Group's IFRS accounting policies and US GAAP accounting policies. None of the differences mentioned are individually significant and they are therefore shown as a combined total.
- k) **Effect of IFRS 1 one-time exemption** – All actuarial gains and losses relating to defined benefit plans are recognised in the balance sheet at 1 January 2002 in accordance with IFRS 1. Under US GAAP, such an exemption does not exist.
- l) **Discontinued operations (Novozyymes A/S)** – under US GAAP, the results of discontinued operations were included until the date of the demerger. Consequently, the results of Novozymes were included until 13 November 2000. The income recorded during 2000 became part of the net assets which were distributed in the form of dividend to shareholders in connection with the demerger.

## NOTES - ADDITIONAL INFORMATION

### 39 RECONCILIATION TO US GAAP (CONTINUED)

The application of the US GAAP described would have resulted in the following adjustments:

DKK million	2004	2003	2002	2001	2000
Sales (no adjustments)	<b>29,031</b>	26,158	24,866	23,385	20,485
<b>Adjustments to net profit:</b>					
Net profit in accordance with IFRS	<b>5,013</b>	4,833	4,116	3,620	3,154
a) Borrowing costs	<b>(2)</b>	(28)	(25)	(20)	(20)
b) Financial instruments	<b>–</b>	122	275	(175)	291
c) Acquired in-process R&D projects	<b>(170)</b>	–	–	–	–
d) Unrealised capital gain on investments in research and development companies	<b>(96)</b>	(85)	(236)	(48)	(19)
e) Goodwill on investments in research and development companies	<b>–</b>	–	60	(60)	–
f) Accounting for associated R&D companies	<b>–</b>	9	9	29	(151)
g) Sale and lease back transactions	<b>(26)</b>	–	–	–	–
h) Restructuring costs	<b>–</b>	–	–	–	(125)
i) Impairment of goodwill	<b>(53)</b>	31	22	–	–
j) Other minor differences	<b>–</b>	2	10	11	–
k) Effect of IFRS 1 one-time exemptions	<b>–</b>	(10)	11	–	–
Tax on the above-mentioned differences between IFRS and US GAAP	<b>19</b>	(30)	28	54	(33)
Net profit from continuing operations in accordance with US GAAP	<b>4,685</b>	4,844	4,270	3,411	3,097
l) Net profit from discontinued operations (Novozymes)	<b>–</b>	–	–	–	408
Net profit in accordance with US GAAP	<b>4,685</b>	4,844	4,270	3,411	3,505
<b>Adjustments to equity:</b>					
Equity in accordance with IFRS	<b>26,504</b>	24,776	22,477	19,700	16,620
a) Borrowing costs	<b>266</b>	268	287	297	351
c) Acquired in-process R&D projects	<b>(170)</b>	–	–	–	–
e) Goodwill on investments in research and development companies	<b>–</b>	–	–	(60)	–
f) Accounting for associated R&D companies	<b>–</b>	(31)	(47)	(57)	(151)
g) Sale and lease back transactions	<b>(26)</b>	–	–	–	–
i) Impairment of goodwill	<b>–</b>	53	22	–	–
j) Other minor differences	<b>–</b>	29	28	35	–
k) Effect of IFRS 1 one-time exemptions	<b>–</b>	36	42	15	–
l) Net assets of discontinued operations according to US GAAP	<b>–</b>	–	–	–	3,758
l) Net assets of discontinued operations – dividend to shareholders	<b>–</b>	–	–	–	(3,758)
Tax arising from the difference between IFRS and US GAAP	<b>8</b>	24	17	18	(94)
Equity in accordance with US GAAP	<b>26,582</b>	25,155	22,826	19,948	16,726
<b>The application of the described US GAAP would have resulted in the following adjustments to balance sheet items:</b>					
According to IFRS:					
Total assets	<b>37,433</b>	34,564	31,612	28,662	24,597
Total liabilities	<b>10,929</b>	9,788	9,135	8,962	7,977
In accordance with US GAAP:					
Total assets	<b>37,643</b>	35,004	32,077	29,043	24,920
Total liabilities	<b>11,061</b>	9,849	9,251	9,095	8,194



## NOTES - ADDITIONAL INFORMATION

### 39 RECONCILIATION TO US GAAP (CONTINUED)

DKK million	2004	2003	2002	2001	2000
<b>US GAAP ratios:</b>					
Earnings per share/ADR from continued operations in accordance with US GAAP in DKK	<b>13.92</b>	14.20	12.32	9.87	8.87
Earnings per share/ADR diluted from continued operations in accordance with US GAAP in DKK	<b>13.86</b>	14.18	12.30	9.84	8.85
Earnings per share/ADR in accordance with US GAAP in DKK	<b>13.92</b>	14.20	12.32	9.87	10.04
Earnings per share/ADR diluted in accordance with US GAAP in DKK	<b>13.86</b>	14.18	12.30	9.84	10.01
Earnings per ADR from continued operations in USD *)	<b>2.55</b>	2.38	1.74	1.17	1.11
Earnings per ADR from continued operations diluted in USD *)	<b>2.53</b>	2.38	1.74	1.17	1.10
Earnings per ADR in accordance with US GAAP in USD *)	<b>2.55</b>	2.38	1.74	1.17	1.25
Earnings per ADR diluted in accordance with US GAAP in USD *)	<b>2.53</b>	2.38	1.74	1.17	1.25
Dividend per share/ADR in DKK	<b>4.80</b>	4.40	3.60	3.35	2.65
Dividend per ADR in USD **)	<b>0.88</b>	0.74	0.51	0.39	0.32

#### Impact on US GAAP of adopting IFRS and changes to US GAAP Accounting policies

Novo Nordisk has, as part of the IFRS adoption, taken the opportunity to change some of its IFRS accounting policies to also comply with US GAAP in order to minimize the reconciliation items. The impact of adopting IFRS and the changes in US GAAP accounting policies on historically reported US GAAP figures are illustrated below. The changes to US GAAP accounting policies shall be seen in conjunction with the convergence project between the International Accounting Standard Board, which issues the IFRS standards, and the Financial Accounting Standard Board, which issues the accounting principles generally accepted in the United States (US GAAP), where these two bodies try to eliminate the differences between IFRS and US GAAP. Novo Nordisk fully supports the convergence project.

I) **Share-based payment** – Novo Nordisk has previously used the option in Statement of Financial Accounting Standards (SFAS) No. 123 on Share-based payment to expense the intrinsic value of granted options and the difference between market price and the sales price on employee shares in the Income statement. In 2004 Novo Nordisk has chosen to use the retroactive restatement method in SFAS No. 148 thereby bringing IFRS and US GAAP in compliance.

II) **Long-term employee benefits** – Novo Nordisk has scrutinised its employee benefits and recognised provisions for certain long-term employee benefits.

The symbols I) to II) in the tables below refer to descriptions of the changes in US GAAP previously reported figures mentioned above.

DKK million	2003	2002	2001	2000
<b>Changes to historically reported US GAAP net profit and equity:</b>				
Net profit as historically reported	4,865	4,245	3,492	3,556
I) Share-based payment	(8)	38	(111)	(70)
Effect on reported tax figure	(13)	(13)	30	19
Net profit in accordance with US GAAP	4,844	4,270	3,411	3,505
Equity as historically reported	25,266	22,945	20,077	16,876
I) Share-based payment	100	92	82	61
II) Long-term employee benefits	(211)	(211)	(211)	(211)
Equity in accordance with US GAAP	25,155	22,826	19,948	16,726

\*) For translation into USD, the exchange rate at 31 December is used.

\*\*) Dividends are translated at Danmarks Nationalbank's (the central bank of Denmark) official exchange rates on the respective payment dates, for 2000–2003. For 2004 proposed dividend is translated using the exchange rates at 31 December 2004 (USD 1 = DKK 5.4676).

## COMPANIES IN THE NOVO NORDISK GROUP

	Country	Year of incorporation / acquisition	Issued share capital / paid-in capital	Percentage of shares owned	Activity			
					Production	Sales and Marketing	Research and Development	Services/Finance
<b>Parent company</b>								
Novo Nordisk A/S	Denmark	1931	DKK 709,388,320	–	○	○	○	○
<b>Subsidiaries by region</b>								
<b>Europe</b>								
Novo Nordisk Pharma GmbH	Austria	1974	EUR 36,336	100		○		
S.A. Novo Nordisk Pharma NV	Belgium	1974	EUR 69,000	100		○		
Novo Nordisk sro	Czech Republic	1997	CZK 14,500,000	100		○		
Novo Nordisk Region Europe A/S	Denmark	2002	DKK 100,500,000	100				○
Novo Nordisk Farma OY	Finland	1972	EUR 420,470	100		○		
Novo Nordisk Pharmaceutique SAS	France	2003	EUR 5,821,140	100		○		
Novo Nordisk Production SAS	France	1959	EUR 57,710,220	100	○			
Novo Nordisk Pharma GmbH	Germany	1973	EUR 614,062	100		○		
Novo Nordisk Hellas Epe	Greece	1979	EUR 1,050,000	100		○		
Novo Nordisk Hungária Kft	Hungary	1996	HUF 371,000,000	100		○		
Novo Nordisk Limited	Ireland	1978	EUR 635	100		○		
Novo Nordisk Farmaceutici SpA	Italy	1980	EUR 516,500	100		○		
Novo Nordisk Farma BV	Netherlands	1983	EUR 61,155	100		○		
Novo Nordisk Scandinavia AS	Norway	1965	NOK 250,000	100		○		
Novo Nordisk Pharma Sp zoo	Poland	1996	PLN 29,021,000	100		○		
Novo Nordisk Comércio Produtos Farmacêuticos Ltda	Portugal	1984	EUR 250,000	100		○		
Novo Nordisk Pharma SA	Spain	1978	EUR 1,502,500	100		○		
Novo Nordisk Scandinavia AB	Sweden	1971	SEK 100,000	100		○		
Novo Nordisk Femcare AG	Switzerland	2003	CHF 1,100,000	100		○	○	○
Novo Nordisk Health Care AG	Switzerland	2000	CHF 159,325,000	100		○	○	○
Novo Nordisk Pharma AG	Switzerland	1968	CHF 50,000	100		○		
Novo Nordisk Holding Ltd	United Kingdom	1977	GBP 2,802,130	100				○
Novo Nordisk Limited	United Kingdom	1978	GBP 2,350,000	100		○		
<b>North America</b>								
Novo Nordisk Canada Inc	Canada	1983	CAD 200	100		○		
Novo Nordisk Region North America A/S	Denmark	2003	DKK 500,000	100				○
Novo Nordisk Holding Inc	United States	2004	USD 50,000	100				○
Novo Nordisk of North America Inc	United States	1988	USD 283,835,600	100				○
Novo Nordisk Pharmaceutical Industries Inc	United States	1991	USD 55,000,000	100	○			
Novo Nordisk Inc	United States	1982	USD 2,000	100		○		
<b>Japan &amp; Oceania</b>								
Novo Nordisk Pharmaceuticals Pty Ltd	Australia	1985	AUD 500,001	100		○		
Novo Nordisk Region Japan & Oceania A/S	Denmark	2002	DKK 15,500,000	100				○
Novo Nordisk Pharma Ltd	Japan	1980	JPY 2,104,000,000	100	○	○		
Novo Nordisk Pharmaceuticals Ltd	New Zealand	1990	NZD 1,000,000	100		○		

## COMPANIES IN THE NOVO NORDISK GROUP

	Country	Year of incorporation / acquisition	Issued share capital / paid-in capital		Percentage of shares owned	Activity			
						Production	Sales and Marketing	Research and Development	Services/Finance
<b>International Operations</b>									
Aldaph SpA	Algeria	1994	DZD	270,000,000	100		●		
Novo Nordisk Pharma Argentina SA	Argentina	1997	ARS	7,465,150	100		●		
Novo Nordisk Produsao Farmacêutica Do Brasil	Brazil	2002	BRL	199,641,074	100	●	●		
Novo Nordisk Farmacêutica do Brasil Ltda	Brazil	1990	BRL	84,727,136	100		●		
Novo Nordisk (China) Pharmaceuticals Co, Ltd	China	1994	CNY	165,957,192	100	●	●		
Novo Nordisk Croatia d.o.o.	Croatia	2004	HRK	500,000	100		●		
Novo Nordisk Region International Operation A/S	Denmark	2002	DKK	35,000,000	100				●
Novo Nordisk Egypt	Egypt	2004	EGP	50,000	100		●		
Novo Nordisk Hong Kong Limited	Hong Kong	2001	HKD	500,000	100				●
Novo Nordisk India Private Ltd	India	1994	INR	265,000,000	100		●		
PT. Novo Nordisk	Indonesia	2003	IDR	827,900,000	100		●		
Novo Nordisk Ltd	Israel	1997	ILS	100	100		●		
Novo Nordisk Pharma (Malaysia) Sdn Bhd	Malaysia	1992	MYR	200,000	100		●		
Novo Nordisk Mexico	Mexico	2004	MXN	150,000	100	●	●		
Novo Nordisk Pharmaceuticals (Philippines) Inc	Philippines	1999	PHP	50,000,000	100		●		
Novo Nordisk Limited Liability Company	Russia	2003	RUB	1,600,000	100		●		
Novo Investment Pte Ltd	Singapore	1994	SGD	12,000,000	100				●
Novo Nordisk Asia Pacific Pte Ltd	Singapore	1997	SGD	2,000,000	100		●		
Novo Nordisk Pharma (Singapore) Pte Ltd	Singapore	1997	SGD	200,000	100		●		
Novo Nordisk (Pty) Ltd	South Africa	1959	ZAR	8,000	100		●		
Novo Nordisk Pharma Korea Ltd	South Korea	1994	KRW	6,108,400,000	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 Tunisie Sarl	Tunisia	2004	TND	20,000	100		●		
Novo Nordisk Saglik Ürünleri Tic Ltd Sti (in million)	Turkey	1993	TRL	25,296,300	100		●		
Novo Nordisk Venezuela	Venezuela	2004	VEB	9,500,000	100		●		
<b>Other subsidiaries</b>									
FeF Chemicals A/S	Denmark	1989	DKK	10,000,000	100	●	●		
NNIT A/S	Denmark	1998	DKK	1,000,000	100				●
Novo Nordisk Engineering A/S	Denmark	1989	DKK	500,000	100				●
Novo Nordisk Servicepartner A/S	Denmark	1998	DKK	1,000,000	100				●
<b>Associated companies</b>									
DakoCytomation A/S	Denmark	1992	DKK	77,369,312	27	●	●	●	
Ferrosan A/S	Denmark	1986	DKK	121,827,000	30	●	●	●	
ZymoGenetics Inc	United States	1988	USD	565,823,000	36			●	
Aradigm Corporation	United States	2001	USD	293,369,400	12			●	

## SUMMARY OF FINANCIAL DATA 2000-2004

DKK million	2000	2001	2002	2003	2004
Sales	20,485	23,385	24,866	26,158	<b>29,031</b>
Sales by business segments:					
Insulin analogues	142	459	1,187	2,553	<b>4,507</b>
Human insulin and insulin-related sales	13,161	14,533	14,651	14,492	<b>14,383</b>
Oral antidiabetic products (OAD)	1,080	1,392	1,620	1,430	<b>1,643</b>
Diabetes care total	14,383	16,384	17,458	18,475	<b>20,533</b>
Haemostasis management (NovoSeven®)	2,252	3,071	3,593	3,843	<b>4,359</b>
Growth hormone therapy	2,008	2,055	2,061	2,133	<b>2,317</b>
Hormone replacement therapy	1,298	1,426	1,333	1,322	<b>1,488</b>
Other products	544	449	421	385	<b>334</b>
Biopharmaceuticals total	6,102	7,001	7,408	7,683	<b>8,498</b>
Sales by geographic segments:					
Europe	9,093	10,562	10,889	11,697	<b>12,411</b>
North America	4,028	5,167	5,786	6,219	<b>7,478</b>
International Operations	2,869	3,395	4,099	4,227	<b>4,844</b>
Japan & Oceania	4,495	4,261	4,092	4,015	<b>4,298</b>
Licence fees and other operating income (net)	571	815	758	1,036	<b>575</b>
Operating profit	4,703	5,410	5,927	6,422	<b>6,980</b>
Net financials	181	285	401	954	<b>477</b>
Profit before income taxes	4,884	5,695	6,328	7,376	<b>7,457</b>
Income taxes	1,730	2,075	2,212	2,543	<b>2,444</b>
Net profit	3,154	3,620	4,116	4,833	<b>5,013</b>
Cash and marketable securities	3,845	3,062	1,738	3,090	<b>3,959</b>
Total assets	24,597	28,662	31,612	34,564	<b>37,433</b>
Total current liabilities	5,860	6,138	6,152	7,032	<b>7,280</b>
Total long-term liabilities	2,117	2,824	2,983	2,756	<b>3,649</b>
Equity	16,620	19,700	22,477	24,776	<b>26,504</b>
Investments in property, plant and equipment (net) **)	2,123	3,829	3,893	2,273	<b>2,999</b>
Investments in intangible assets and long-term financial assets (net)	(22)	288	81	40	<b>312</b>
Free cash flow *)	2,712	186	497	3,846	<b>4,278</b>
Net cash flow	1,381	(820)	56	(64)	<b>2,136</b>

### Ratios

Sales in percent:					
Insulin analogues	0.7%	2.0%	4.8%	9.8%	<b>15.5%</b>
Human insulin and insulin-related sales	64.2%	62.1%	58.9%	55.4%	<b>49.5%</b>
Oral antidiabetic products (OAD)	5.3%	6.0%	6.5%	5.5%	<b>5.7%</b>
Diabetes care total	70.2%	70.1%	70.2%	70.6%	<b>70.7%</b>
Haemostasis management (NovoSeven®)	11.0%	13.1%	14.4%	14.7%	<b>15.0%</b>
Growth hormone therapy	9.8%	8.8%	8.3%	8.2%	<b>8.0%</b>
Hormone replacement therapy	6.3%	6.1%	5.4%	5.1%	<b>5.1%</b>
Other products	2.7%	1.9%	1.7%	1.5%	<b>1.2%</b>
Biopharmaceuticals total	29.8%	29.9%	29.8%	29.4%	<b>29.3%</b>
Sales outside Denmark as a percentage of sales	98.8%	99.2%	99.2%	99.3%	<b>99.3%</b>
Sales and distribution costs as a percentage of sales	29.4%	29.7%	28.9%	28.5%	<b>28.5%</b>
Research and development costs as a percentage of sales	16.6%	16.6%	15.9%	15.5%	<b>15.0%</b>
Administrative expenses as a percentage of sales	9.4%	8.3%	7.9%	7.1%	<b>6.7%</b>
Gross margin *)	75.5%	74.2%	73.5%	71.7%	<b>72.3%</b>
Operating profit margin *)	23.0%	23.1%	23.8%	24.6%	<b>24.0%</b>
Growth in operating profit *)	32.6%	15.0%	9.6%	8.4%	<b>8.7%</b>
Growth in operating profit, three-year average *)	24.1%	22.7%	19.1%	11.0%	<b>8.9%</b>
Net profit margin *)	15.4%	15.5%	16.6%	18.5%	<b>17.3%</b>
Effective tax rate *)	35.4%	36.4%	35.0%	34.5%	<b>32.8%</b>
Equity ratio *)	67.6%	68.7%	71.1%	71.7%	<b>70.8%</b>
Payout ratio *)	29.0%	32.1%	30.2%	30.8%	<b>31.8%</b>
Return on equity *)	19.6%	19.9%	19.5%	20.5%	<b>19.6%</b>
Change in market capitalisation	56.2%	20.4%	(40.4%)	15.4%	<b>21.9%</b>
ROIC *)	22.3%	22.7%	20.5%	19.5%	<b>20.6%</b>
Cash/earnings *)	86.0%	5.1%	12.1%	79.6%	<b>85.3%</b>
Cash/earnings, three-year average *)	66.3%	56.2%	34.4%	32.3%	<b>59.0%</b>

# SUMMARY OF FINANCIAL DATA 2000-2004

Supplementary information in EUR

EUR million	2000	2001	2002	2003	2004
Sales	2,748	3,138	3,347	3,520	<b>3,902</b>
Sales by business segments:					
Insulin analogues	19	62	160	344	<b>606</b>
Human insulin and insulin-related sales	1,766	1,950	1,972	1,950	<b>1,933</b>
Oral antidiabetic products (OAD)	145	187	218	192	<b>221</b>
Diabetes care total	1,930	2,199	2,350	2,486	<b>2,760</b>
Haemostasis management (NovoSeven®)	302	412	484	517	<b>586</b>
Growth hormone therapy	269	276	277	287	<b>311</b>
Hormone replacement therapy	174	191	179	178	<b>200</b>
Other products	73	60	57	52	<b>45</b>
Biopharmaceuticals total	818	939	997	1,034	<b>1,142</b>
Sales by geographic segments:					
Europe	1,220	1,417	1,465	1,574	<b>1,668</b>
North America	540	693	779	837	<b>1,005</b>
International Operations	385	456	552	569	<b>651</b>
Japan & Oceania	603	572	551	540	<b>578</b>
Licence fees and other operating income (net)	77	109	102	139	<b>77</b>
Operating profit	631	726	798	864	<b>938</b>
Net financials	24	38	54	129	<b>64</b>
Profit before income taxes	655	764	852	993	<b>1,002</b>
Income taxes	232	278	298	343	<b>328</b>
Net profit	423	486	554	650	<b>674</b>
Cash and current asset investments	515	412	234	415	<b>532</b>
Total assets	3,296	3,855	4,258	4,643	<b>5,033</b>
Total current liabilities	785	825	829	945	<b>979</b>
Total long-term liabilities	284	380	402	370	<b>491</b>
Equity	2,227	2,649	3,027	3,328	<b>3,563</b>
Investments in property, plant and equipment (net) **)	284	515	524	305	<b>403</b>
Investments in intangible assets and long-term financial assets (net)	(3)	39	11	5	<b>42</b>
Free cash flow *)	363	25	67	517	<b>575</b>
Net cash flow	185	(110)	8	(9)	<b>287</b>

## Share data

Basic earnings per share in DKK *)	9.03	10.47	11.87	14.17	<b>14.89</b>
Diluted earnings per share in DKK *)	9.03	10.45	11.85	14.15	<b>14.83</b>
Dividend per share in DKK	2.65	3.35	3.60	4.40	<b>4.80</b>
Price/earnings *)	31.56	32.66	17.27	17.01	<b>20.08</b>
Number of shares at year-end (million)	377.2	354.7	354.7	354.7	<b>354.7</b>
Number of shares outstanding at year-end (million)	345.5	346.7	345.3	338.2	<b>332.1</b>
Average number of shares outstanding (million) *)	349.2	345.7	346.7	341.2	<b>336.6</b>
Average number of shares outstanding incl share options 'in the money' (million)	349.5	346.6	347.2	341.6	<b>338.1</b>
Quoted price at year-end for B shares in DKK *)	285	342	205	241	<b>299</b>
Quoted price (high) for B shares during the year in DKK	368	393	340	254	<b>331</b>
Quoted price (low) for B shares during the year in DKK	168	277	168	171	<b>230</b>
Quoted price at year-end for ADRs in USD *)	35.40	40.10	28.90	40.96	<b>54.26</b>
Market capitalisation in DKK (million) *)	98,507	118,563	70,613	81,494	<b>99,301</b>
Basic earnings per share in accordance with US GAAP in DKK	10.04	9.87	12.32	14.20	<b>13.92</b>
Diluted earnings per share in accordance with US GAAP in DKK	10.01	9.84	12.30	14.18	<b>13.86</b>
Basic earnings per ADR in accordance with US GAAP in USD *)	1.25	1.17	1.74	2.38	<b>2.55</b>
Diluted earnings per ADR in accordance with US GAAP in USD *)	1.25	1.17	1.74	2.38	<b>2.53</b>

## Employees

Total full-time positions at year-end	13,752	16,141	18,005	18,756	<b>20,285</b>
Denmark	8,767	10,127	11,104	11,414	<b>11,839</b>
Rest of Europe	1,999	2,292	2,361	2,430	<b>2,454</b>
North America	999	1,404	1,481	1,590	<b>1,949</b>
International Operations	1,216	1,531	2,248	2,455	<b>3,104</b>
Japan & Oceania	771	787	811	867	<b>939</b>

\*) For definitions, please refer to page 70.

\*\*) For 2002 Investments in tangible fixed assets (net) include fixed assets acquired in connection with the acquisition of Novo Nordisk Producao Farmaceutica Do Brasil (DKK 104 million/EUR 14 million).

Key figures are translated into EUR as supplementary information – the translation of income statement items is based on the average exchange rate in 2004 (EUR 1 = DKK 7.4399) and the translation of balance sheet items is based on the exchange rate at the end of 2004 (EUR 1 = 7.4381). The figures in DKK reflect the economic substance of the underlying events and circumstances of the Novo Nordisk Group.

# ACCOUNTING POLICIES FOR NON-FINANCIAL DATA

## ACCOUNTING POLICIES FOR NON-FINANCIAL DATA

The accounting policies for the 2003 assurance of non-financial data can be found as part of the web-based Sustainability Report 2003 at [novonordisk.com/sustainability](http://novonordisk.com/sustainability).

Non-financial comparative performance data for 2000 to 2003 other than the EPIs and their underlying data have not been audited but were subject to an assurance process in 2003. Please refer to the statement from Deloitte in the *Sustainability Report 2003*.

In 2004, there have been no significant restatements, but the following changes have been made to accounting policies applied for non-financial data:

- The environmental data covering the packaging site in Tianjin, China, have been included in the environmental data for 2004, which is its first year of operation. This inclusion has not affected the comparative data.
- In the best possible pricing scheme a margin of +10% to the realised sales price (ie 20–22% of average western price) was introduced. This was done to ensure that compliance measurement is unaffected by external factors such as fluctuating exchange rates.
- All financial data are adjusted to the changes in accounting policies due to the adoption of IFRS (see note 1, page 64).

To Novo Nordisk, the AA1000 Assurance Standard (AA1000AS) is an essential component in creating a generally applicable approach to assessing and strengthening the credibility of our public reporting of non-financial data. Novo Nordisk's assurance process has been designed to ensure that the qualitative as well as quantitative data that make up sustainability performance plus the systems that underpin the data and performance are assured. We have dealt with the principles as described below.

### 1. Completeness

As a pharmaceutical company with global reach, Novo Nordisk is engaged in a range of activities to support sustainable development. All of these are founded in the company's corporate governance framework. The Annual Report aims to capture the organisation's 'footprint' in terms of social, environmental and economic impacts on society. Hence, we account for our performance in relation to targets, major achievements and key issues. It does not provide a full coverage of all our activities. See scope of report below.

### 2. Materiality

Key issues are identified through ongoing stakeholder engagement and addressed by programmes or action plans with clear and measurable targets. Stretch targets are set to guide the long-term efforts in strategic areas, such as global access to health. The issues presented in the Annual Report are deemed to have a significant impact on the company's future business performance and may support stakeholders in their decision-making and are therefore regarded as Novo Nordisk's material issues.

### 3. Responsiveness

The report is reaching out to a wide range of stakeholders, each with their specific needs and interests. To most of our stakeholders, however, the Annual Report is but a single element of our interaction and communication. It reflects how we have addressed stakeholder concerns and interests in dealing with the dilemmas and issues. Stakeholder dialogue is an invaluable part of our efforts, and we encourage readers to give us feedback.

### Scope

Accounting policies for the non-financial data in the Annual Report are based on data for Novo Nordisk A/S, ie Novo Nordisk A/S, Novo Nordisk IT A/S, Novo Nordisk Engineering A/S and Novo Nordisk Servicepartner A/S and affiliates. Environmental data cover the significant environmental impact of the organisation's activities at our production sites. Social data cover all employees. Economic data cover the Novo Nordisk Group. Engagements in joint ventures and contract licensees are not included in the report scope. However, data for animal testing include testing taking place at contract research organisations. Likewise, performance recorded from environmental and social evaluations of key suppliers is included.

### Data

To ensure consistency of data, all data have been defined and described in company guidelines. Internal control procedures have been established to ensure that data are reported according to the definitions.

### Environmental data

The environmental data cover those activities which, based on an overall environmental assessment, could have a significant impact on the environment.

### Resources

- Water consumption includes consumption of drinking water, industrial water and steam. Data are based on meter readings and checked to invoices.
- Energy consumption (direct and indirect supply) includes both direct supply of energy (fuel) eg natural gas, fuel oil and other types and indirect supply of external energy (energy) eg electricity, steam and district heat. The consumption of fuel and energy is based on meter readings and invoices.
- Raw and packaging materials comprise materials for production and related processes and packaging of products. Consumption of raw materials and packaging is converted to tons. Data are based on registrations in our stock-system.

### Waste

- Wastewater: Wastewater includes industrial wastewater and sanitary wastewater. The volume is calculated based on measurements and invoices. Quantities of components eg COD, nitrogen and phosphorous are calculated based on test results or standard factors.
- By-products (biomass): By-products include NovoGro, NovoGro30 and yeast slurry. The volume is based on measurements and components eg nitrogen and phosphorous are based on test results or standard factors.
- Waste (total) is the sum of non-hazardous and hazardous waste. The disposal of waste is registered based on weight receipts. The disposal percentages are calculated as the sum of waste disposed in a specific manner of the total waste (total). Waste for recycling can be both non-hazardous and hazardous. The remaining part of the hazardous waste is waste for controlled destruction.

### Emissions to air

- Organic solvents cover the sum of emissions of different types of organic solvents such as acetone, ethanol etc. exclusive of emissions of ozone-depleting materials. Data are based on measurement and ensuring calculations.
- Ozone-depleting materials include emissions of CFCs, HCFCs and Halon. Data are based on maintenance log books.
- Emissions of CO<sub>2</sub>, SO<sub>2</sub> and NO<sub>x</sub> from energy are based on standard factors for fuel and for energy on available emission factors from the external suppliers of energy, often the previous years emission factors as the current year's emissions factors are not available when we calculate the emissions at the time of reporting.

### Environmental impact potentials

- The environmental impact potentials for global warming, ozone layer depletion, acidification and eutrophication are calculated on the basis of a method developed by the Institute for Product Development, DTU published by the Danish EPA in 'Udvikling af Miljøvenlige Industri Produkter' (UMIP).

### EPI for water and energy

- The eco-productivity indices for water and energy are calculated as the number of released units as a ratio of the direct production related consumption of water and energy, respectively, compared to the previous year's figures.

# ACCOUNTING POLICIES FOR NON-FINANCIAL DATA

## ACCOUNTING POLICIES FOR NON-FINANCIAL DATA (CONTINUED)

### Compliance data

- ◉ Compliance data consist of breaches of regulatory limits, regulatory limits with repeated breaches, accidental releases, accidental releases of GMMs and complaints. All data are based on information from departments and test results. All breaches and accidental releases are reported to the authorities.

### Social data

The social data cover all employees included in Novo Nordisk's headcount.

### Basic employee statistics

- ◉ All basic employee statistics are based on registrations in the company's SAP Human Resource system. The number of employees is calculated as the actual number of employees as of year-end.
- ◉ Rate of absence: For employees in Denmark excl. FeF Chemicals, absence data are registered in the SAP Human Resource system. For employees outside Denmark, data for rate of absence are based on local registrations. Types of absence include absence due to the employee's own illness, pregnancy-related sick leave and occupational injuries and illnesses per total available working hours in the year adjusted for country specific holidays.
- ◉ Rate of staff turnover: The rate of staff turnover is calculated as the number of employees who left Novo Nordisk during the financial year compared with the average number of employees in the financial year.
- ◉ eVoice indicators: Four of Novo Nordisk's Triple Bottom Line Performance Indicators are based on employee feedback to questions in the employee survey database eVoice. The averages are simple averages calculated in the database on answers given by the employees.

### Health & Safety

- ◉ The frequency of occupational injuries is the number of injuries reported for all employees per million working hours. An occupational injury is any work related injury causing more than one day of absence in addition to the day of the injury.
- ◉ The frequency of occupational illness is the number of illnesses reported for all employees per million working hours. An occupational illness is any illness (bodily harm or loss of capacity) caused by continued and repeated exposure to conditions (infection, strain, toxins, fumes or other) of the work environment over a period of time.
- ◉ The number of fatal occupational accidents is based on registrations centrally and locally in affiliates.

### Economic data

The economic data are based on financial registrations.

- ◉ Cash Value Distribution is calculated based on Novo Nordisk's global financial registrations.
- ◉ Direct and indirect effects on number of jobs, job income and income tax are calculated using financial registrations and general statistics from eg Statistics Denmark. The indicators apply to effects created by Novo Nordisk in Denmark and globally from Danish jobs.
- ◉ All types of taxes reported are based on financial registrations of taxes paid in Denmark except corporate tax as a share of turnover.

### Other financial data

- ◉ Training costs are all costs on a specific account in the financial accounts. The amount covers internal and external training posted on the account in the financial books.
- ◉ Data on environmental costs and investments are based on reporting from the included production sites and central registrations of investments.

### Animal data

- ◉ Animals purchased for testing are the number of animals purchased for all testing undertaken for Novo Nordisk either in-house or at Contract Research Organisations (CROs). The number of animals purchased is based on internal registration of purchased animals and yearly reports from CROs.
- ◉ The percentage of animal test types removed from external and internal specification is calculated as the number of test types removed from external and internal specification from the total test types identified. The indicator refers to test types performed in Denmark. Test types refer to tests required by regulatory authorities.
- ◉ The indicator 'Housing conditions for experimental animal' is based on an annual status of the implementation of new facilities improving living conditions. The indicator applies to Novo Nordisk's in-house testing in Denmark.

### Patents

- ◉ Patent families are the 'number of active patent families to date' and the 'new patent families (first filing)'.

### Fulfilment of action points

- ◉ The percentage of fulfilment of action points planned arising from facilitations of the Novo Nordisk Way of Management. It is calculated as the number of overdue action points end year per total number of action points with deadline in the period minus the action points abolished during the year due to organisational changes.

### Access to health

- ◉ Novo Nordisk A/S has formulated a pricing policy for the least developed countries. The purpose of the policy is to offer insulin to the world's least developed countries at or below a price of 20% of the average prices for insulin in the western world. The average western world price is defined as the average of Novo Nordisk's list prices as identified in the List Price Database for all insulin injectable products for the western world countries. The western world is defined as Europe (EU, CH, N), the United States, Canada, and Japan. The policy target price is measured in DKK per MU using the Novo Nordisk official standard exchange rates and is calculated every second year. A margin of +10% to the realised sales price (ie 20-22%) is permitted to ensure that compliance measurement is unaffected by external factors such as fluctuating exchange rates.
- ◉ The term 'operates in' does not denote actual physical presence by Novo Nordisk. It is defined as direct or indirect sales by Novo Nordisk via government tender or private market sales to wholesalers, distributors, NGOs, etc.

All data are documented and evidence has been put forward to the auditors.

## QUARTERLY FIGURES 2003 AND 2004 (UNAUDITED)

DKK million	2003				2004			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Sales	6,009	6,435	6,603	7,111	6,515	7,164	7,408	7,944
Sales by business segments:								
Insulin analogues	484	572	705	792	886	1,037	1,252	1,332
Human insulin and insulin-related sales	3,388	3,642	3,526	3,936	3,206	3,640	3,593	3,944
Oral antidiabetic products (OAD)	360	298	384	388	416	379	445	403
Diabetes care total	4,232	4,512	4,615	5,116	4,508	5,056	5,290	5,679
Haemostasis management (NovoSeven®)	918	990	1,002	933	1,019	1,084	1,086	1,170
Growth hormone therapy	499	534	516	584	550	557	559	651
Hormone replacement therapy	277	290	358	397	339	389	396	364
Other products	83	109	112	81	99	78	77	80
Biopharmaceuticals total	1,777	1,923	1,988	1,995	2,007	2,108	2,118	2,265
Sales by geographic segments:								
Europe	2,712	2,923	2,909	3,153	2,884	3,106	3,057	3,364
North America	1,530	1,471	1,634	1,584	1,727	1,837	2,098	1,816
International Operations	910	1,058	1,026	1,233	980	1,134	1,171	1,559
Japan & Oceania	857	983	1,034	1,141	924	1,087	1,082	1,205
Gross profit	4,341	4,633	4,793	4,982	4,661	5,219	5,318	5,783
Sales and distribution costs	1,734	1,821	1,837	2,059	1,886	1,991	2,039	2,364
Research and development costs	940	972	1,015	1,128	1,040	983	1,086	1,243
Administrative expenses	460	420	490	487	477	431	502	534
Licence fees and other operating income (net)	171	226	216	423	232	71	59	213
Operating profit	1,378	1,646	1,667	1,731	1,490	1,885	1,750	1,855
Net financials	234	287	27	406	87	20	85	285
Profit before taxation	1,612	1,933	1,694	2,137	1,577	1,905	1,835	2,140
Income taxes	556	662	583	742	524	633	609	678
Net profit	1,056	1,271	1,111	1,395	1,053	1,272	1,226	1,462
Depreciation, amortisation and impairment losses	309	356	363	553	380	387	576	549
Total equity	21,712	22,692	23,587	24,776	23,942	24,827	25,557	26,504
Total assets	31,382	33,103	35,140	34,564	33,838	34,248	35,587	37,433
<b>Ratios</b>								
Gross margin	72.2%	72.0%	72.6%	70.1%	71.5%	72.9%	71.8%	72.8%
Sales and distribution costs as a percentage of sales	28.9%	28.3%	27.8%	29.0%	28.9%	27.8%	27.5%	29.8%
Research and development costs as a percentage of sales	15.6%	15.1%	15.4%	15.9%	16.0%	13.7%	14.7%	15.6%
Administrative expenses as a percentage of sales	7.7%	6.5%	7.4%	6.8%	7.3%	6.0%	6.8%	6.7%
Operating profit margin	22.9%	25.6%	25.2%	24.3%	22.9%	26.3%	23.6%	23.4%
Equity ratio	69.2%	68.5%	67.1%	71.7%	70.8%	72.5%	71.8%	70.8%
<b>Share data</b>								
Basic earnings per share/ADR (in DKK)	3.07	3.72	3.27	4.12	3.11	3.76	3.64	4.38
Diluted earnings per share/ADR (in DKK)	3.06	3.72	3.26	4.11	3.10	3.74	3.63	4.37
Average number of shares outstanding (million) – basic EPS	344.4	341.5	340.3	338.5	338.2	338.1	336.7	333.6
Average number of shares outstanding (million) – diluted EPS	344.6	342.0	340.7	339.1	339.8	339.8	338.2	334.7
<b>Employees</b>								
Number of full-time positions at the end of the period	18,221	18,465	18,664	18,756	19,179	19,631	20,001	20,285



The Annual Report does not include the Financial Statements of the Parent Company, Novo Nordisk A/S. These have been prepared in a separate document, which can be obtained upon request from Novo Nordisk A/S and are available at [novonordisk.com](http://novonordisk.com)

The Financial Statements of the Parent Company, Novo Nordisk A/S form an integral part of the complete Annual Report. The complete Annual Report including the Financial Statements of the Parent Company, Novo Nordisk A/S, will be filed with the Danish Commerce and Companies Agency where a copy also can be obtained.

To meet the requirements of the US Sarbanes-Oxley Act, Novo Nordisk A/S has established an Audit Committee.

The Audit Committee assists the Board of Directors with the oversight of; the external auditors, the internal auditors, the procedure for handling complaints regarding accounting, internal accounting controls, auditing or financial reporting matters (whistle blowers), the accounting policies and the systems of internal controls.

The complete Annual Report has the below Management Statement and Auditors Reports as provided on page 104.

## STATEMENT BY THE BOARD OF DIRECTORS AND EXECUTIVE MANAGEMENT ON THE ANNUAL REPORT

Today, the Board of Directors and Executive Management approved the Annual Report of Novo Nordisk A/S for the year 2004. The Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards. The Financial Statements of the Parent Company, Novo Nordisk A/S, have been prepared in accordance with the Danish Financial Statements Act, Danish Accounting Standards and the financial reporting requirements of the Copenhagen Stock Exchange. In our opinion, the accounting policies used are appropriate and the Annual Report gives a true and fair view of the Group's and the Company's assets, liabilities, equity, financial position, results and cash flows.

Novo Nordisk's reporting has been prepared in accordance with the 2002 GRI Sustainability Reporting Guidelines – covering performance on the Triple Bottom Line – and includes Communication on Progress in support of the United Nations Global Compact.

Gladsaxe, 27 January 2005

### Executive Management:

Lars Rebiensørensen  
President and CEO

Jesper Brandgaard  
CFO

Lars Almbloom Jørgensen

Lise Kingo

Kåre Schultz

Mads Krogsgaard Thomsen

### Board of Directors:

Mads Øvlisen  
Chairman

Sten Scheibye  
Vice chairman

Kurt Briner

Johnny Henriksen

Niels Jacobsen  
Audit Committee member

Ulf J Johansson  
Audit Committee member

Anne Marie Kverneland

Kurt Anker Nielsen  
Chairman  
of the Audit Committee

Stig Strøbæk

Jørgen Wedel

## AUDITORS' REPORTS

The Novo Nordisk Annual Report 2004 integrates financial and non-financial performance. The Annual Report is presented with two auditors' reports. The first covers the audit of all the information in the Annual Report, including all financial information in accordance with International Financial Reporting Standards, the Danish Financial Statement Act and additional Danish reporting requirements as well as

information pertaining to Novo Nordisk's non-financial performance. The second covers Novo Nordisk's commitment to sustainability and stakeholder engagement embodied in the principles of materiality, completeness and responsiveness of the AA1000 Assurance Standard.

### AUDITORS' REPORT ON THE ANNUAL REPORT FOR 2004

We have audited the Annual Report of Novo Nordisk A/S for 2004. The Consolidated financial statement of the Annual Report have been presented in accordance with IFRS and the Annual Report as a whole in accordance with the Danish Financial Statement Act and the additional Danish reporting requirements.

The Annual Report is the responsibility of the Company's Management. Our responsibility is to express an opinion on the Annual Financial Report based on our audit.

#### Basis of opinion

We conducted our audit in accordance with International and Danish auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance that the Annual Report is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Annual Report. An audit also includes assessing the accounting policies used and significant estimates made by Management, as well as evaluating the overall Annual Report presentation. We believe that our audit provides a reasonable basis for our opinion.

Our audit did not give rise to any qualifications.

Gladsaxe, 27 January 2005

PricewaterhouseCoopers  
Statsautoriseret Revisionsinteressentskab

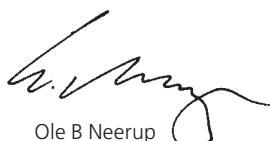


Lars Holtug  
Danish State-Authorised Public Accountant

#### Opinion

In our opinion, the Consolidated financial statement of the Annual Report give a true and fair view of the Group's financial position at 31 December 2004 and of the results of the operations and consolidated cash flows for the financial year 2004 in accordance with International Financial Reporting Standards (IFRS) and the additional Danish Reporting requirements. Furthermore, in our opinion, the Annual Report gives a true and fair view of the Parent Company's financial position at 31 December 2004 and of the results of the operations for the financial year 2004 in accordance with the Danish Financial Statement Act and the additional Danish reporting requirements.

Ernst & Young  
Statsautoriseret Revisionsaktieselskab



Ole B Neerup  
Danish State-Authorised Public Accountant

## ASSURANCE REPORT ON NON-FINANCIAL REPORTING 2004

**Subject, responsibilities, objective, and scope of assurance statement**

We have reviewed Novo Nordisk's commitment to sustainability and stakeholder engagement embodied in the principles of the AA1000 Assurance Standard (AA1000AS).

Management of Novo Nordisk is responsible for defining stakeholders and for the collection and presentation of the non-financial information in the Annual Report. Our responsibility, as agreed with Management, is to express conclusions with limited assurance in relation to the principles of materiality, completeness and responsiveness of the AA1000AS and in accordance with the ISAE 3000.

Moreover, we have assessed Management's statement that the Annual Report meets the conditions for reporting 'in accordance' with the GRI's 2002 Sustainability Reporting Guidelines, and whether the reporting and underlying policies, systems and activities support Management's commitment to the United Nations' Global Compact.

**Basis of opinion**

We planned and performed our work based on the AA1000AS and in accordance with the ISAE 3000. Based on an assessment of materiality and risk, our work included a review of management systems, reporting structures and boundaries as well as enquiries, interviews and testing of registration and communication systems, data and underlying documentation. We tested whether data and the underlying components are accounted for in such a way as to fulfil the assertions of materiality, completeness, valuation, existence and cut-off in accordance with the Novo Nordisk accounting policies for non-financial data. Two major production sites were visited in Denmark, namely Bagsværd and Kalundborg.

Gladsaxe, 27 January 2005

PricewaterhouseCoopers  
Statsautoriseret Revisionsinteressentskab



Lars Holtug  
Danish State-Authorised Public Accountant

We have assessed Novo Nordisk's statement that it reports 'in accordance' with GRI by checking that the reporting (the Annual Report and the supplementary information in the online report) contains the required information and indicators and by reviewing Novo Nordisk's own assessment of whether these are consistent with the eleven Reporting Principles of Part B in the GRI Guidelines.

With respect to the UN Global Compact we have reviewed Novo Nordisk's own assessment of how the reported information and the underlying policies, systems and activities are aligned to and support the principles of the UN Global Compact.

**Opinion**

Based on the work performed nothing has come to our attention that would cause us not to believe that

- the Annual Report includes information that is material to Novo Nordisk's corporate stakeholders and that the reported targets and indicators in respect of sustainability in general are used in strategic and operational decision-making;
- the Annual Report presents a fair and balanced account of Novo Nordisk's material sustainability performance, risks and impacts at the corporate level and that Novo Nordisk can identify and understand material aspects of its corporate sustainability performance;
- through the Annual Report Novo Nordisk is responsive to major issues raised by stakeholders and that Novo Nordisk has robust policies, programmes and procedures in place to address material issues raised by stakeholders.

Based on our work we consider that Novo Nordisk's policies, systems and activities taken as a whole support Management's commitment to the UN Global Compact. In addition, nothing has come to our attention that disproves Novo Nordisk's statement that it has met the conditions for reporting 'in accordance' with the GRI guidelines.

PricewaterhouseCoopers AG, Switzerland



Thomas Scheiwiller  
Dr. Sc.nat

## BOARD OF DIRECTORS



Clockwise from top left: Mads Øvlisen, Stig Strøbæk, Johnny Henriksen, Niels Jacobsen, Kurt Anker Nielsen, Kurt Briner, Ulf J Johansson, Sten Scheibye, Anne Marie Kverneland and Jørgen Wedel.

### **Mads Øvlisen, chairman**

Mads Øvlisen is chairman of the Board of Novo Nordisk A/S. Former president and chief executive officer of Novo Nordisk, Mr Øvlisen became chairman of the Board in November 2000. Mr Øvlisen is also chairman of the Board of the Danish Royal Theatre (2000), and chairman of the Board of LEGO A/S (a member of the board since 1990, chairman since 1996), member of the Board of Governors of the Novo Nordisk Foundation (since 1981) and a member of the Board of the Wanås Foundation, Sweden. Mr Øvlisen was made Knight Commander of the Order of Dannebrog in 2004 and holds the Italian Order of Merit (It.F.3). He is adjunct professor of corporate social responsibility at the Copenhagen Business School. Mads Øvlisen was elected to the Board of Novo Nordisk A/S (initially in the former Novo Industri A/S) in 1981 and has been re-elected several times, most recently in March 2004. Mr Øvlisen's term as a board member expires in March 2005. Mr Øvlisen is a Danish national, born on 9 March 1940.

### **Sten Scheibye, vice chairman**

Sten Scheibye is vice chairman of the Board of Novo Nordisk A/S. Since 1995, Mr Scheibye has been the CEO of Coloplast A/S, Denmark. Mr Scheibye is also adjunct professor of applied chemistry at the University of Aarhus, Denmark. Besides being a member of the Board of Directors of various Coloplast companies, Sten Scheibye is a member of the Board of Directors of Danske Bank A/S. Mr Scheibye was elected to the Board of Novo Nordisk A/S in March 2003 and re-elected in March 2004 and his term as a board member expires in March 2005. Mr Scheibye is a Danish national, born on 3 October 1951.

### **Kurt Briner**

Kurt Briner works as an independent consultant in the pharmaceutical and biotech industry and is a board member of CBax SA, OM Pharma, Progenics Pharmaceuticals Inc, GALENICA SA, and a member of the Supervisory Board of Altana Pharma GmbH. In 1988, he was promoted president & CEO of Sanofi Pharma – a position he held until 1998. He has been chairman of the European Federation of Pharmaceutical Industries and Associations, Brussels (EFPIA). Kurt Briner was elected to the Board of Novo Nordisk A/S in November 2000 and was re-elected most recently in March 2004. Mr Briner's term as a board member expires in March 2005. Mr Briner is a Swiss national, born on 18 July 1944.

### **Johnny Henriksen**

Johnny Henriksen has been an employee-elected member of the Board of Directors of Novo Nordisk A/S since March 2002. He joined Novo Nordisk in January 1986 and currently works as an environmental adviser in Product Supply. Johnny Henriksen's term as a board member expires in March 2006. Mr Henriksen is a Danish national, born on 19 April 1950.

### **Niels Jacobsen**

Since 1998, Niels Jacobsen has been president & CEO of William Demant Holding A/S and Oticon A/S, an industrial group in the hearing healthcare field. Mr Jacobsen is a board member of Højgaard Holding A/S, Nielsen & Nielsen Holding A/S, and is also a board member of a number of companies wholly or partly owned by the William Demant Group, including Sennheiser Communications A/S, Himsa A/S, Himsa II A/S, Hearing Instrument Manufacturers Patent Partnership A/S (chairman) and William Demant Invest A/S (chairman). Furthermore, Mr Jacobsen holds a seat on The Central Board of the Confederation of Danish Industries. Niels Jacobsen was elected to the Board of Novo Nordisk A/S in

November 2000 and was re-elected most recently in March 2004. Mr Jacobsen's term as a board member expires in March 2005. Niels Jacobsen is a member of the Audit Committee. Mr Jacobsen is a Danish national, born on 31 August 1957.

### **Ulf J Johansson**

In 1990, Ulf Johansson founded and became chairman of Europolitan Holdings AB, a GSM mobile telephone operator in Sweden, which was publicly listed from 1994 to 2003. Since 1990, Mr Johansson has been a member of the Royal Swedish Academy of Engineering Sciences. He is chairman of the Boards of Directors of Europolitan Vodafone AB (formerly Europolitan Holdings AB), AcandoFrontec AB, Zodiak Venture AB and Eurostep Group AB. He is also a board member of Novo A/S and Trimble Navigation Ltd and was chairman of the University Board of the Royal Institute of Technology, Stockholm, from 1998 to 2003. Ulf Johansson was elected to the Board of Novo Nordisk A/S in March 1998 and was re-elected most recently in March 2004. Mr Johansson's term as a board member expires in March 2005. Ulf Johansson is a member of the Audit Committee. Mr Johansson is a Swedish national, born on 21 August 1945.

### **Anne Marie Kverneland**

Anne Marie Kverneland has been an employee-elected member of the Board of Directors of Novo Nordisk A/S since November 2000. Ms Kverneland works as a laboratory technician in Discovery. Anne Marie Kverneland was re-elected by the employees in March 2002 and her term as a board member expires in March 2006. Ms Kverneland is a Danish national, born on 24 July 1956.

### **Kurt Anker Nielsen**

Kurt Anker Nielsen is former CEO of Novo A/S. He serves as vice chairman of the Board of Novozymes A/S and as a board member of Novo A/S, DakoCytomation A/S, Coloplast A/S, ZymoGenetics, Inc, Norsk Hydro ASA, and TDC A/S. In the three last mentioned companies Mr Nielsen is also elected as Audit Committee member. Kurt Anker Nielsen was elected to the Board of Novo Nordisk A/S in November 2000 and was re-elected in March 2002 and March 2004. Mr Nielsen's term as a board member expires in March 2005. Kurt Anker Nielsen is chairman of the Audit Committee in Novo Nordisk A/S. Mr Nielsen is a Danish national, born on 8 August 1945.

### **Stig Strøbæk**

Stig Strøbæk has been an employee-elected member of the Board of Directors of Novo Nordisk A/S and of the Board of Governors of the Novo Nordisk Foundation since 1998. Mr Strøbæk is presently working in Product Supply as an electrician. Stig Strøbæk was re-elected by the employees in March 2002 and his term as a board member expires in March 2006. Mr Strøbæk is a Danish national, born on 24 January 1964.

### **Jørgen Wedel**

Prior to his retirement in 2001, Jørgen Wedel was executive vice president of the Gillette Company. He was responsible for Commercial Operations, International, and was a member of Gillette's Corporate Management Group. Since 2004, Mr Wedel has been a board member of ELOPAK AS, a Norwegian food packaging company. Jørgen Wedel was elected to the Board of Novo Nordisk A/S in November 2000 and was re-elected most recently in March 2004. Mr Wedel's term as a board member expires in March 2005. Mr Wedel is a Danish national, born on 10 August 1948.



Clockwise from top left: Lars Rebien Sørensen, Mads Krogsgaard Thomsen, Lise Kingo, Jesper Brandgaard, Kåre Schultz and Lars Almbloom Jørgensen.

### Lars Rebien Sørensen

Lars Rebien Sørensen is president and chief executive officer (CEO) of Novo Nordisk A/S. He joined Novo Nordisk's Enzymes Marketing in 1982. Over the years he has been stationed in several countries, including the Middle East and the US. Mr Sørensen was appointed a member of Corporate Management in May 1994, and was given the special responsibility in Corporate Management for Health Care in December 1994. He was appointed president and CEO in November 2000. Lars Rebien Sørensen is a member of the Board of Scandinavian Airlines System AB and ZymoGenetics, Inc. He is a Danish national, born on 10 October 1954. Lars Rebien Sørensen has a Master's degree in forestry from The Royal Veterinary and Agricultural University in Denmark in 1981, and a BSc in International Economics from the Copenhagen Business School in 1983.

### Jesper Brandgaard

Jesper Brandgaard is executive vice president and chief financial officer (CFO) of Novo Nordisk A/S. He joined Novo Nordisk in 1999 as corporate vice president of Corporate Finance. Mr Brandgaard was appointed CFO in November 2000. Jesper Brandgaard serves as chairman of the Boards of NNE A/S and NNIT A/S. He is a Danish national, born on 12 October 1963. Jesper Brandgaard holds an MSc in Economics and Auditing (1990) as well as a Master of Business Administration (1995), both from the Copenhagen Business School.

### Lars Almbloom Jørgensen

Lars Almbloom Jørgensen is executive vice president, quality, regulatory and business development of Novo Nordisk A/S. He joined Novo Nordisk in 1980 as area manager for North America. In November 2000 Mr Jørgensen was appointed chief of operations. From March 2002 to December 2003 he was chief of staffs. Lars Almbloom Jørgensen is a Danish national, born on 31 July 1948. Lars Almbloom Jørgensen received his MSc (Econ) from the Copenhagen Business School in 1976.

### Lise Kingo

Lise Kingo is executive vice president, people, reputation and relations of Novo Nordisk A/S. She joined Novo Nordisk's Enzymes Promotion in 1988 and worked over the years to build up the company's Triple Bottom Line approach. In 1999 Ms Kingo was appointed corporate vice president, Stakeholder Relations. She was executive vice president, Stakeholder Relations from March 2002 to December 2003. Lise Kingo is a member of the Board of Business for Social Responsibility in the US and a core faculty member of HRH Prince of Wales Businesses and the Environment Programme. She is a Danish national, born on 3 August 1961. Lise Kingo holds a BA in Religions and Ancient Greek Art (1986, University of Aarhus, Denmark), a BCom in Marketing Economics (1991, the Copenhagen Business School) and an MSc (Responsibility and Business Practice) from the University of Bath, United Kingdom (2000).

### Kåre Schultz

Kåre Schultz is executive vice president and chief operating officer (COO) of Novo Nordisk A/S. He joined Novo Nordisk in 1989 as an economist in Health Care, Economy & Planning. In November 2000 Mr Schultz was appointed chief of staffs. In March 2002 he took over the responsibility of COO. Kåre Schultz is a Danish national, born on 21 May 1961. Kåre Schultz holds an MSc (Economy) from the University of Copenhagen (1987).

### Mads Krogsgaard Thomsen

Mads Krogsgaard Thomsen is executive vice president and chief science officer (CSO) of Novo Nordisk A/S. He joined Novo Nordisk in 1991. Dr Thomsen was appointed CSO in November 2000. Mads Krogsgaard Thomsen sits on the editorial boards of three international journals and is a member of the Board of Directors of the Danish Technical University. He is a Danish national, born on 27 December 1960. Mads Krogsgaard Thomsen holds a Doctor of Veterinary Medicine degree from the Royal Veterinary and Agricultural University in Denmark in 1986, where he also obtained a PhD degree in 1989 and a DSc degree in 1991, and in 2000 became professor of pharmacology. He is president of the National Academy of Technical Sciences (ATV).

### Senior Management Board

Jesper Bøving – Diabetes Active Pharmaceutical Ingredients  
 Mariann Strid Christensen – Quality  
 Eric Drapé – Diabetes Finished Products  
 Klaus Ehrlich – Europe  
 Peter Bonne Eriksen – Regulatory Affairs  
 Torben Skriver Frandsen – NNIT  
 Lars Green – Corporate Finance  
 Ginger Gregory – People and Organisation  
 Jesper Høiland\* – International Operations  
 Per Jansen – Novo Nordisk Servicepartner  
 Lars Fruergaard Jørgensen – IT & Corporate Development  
 Lars Guldbæk Karlsen – Global Development  
 Peter Kurtzhals – Discovery  
 Roger Moore – Japan & Oceania  
 Ole Ramsby – Legal Affairs  
 Jakob Riis\*\* – International Marketing  
 Martin Soeters – North America  
 Kim Tosti – Devices and Sourcing  
 Per Valstorp – Product Supply  
 Hans Ole Voigt – NNE

\* As of 1 January 2005

\*\* As of 15 February 2005

## SHAREHOLDER INFORMATION

299

DKK was the closing share price for Novo Nordisk's B shares at the end of 2004.

63.2

billion turnover in 2004 for Novo Nordisk's B shares on the Copenhagen Stock Exchange.

**N**ovo Nordisk's B shares are quoted on the stock exchanges in Copenhagen and London and on the New York Stock Exchange in the form of American Depositary Receipts (ADRs) with the ticker code 'NVO'. The B shares are traded in units of DKK 2. The ratio of Novo Nordisk B shares to ADRs is 1:1 (one B share to one ADR). 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 2 of the A share capital carries 20 votes. Each holding of DKK 2 of the B share capital carries 2 votes.

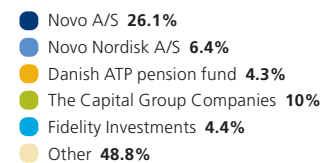
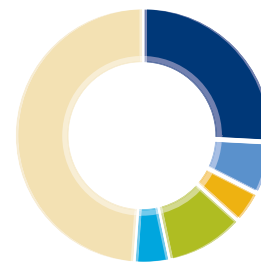
The turnover of Novo Nordisk's B shares on the Copenhagen Stock Exchange amounted to DKK 63.2 billion in 2004. The share price ended the year at DKK 299, compared with a price at year-end 2003 of DKK 241. The market value of Novo Nordisk's outstanding share capital was DKK 89 billion at the end of 2004. During 2004, the price of Novo Nordisk's B shares rose by 24% and the Novo Nordisk share was one of the most traded stocks on the Copenhagen Stock Exchange. This compares to an increase in the European Pharma index of 2.2%. The price of Novo Nordisk ADRs listed on the New York Stock Exchange measured in USD increased by 32.5%. This compares to a decrease in the US Pharma index of 8.6%.

### Share ownership

Novo Nordisk's share capital is DKK 709,388,320, which is divided into an A share capital of nominally DKK 107,487,200 and a B share capital of nominally DKK 601,901,120. Novo Nordisk's A shares are non-listed shares and 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). The sale of A shares is restricted by the by-laws of the Foundation. In addition, Novo A/S holds DKK 77,685,560 B share capital. Holding 26.1% of the total share capital, Novo A/S controls 70.6% of the total number of votes. As Novo Nordisk B shares are in bearer form,

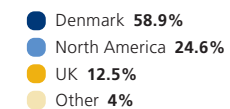
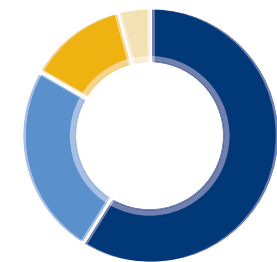
### Breakdown of shareholders

% of capital



### Geographical distribution of share capital

% of capital



no official record of all shareholders exists. Based on the available sources of information on the company's shareholders, it is estimated that Novo Nordisk's shares at the end of 2004 were distributed as shown in the pie charts above. At that point in time 88.2% of the total share capital was included in Novo Nordisk's register of shareholders. At the end of 2004 Novo Nordisk has more than 57,000 shareholders and the free-float is around 67.5%.

### Form 20-F

Copies of the Form 20-F Report for 2003 filed in February 2004 with the US Securities and Exchange Commission can be obtained upon request from Novo Nordisk Inc. The Form 20-F Report for 2004 is expected to be filed before the end of February 2005.

### Payment of dividends

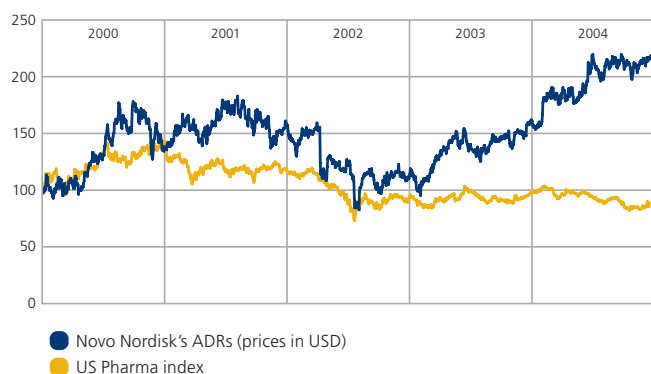
Shareholders resident in Denmark will – unless they are tax-exempt

## Price development of Novo Nordisk shares

Price development of Novo Nordisk's B shares on the Copenhagen Stock Exchange relative to the European Pharma index  
Index 1 January 2000=100



Price development of Novo Nordisk's ADRs on the New York Stock Exchange relative to US Pharma index  
Index 1 January 2000=100



# 4.80

DKK dividend is proposed for 2004.

# 58.9%

of share capital is held in Denmark.

# 26.1%

of shares belong to Novo A/S.

# 20

votes are allowed per A share.

# 2

votes are allowed per B share.

# 27

January 2006: Novo Nordisk announces the full-year results for 2005.

– receive their dividend in DKK with the statutory deduction of 28% Danish tax. Shareholders resident outside Denmark will receive their dividend in DKK with the statutory deduction of 28% Danish tax. ADR holders will receive their dividend in USD with the statutory deduction of 28% Danish tax. If the holder is resident in the US or Canada the deduction might be reduced to 15%. Shareholders resident in countries outside Denmark 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. US and UK resident shareholders may apply to the Danish authorities for a refund of dividend tax in excess of 15%. 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 (see opposite).

For 2004, the dividend payments for Novo Nordisk shares were as illustrated in the table below.

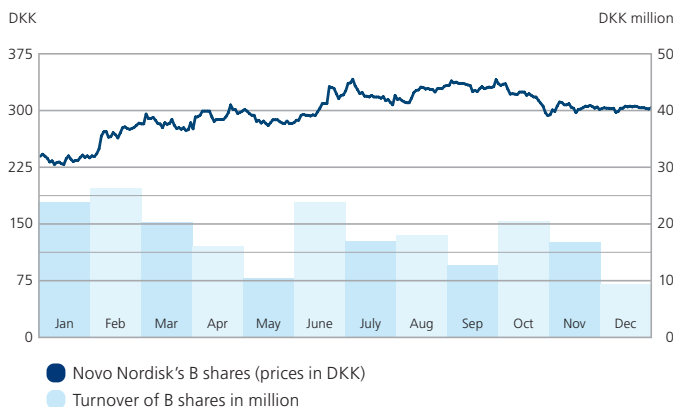
	A shares DKK 2	B shares DKK 2	ADRs
<b>Dividend payment</b>	DKK 4.80	DKK 4.80	USD 0.88

Novo Nordisk does not pay a dividend on its own holding of treasury shares. The proposed dividend for 2004 is DKK 4.80 for each Novo Nordisk B share of DKK 2 and for each Novo Nordisk A share of DKK 2.

### Internet

Novo Nordisk's homepage for investors can be found at [novonordisk.com](http://novonordisk.com). It includes historic and updated information about Novo Nordisk's activities: press releases from 1995 and onwards, financial results, investor presentations, background information, recent annual reports and accounts, parent company accounts and sustainability reports.

Price development and monthly turnover of Novo Nordisk's B shares on the Copenhagen Stock Exchange 2004



## Investor Relations

### Novo Nordisk Investor Relations

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### Transfer agents

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:

Danske Bank  
Holmens Kanal 2-12  
1092 Copenhagen K  
Denmark  
Tel +45 3344 0000

In North America:  
JP Morgan Chase Bank  
PO Box 43013  
Providence, RI 02940-3013  
USA  
Tel +1 781 575 4328

### FINANCIAL CALENDAR 2005

**Annual General Meeting** 9 March 2005


Dividend	B shares	ADRs
Ex-dividend	10 March 2005	10 March 2005
Record date	14 March 2005	14 March 2005
Payment	15 March 2005	22 March 2005

### Announcement of financial results 2005

First three months	Half year	Nine months	Full year
28 April	11 August	27 October	27 January 2006

You can  
inherit it.  
You can be  
born with it.  
You can get it  
during pregnancy.  
You can develop it from  
the way you live.  
So is there any way  
to be safe from  
diabetes?

I am one of the 18 million Americans managing life with diabetes. Join me, Novo Nordisk and the Entertainment Industry Foundation in the fight to change the way this disease is treated, one person at a time.



To learn more, or to take an easy test for diabetes, ask your doctor. For more information visit [www.DiabetesAware.com](http://www.DiabetesAware.com).

