# **%NB%** NORGES BANK



Annual Report 2007



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# Norges Bank Oslo 2008

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# Table of Contents

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Part I. Report of the Executive Board 2007	6
Monetary policy	6
Financial stability	7
Investment management	8
Organisation and personnel	10
Use of resources and restructuring	10
Gender equality	11
Health, environment and safety	12
Internal control and risk management	13
Ethical rules	13
Financial results	13
Distribution of profit	15
Part II. Financial Statements Norges Bank 2007	17
Profit and loss account	19
Balance sheet	20
Notes	22
Auditors' reports for 2007	47
Auditor's report for Norges Bank for 2007	47
Auditor's report for the Government Pension Fund – Global for 2007	48
Resolution of the Supervisory Council on the financial statements for 2007	49
The Supervisory Council's statement on the minutes of meetings of the Executive Board and	
its supervision of the Bank in 2007	49
Part III. Norges Bank's activities	51
Chapter 1. Monetary policy	52
	<b>52</b>
Flexible inflation targeting Monetary policy in 2007	55
	55 55
Developments in the period to 2007  Conduct of manatary policy in 2007	
Conduct of monetary policy in 2007	56
Monetary policy in the period to March	59
Monetary policy in the period to June	60
Monetary policy in the period to November	61
Assessment – use of instruments	62
Financial market expectations concerning the key policy rate	62
Was interest rate setting predictable in 2007?	63
Other cross-checks	65
Assessment – performance over time	66
Assessment of inflation and the output gap over time	66
Inflation expectations	68
Liquidity management in the money market	69
Chapter 2. Financial stability	74
Main points	74
The outlook for financial institutions and financial markets	75
What happened in 2007?	75
What are Norges Bank's responsibilities?	78
What has Norges Bank done in 2007?	78
The framework conditions for financial institutions and financial markets	81

What happened in 2007?	81
What are Norges Bank's responsibilities?	83
What has Norges Bank done in 2007?	83
Payment systems	83
What happened internationally in 2007?	83
83 What happened in Norway in 2007?	84
What are Norges Bank's responsibilities?	85
What has Norges Bank done in 2007?	86
Notes and coins	91
Developments in the use of notes and coins in 2007	91
What are Norges Bank's responsibilities?	91
What has Norges Bank done in 2007?	92
Contingency work	94
What sort of crises must the Bank be prepared for?	94
What are Norges Bank's responsibilities?	94
What has Norges Bank done in 2007?	94
Chapter 3. Investment management	96
Foreign exchange reserves and claims on the IMF	96
Government Pension Fund – Global	97
Government Petroleum Insurance Fund	98
Chapter 4. Research and international cooperation	99
Research activity in 2007	99
Outreach	99
Support for economic research	101
International cooperation	101
Other central banks	101
International organisations	101
Technical assistance to the Reserve Bank of Malawi	102
Chapter 5. Other responsibilities	105
Foreign exchange transactions	105
Government debt 2007	106
Communications activities	107
Chapter 6. Organisation, management and use of resources	108
Core responsibilities	108
Developments in the use of resources	108
Operational areas as core units	109
High degree of delegation	110
Management and follow-up	110
Fundamental values	110
Distribution of costs by main function	110
Working conditions	112
Appendices	113
A. Tables	114
B. Norges Bank's management and organisation	123



Report of the Executive Board 2007

# Report of the Executive Board 2007

In accordance with the Norges Bank Act, executive and advisory authority is vested in the Executive Board, which is in charge of Norges Bank's operations and the management of its resources.

The Executive Board seeks to fulfil the Bank's objectives and values with particular emphasis on achieving price stability, financial stability and prudent and effective asset management that generates added value. The Executive Board continues to closely monitor the development of the organisation and its overall use of resources.

Internal control and risk management are important. In order to strengthen the follow-up procedures, the Executive Board decided in autumn 2006 to establish an audit committee, and a separate internal audit unit accountable to the Executive Board has been in place since summer 2007. For details, see the section "Internal control and risk management".

The Executive Board held 17 meetings in 2007 and dealt with 139 matters. In addition to the regular Executive Board meetings, a number of seminars focusing on the Bank's core activities were held. Among other things, the Executive Board held several meetings and seminars with the advisory committee on investment management set up by the Executive Board in 2006.

# Monetary policy

In the course of 2007, various measures of inflation showed that consumer price inflation was picking up. Inflation excluding energy products had been very low for some time. The operational target of monetary policy is annual consumer price inflation of approximately 2.5% over time. Viewed over a period of several years, inflation has been low and stable and remained fairly close to, but somewhat below, the target.

The key policy rate was raised further during 2007 and had returned to a more normal level by the end of

the year. A relatively long period of low interest rates then came to an end.

The aim of preventing inflation expectations from becoming entrenched well below target was an important reason why the key policy rate was reduced to 1.75% in 2004, when inflation fell and approached zero, accompanied by spare capacity in the Norwegian economy. It was signalled that the interest rate would remain low until there were clear indications that inflation was beginning to rise. The low interest rate, coupled with strong and sustained growth in the global economy and high oil prices, contributed to solid growth in demand for goods and services and in aggregate output. This gradually led to prospects for higher inflation. Since summer 2005, monetary policy has been oriented towards gradually returning the key policy rate towards a more normal level.

At the beginning of 2007, the key rate was still below what we would consider a normal level. The upswing in the Norwegian economy was entering its fourth year, while inflation excluding energy products had been lower than expected. Against the background of high growth in output and employment, rising wage growth and a weaker krone, at the beginning of 2007 there was reason to believe that consumer price inflation would gradually pick up. In the period to summer 2007, Norges Bank announced that interest rates would be increased at a faster pace than expected at the beginning of the year. Along with prospects for higher inflation, interest rate expectations were being fuelled by strong growth in output and employment, even though a stronger krone pointed to the opposite. Following the turmoil in global financial markets in August, interest rate expectations were revised slightly down again.

The key rate was increased in seven increments from 3.50% to 5.25% in the course of 2007, due to prospects for higher inflation. The interest rate was raised well before inflation began to rise. While various measures of underlying inflation were between 1% and 1½% in the first half of the year, the same measures ranged between 1½% and 2% in the second half. As expected, consumer price inflation accelerated towards the end of 2007, and underlying inflation was estimated to be between 1¾% and 2½% at the end of the year. Headline inflation was heavily influenced by movements in electricity prices, and climbed rapidly from a low level towards the end

of the year. Growth in the economy was still robust, and capacity utilisation was high in many industries.

The Executive Board explains its interest rate decisions in a press release following each monetary policy meeting. The Bank's *Monetary Policy Report* provides a qualitative and quantitative account of the factors that have had a bearing on the interest rate outlook.

With effect from 16 March 2007, the Executive Board set the overnight lending rate at 1 percentage point above the key rate. This action did not entail any change in monetary policy, but narrowed the gap between the key policy rate (the deposit rate) and the lending rate.

The turmoil in global financial markets from August onwards induced Norges Bank to supply additional liquidity on several occasions in the second half of 2007. Nevertheless, the turmoil led to a situation where during this period short-term money market rates were higher than expected key interest rates would imply. The situation in money and financial markets both at home and abroad improved towards the end of the year after several central banks provided additional long-term liquidity.

# Financial stability

The turmoil in global financial markets in the second half of 2007 has made it increasingly relevant to question the robustness of the financial system. The turmoil has affected markets in which Norwegian financial institutions are involved, but the effects to date have not posed a threat to the stability of the Norwegian financial system in the short term. Norges Bank analyses the stability of the system in the slightly longer term. The Bank also looks at what can be done to mitigate risk, and how crises can be managed should they nevertheless arise.

Norges Bank considers the financial system to be stable as long as it is in a position to channel capital, execute payments and redistribute risk in a satisfactory manner. The system needs to be sufficiently robust so that these roles can be performed even if the system is exposed to major external shocks. Such shocks can come from global financial markets (as in 2007), from domestic financial markets or the real economy, or from infrastructure-related factors that prevent settlement and payment systems from functioning as they should.

In 2007, the Executive Board presented two submissions to the Ministry of Finance with its assessment of the financial stability outlook. Both submissions stated that the financial stability outlook was satisfactory. Banks generally have satisfactory capital adequacy and have recorded high earnings. The new minimum capital requirements will be easier for most Norwegian banks to satisfy. This is because a large portion of their loans are secured on residential property, in most cases with market values well in excess of the loans.

At the same time, several factors may put pressure on banks' profits. In recent years, recorded loan losses have been close to zero, which is below what can be considered a normal level. More than half of banks' lending is to Norwegian households, with loans to Norwegian enterprises accounting for most of the remainder. The solid financial position of their customers suggests that banks need not expect very high losses in the immediate future. However, they must expect some losses, and the risk increases the further ahead we look. In addition, banks' interest margins have gradually decreased as a result of intensified competition.

We consider the payment systems to be robust. Norges Bank is responsible for authorising and supervising interbank systems in Norway, and ensures that the requirements of the Payment Systems Act are met. Norges Bank monitors the resilience of the systems to liquidity or solvency problems at individual banks, and ensures that the systems have good back-up solutions in the event of operational irregularities and disturbances. In its oversight, Norges Bank attaches importance to international recommendations for interbank systems. In its most recent Annual Report on Payment Systems, the conclusion was that the Norwegian systems wholly or largely comply with these recommendations.

The bulk of payments between Norwegian banks are settled through Norges Bank's Settlement System (NBO). The Bank is working on replacing the current system with a new system. The new system will be better suited to the tasks currently performed by Norges Bank. The banking sector is playing an active part in all main phases of the introduction of the new system.

In recent years, Norges Bank has reassessed its role in cash distribution in order to ensure the most efficient

NORGES BANK ANNUAL REPORT 2007 REPORT OF THE EXECUTIVE BOARD 7

possible division of responsibilities and duties between participants and a clearer distinction between different types of service. We have more clearly assumed the role of wholesaler, while banks are taking more responsibility for the redistribution of cash among themselves.

Norges Bank has the exclusive right to issue notes and coins in NOK. We consider it important that these means of payment are safe and reliable, and we apply strict requirements to suppliers of notes and coins. These notes and coins include security features that are difficult to copy and make it easy to distinguish between genuine and counterfeit notes and coins.

Although the outlook for financial stability is favourable, the Executive Board considers it very important that Norges Bank is well prepared in the event of serious disturbances. The contingency and back-up solutions for Norges Bank's settlement system for banks are tested at regular intervals. In 2007, Norges Bank also took part in a Nordic exercise on crisis management in financial institutions with operations in more than one country.

In its submissions to the Ministry of Finance, the Executive Board noted several factors that could threaten the stability of the Norwegian financial system ahead. There are four factors that the Bank will be monitoring particularly closely:

- the risk of a global downturn
- the turmoil in money and credit markets
- high household debt
- the rapid rise in commercial property prices

Collectively, and possibly also individually, these risk factors could cause problems for Norwegian financial institutions. The most important institutions are today solid to the extent that it is unlikely that they will experience major problems in the immediate future. The Executive Board underlines the importance of Norges Bank closely monitoring the financial stability outlook and its ability to carry out high-quality analyses of the outlook for financial stability.

The Executive Board attaches importance to Norges Bank's work to mitigate the risks to the Norwegian financial system by bolstering its resilience to external shocks. Norges Bank can achieve this by ensuring that its own

systems are robust. This applies particularly to the settlement system for banks. We can also encourage other participants to assess their risks carefully. One important contribution over time is the advice we give on the design of the regulatory framework for the financial system.

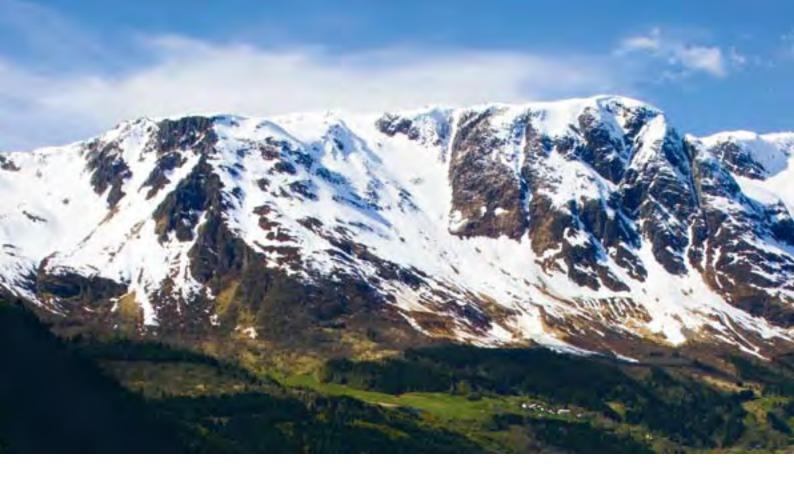
The Executive Board considers it important that Norges Bank communicates its financial stability analyses to the public. One important aim of the financial stability reports is to raise the level of awareness and stimulate debate about factors that are important for financial stability. These reports are presented at press conferences which are webcast live. They are also presented to the banking sector at meetings and lectures.

### Investment management

Norges Bank manages the Government Pension Fund – Global (previously the Government Petroleum Fund) on behalf of the Ministry of Finance. The Bank also manages its foreign exchange reserves, which in addition to the investment portfolio also contain two smaller subportfolios. Moreover, the Bank manages the Government Petroleum Insurance Fund on behalf of the Ministry of Petroleum and Energy. At the end of 2007, Norges Bank managed assets amounting to a total of NOK 2 269bn in international capital markets.

In 2007, all portfolios managed by Norges Bank recorded positive returns, as measured in terms of the currency basket corresponding to the composition of the individual portfolio's benchmark index. Of the two large portfolios managed by Norges Bank, the Government Pension Fund – Global generated a return of 4.3% and the foreign exchange reserves' investment portfolio a return of 3.4%. The returns in NOK were lower at -3.9% and -4.5% respectively, due to the appreciation of the Norwegian krone in relation to the currency basket. However, the return in terms of international currencies provides the best indication of developments in the two funds' purchasing power. At end-2007, the market value of the Pension Fund was NOK 2 019bn and the market value of the investment portfolio stood at NOK 214bn.

Since 1997, the Pension Fund has recorded an average annual real return after management costs of 4.26%, while



the corresponding real return on the investment portfolio has been 3.65% since 1998.

Active management yielded negative results in 2007. The actual gross return on the Pension Fund was 0.22 percentage point lower than the return on the benchmark portfolio defined by the Ministry of Finance. Since 1998, the average annual excess return has been 0.40 percentage point. There was a negative gross excess return on the foreign exchange reserves' investment portfolio of 1.12 percentage points in 2007. Norges Bank's objective is to achieve an excess return through active management, while taking account of the costs of phasing in new capital and the operating costs associated with active management. In the three-year period 2005-2007, this net excess return was 0.32 percentage point annually for the Pension Fund and -0.23 percentage point for the investment portfolio. The objective for both funds is to achieve a positive excess return of 0.25 percentage point.

Norges Bank's Executive Board has adopted a strategy plan for investment management in the period to 2010. During the plan period, capital under management in Norges Bank may double, the allocation to equities in the Pension Fund will increase, and there may be investment in new asset classes such as real estate and private equity. The principal objectives of the plan are to generate substantial value added through active management of

the government's and Norges Bank's foreign financial assets, to foster the owners' long-term financial interests through active corporate governance, and to implement the owners' management strategy in a cost-effective, prudent and confidence-inspiring manner.

In 2007, the Chinese authorities gave Norges Bank permission to open an office in Shanghai, and the office was formally inaugurated in November. The Bank's office in New York was moved to midtown Manhattan during the year.

In recent years, Norges Bank has attached substantial importance to the work on managing and controlling operational risk with a view to achieving the goal of high returns with low operational risk. In 2007, the Executive Board reviewed the framework and limits for the management of operational risk in investment management.

The Executive Board has determined that remuneration and human resources policy in investment management is to serve as an instrument for achieving performance targets. The labour market for persons with experience in financial and investment management is characterised by a high salary level and significant components of performance-based pay. Many members of the staff of Norges Bank Investment Management therefore receive a salary that depends on their performance. The intention behind this is for Norges Bank to be sufficiently competitive in

NORGES BANK ANNUAL REPORT 2007 REPORT OF THE EXECUTIVE BOARD

the Norwegian and global labour market.

The Executive Board has laid down corporate governance guidelines for the equity portfolios as a supplement to the Ministry of Finance's guidelines for the Pension Fund portfolio. Norges Bank's main tasks are twofold. First, ownership rights shall be safeguarded and used to secure and generate financial wealth for future generations. The goal is a high long-term absolute return on the funds under management. Second, Norges Bank shall seek to contribute to a high ethical, social and environmental standard in the companies in which it has invested, and thereby also to sustainable financial development in the long term. It is regarded as important that companies in which the Bank has equity holdings are aware of Norges Bank's corporate governance principles, and that the boards of these enterprises act in accordance with internationally recognised principles of good corporate governance. Norges Bank's corporate governance is based on the principles expressed in the UN Global Compact, the OECD Principles of Corporate Governance and Guidelines for Multinational Enterprises, and the new UN Principles for Responsible Investment (PRI), which Norges Bank has signed and helped to draw up. Norges Bank votes at the general meetings of the vast majority of companies in the portfolios.

The Executive Board lays down guidelines for the management of the foreign exchange reserves. Benchmark portfolios are used as a basis for managing risk and measuring the performance of operational management. The investment portfolio accounts for the largest portion of the foreign exchange reserves. In June 2007, the Executive Board decided to extend the benchmark portfolio for equities to include small-cap companies. This change corresponded to that adopted by the Ministry of Finance for the Pension Fund. The change in the foreign exchange reserves was implemented on 31 August 2007.

In 2007, risk exposure in relation to the benchmark portfolio remained well within the limits set by the Executive Board. The total portfolio risk is determined by the benchmark portfolio and by the magnitude of fluctuations in equity and fixed income markets. According to Norges Bank's risk models, the standard deviation on the total return at end-2007 was estimated at 8.3 percentage points.

The other sub-portfolios in the foreign exchange reserves – the money market portfolio and the buffer portfolio – are smaller. There have been no changes in the management of these sub-portfolios.

The Ministry of Finance and the Ministry of Petroleum and Energy have established benchmark indices as a means of managing risk and measuring the performance of Norges Bank's operational management of the Government Pension Fund – Global and the Government Petroleum Insurance Fund. In 2007, risk exposure in relation to the benchmark portfolio remained well within the limits set by the two ministries. In 2007, the Ministry of Finance transferred NOK 313.6bn to the Pension Fund. This figure includes management fees for 2006 of NOK 1.5bn.

The Ministry of Finance has also established ethical guidelines for the Pension Fund's investments. A separate Council on Ethics advises the Ministry of Finance on how the guidelines for negative screening and exclusion of companies from the investment universe should be applied. The Executive Board has established similar rules for negative screening and the exclusion of companies from the foreign exchange reserves.

Norges Bank publishes a separate annual report on the management of the Government Pension Fund – Global, the investment portfolio and buffer portfolio in the foreign exchange reserves, and the Government Petroleum Insurance Fund.

# Organisation and personnel

#### Use of resources and restructuring

The Executive Board emphasises that the central bank should discharge its responsibilities in a professional manner and at low cost. Operations should be well managed, reflect a strong ethical awareness and be in line with best international practice. The Bank should show a willingness and capacity to change.

In recent years, the Bank has concentrated its operations on core activities, i.e. monetary policy, financial stability and investment management, including related operational and staff functions. This has resulted in substantial restructuring. Cash handling was spun off into

a separate company in 2001, and all the Bank's shares were sold in January 2006. The Royal Norwegian Mint was sold in 2003. The Bank has concentrated on its role as wholesaler in the distribution of notes and coins, and the number of cash depots has been reduced. Banknote production was discontinued in 2007, and agreements for delivery of banknotes have been concluded with two foreign printing works. The first deliveries will take place in 2008. Operation of the Bank's settlement system has been outsourced. Plans have been drawn up to reduce the Bank's central staff and support functions towards 2010. Norges Bank's statistics activities have also been transferred to Statistics Norway in two phases, the second with effect from 1 January 2007. The transfer has resulted in better use of the two organisations' combined expertise.

At end-2007, the number of permanent employees in Norges Bank totalled 528, compared with 542 at end-2006. Since the end of the 1990s, the number of employees has been reduced by over 600. This has been accompanied by an increase in the use of resources in the Bank's core areas. The staffing of Norges Bank Investment Management has increased markedly in recent years, particularly as a result of the sharp rise in the capital of the Government Pension Fund - Global. The number of permanent employees in Norges Bank Investment Management at end-2007 was 178, up from 128 a year earlier. As a result of the substantial increase in capital under management in the next few years, and of more complex tasks, there will probably be further increases in the number of employees in this area of the Bank's activities in the years ahead. Yngve Slyngstad took over as Executive Director of Norges Bank Investment Management on 1 January 2008.

Norges Bank is using human resources policy programmes to facilitate employees' adaptation to the changes in the Bank. In the period 1999 to end-2007, the Bank entered into 334 termination agreements. In 2007, applications under these agreements were approved for 22 employees in different areas of the Bank, compared with seven the year before. NOK 129m has been set aside in the accounts to cover future payments related to restructuring.

The Executive Board seeks to optimise the management of the head office building and the use of vacant

premises. In 2006, an agreement was entered into with Kredittilsynet (the Financial Supervisory Authority of Norway) providing for the leasing of large parts of the premises that became vacant when the Printing Works' activities were discontinued in 2007. The leasing agreement requires considerable building activity, including the conversion of the former premises of the Printing Works into offices. The plans were reviewed in 2007 in the light of excessively high costs in the first tenders. The conversion work is due to be completed towards the end of 2009. Agreements related to the revised plans have been allocated a total budget of just over NOK 300 million. This does not allow for the costs due to unforeseen circumstances that normally arise in construction projects of this kind.

Net use of resources for the Bank's own operations has been reduced by about 28% in real terms since 1998. Restructuring costs are not included. Net use of resources showed a slight increase from 2006 to 2007 (see Chapter 6 for further details).

#### **Gender equality**

Women account for 39% of the employees in Norges Bank. In 2007, the share of women recruited to permanent positions was 30%. At the end of 2007, part-time employees, primarily women, accounted for 7% of permanent employees. The share of women is higher in the lower-paid occupational categories than in management positions and in the category economist/senior adviser. The Bank's gender equality programme has set targets for the share of women in different occupational categories. At the end of 2007, the share of women in managerial positions was 29%. The target is 40%. The Executive Board emphasises that there should not be gender-based differences in pay. A comparison shows that, on average, the salary of female managers in Norges Bank was 90%1 of the salary of male managers. The percentage for the category economist/senior adviser was 86%. The differences can largely be explained by there being few female applicants for positions in investment management where salaries are often higher than in other parts of the Bank, and by the fact that female employees are generally somewhat younger than their male colleagues.

Efforts are in progress to increase the share of women

<sup>&</sup>lt;sup>1</sup> Excluding executive directors. The salaries for this group are listed in Note 7 to Norges Bank's accounts for 2007



in management positions and economist/senior adviser positions by seeking female candidates for vacant management positions, both externally and internally. Women are given management training by being engaged as project coordinators and serving as acting managers during temporary vacancies. The working situation is adapted to employees with small children through flexible working hours and the possibility of working from home via computer.

The Executive Board is following developments in gender equality at Norges Bank via regular reports from the Bank's administration.

#### Health, environment and safety

Norges Bank has entered into an agreement to be an inclusive workplace enterprise. In 2007, sickness absence was 3.9% of the total number of working days, compared with 3.0% in 2006. Long-term absences (16 days or more) accounted for 2.6% of total absence, against 1.5% in 2006.

In connection with the closure of Norges Bank's Printing Works, an extensive environmental clean-up operation in the galvanisation facilities was performed by an external specialist firm. A total of 24 500 litres of

acidic and caustic liquids and about 1 100 kilograms of solid waste were properly declared and delivered to an approved facility. Norges Bank has no significant impact on the external environment.

The Bank's Working Environment Committee believes the working environment to be good. The physical working environment is considered to be particularly well looked after, and the occupational health service provides aids and protective equipment where necessary. The committee is regularly updated on the results of health, environment and safety surveys in the Bank. The results for 2007 reveal a slight increase in stress-related complaints. The Executive Board is taking this seriously and has asked management to take appropriate action.

The Executive Board places considerable emphasis on ensuring adequate safety in all parts of the Bank's operations. The objective is to protect the lives and health of the Bank's employees and related parties and protect the considerable assets managed by the Bank. In autumn 2004, the Bank initiated measures to upgrade security at the head office and at the Bank's depots. This work has now been completed. No occupational injuries or accidents were registered in 2007.

#### Internal control and risk management

Internal control and risk management are essential to the Bank's operations and are an integral part of the Bank's line management and management systems.

In 1998, the Executive Board decided to develop internal control procedures at Norges Bank on the basis of Kredittilsynet's internal control regulations, which ensure clearer responsibilities and more thorough documentation and verification of internal control. The Executive Board has also laid down overarching principles for internal control at Norges Bank.

Norges Bank defines internal control as all measures, arrangements, systems, etc. that contribute to the achievement of the Bank's goals. Requirements are set out regarding the performance and documentation of risk analyses and control measures. The Executive Board receives annual reports on the risk outlook and the quality of internal control in the various areas of operation. Norges Bank Investment Management reports more frequently.

Developments, particularly in the management of the Government Petroleum Fund – Global, but also in the Bank's other core areas, entail increased operational and reputational risk. This poses new challenges to the Bank and the governing bodies.

In autumn 2006, the Executive Board decided to establish an audit committee and a special internal audit unit accountable to the Executive Board. The audit committee held six meetings in 2007 and is composed of three of the Executive Board's external members. Its main role is to prepare issues in particular areas for the Executive Board, mainly in connection with the Executive Board's supervisory function and responsibility for risk management and control. The internal audit unit is also accountable to the Executive Board, and functions as secretariat to the audit committee. The unit became operational in June 2007 and now has six employees. The audit committee and internal audit unit were established with the approval of the Supervisory Council, but do not in other respects have any connection with the competence and responsibilities of the Supervisory Council pursuant to the Norges Bank Act, which are to supervise the Bank's operations and the organisation of Central Bank Audit's activities.

In order to enhance its expertise and address the special challenges associated with the financial auditing of Norges Bank Investment Management, Central Bank Audit began collaborating with a large international accounting firm in 2007.

#### **Ethical rules**

For Norges Bank to be able to fulfil its responsibilities, the general public must have complete confidence that the Bank will perform its functions in a professional and independent manner. The Executive Board emphasises that the Bank's employees must always conduct themselves in an ethical manner. The Executive Board has therefore established ethical rules for the Bank's employees to prevent them from exploiting their positions to achieve unethical advantages for themselves or others or being disloyal to the Bank. The rules were most recently revised in 2005. Ethical rules have also been established for the members of the Executive Board, cf. the regulation issued by the Ministry of Finance on 7 August 2000 on the relationship of members of Norges Bank's Executive Board to other credit institutions and enterprises. In autumn 2007, the Executive Board issued a set of guidelines on internal whistle-blowing at Norges Bank in response to new rules in the Working Environment Act. In accordance with the rules on money laundering, the Bank reported two suspicious transactions to Økokrim (the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime) in 2007. Both cases concerned deposits of old banknotes by members of the public.

#### **Financial results**

The Supervisory Council adopted accounting policies for Norges Bank at its meeting on 13 December 2007. These policies have been applied when preparing the annual financial statements.

Net international reserves are Norges Bank's main assets, excluding the Government Pension Fund – Global, which does not affect the Bank's results. Norges Bank's liabilities consist of notes and coins in circulation and domestic deposits from the central government and banks. This balance sheet composition will normally generate a positive return over time, mainly because the Bank has substantial capital in addition to liabilities in the form of notes and coins in circulation. The Bank's assets consist primarily of investments that generate a return.

NORGES BANK ANNUAL REPORT 2007 REPORT OF THE EXECUTIVE BOARD 13



However, since the Bank's assets are largely invested in foreign exchange and liabilities are denominated in NOK, a foreign exchange risk arises that requires substantial capital.

Norges Bank's income consists primarily of interest and any net exchange gains from investments in foreign exchange. Exchange and capital gains are the result of changes in exchange rates and equity prices, and interest rate changes that affect bond prices. Norges Bank's results will depend on developments in these variables, which may cause wide annual fluctuations in the Bank's results.

Norges Bank's annual accounts for 2007 show a loss of NOK 17.6bn, compared with a profit of NOK 5.5bn in 2006. Due to the appreciation of the Norwegian krone against most of the main currencies in the foreign exchange reserves, the foreign exchange reserves translated into NOK showed an overall exchange loss of NOK 26.9bn in 2007, compared with a loss of NOK 5.0bn in 2006. Exchange losses due to the appreciation of the krone have no effect on the international purchasing power of the foreign exchange reserves.

Movements in prices in international securities markets in 2007 resulted in a capital loss of NOK 3.7bn, compared with a gain of NOK 6.6bn in 2006. Interest income and

dividends from foreign investments amounted to NOK 15.5bn, which is NOK 2.5bn higher than in 2006.

Interest payments to the Treasury amounted to NOK 6.5bn, compared with NOK 4.6bn in 2006.

The Adjustment Fund stood at NOK 73.0bn at end-2006. After the year-end allocations for 2007, the Adjustment Fund amounted to NOK 55.5bn. The Ministry of Finance has stipulated how much Norges Bank may allocate to the Adjustment Fund as a buffer against changes in exchange rates and securities prices (cf. description under 'Distribution of profit' below). For the Adjustment Fund to reflect the ratios in the guidelines for provisions and allocation of profits, it would have to total NOK 96.3bn.

Norges Bank's total balance sheet amounted to NOK 2 426.8bn. The Government Pension Fund – Global is integrated into Norges Bank's accounts, and accounts for about 83% of the Bank's balance sheet. The NOK deposits in the Government Pension Fund – Global are a liability item for Norges Bank and at year-end amounted to NOK 2 017.0bn. Norges Bank invests the equivalent of the NOK deposits abroad in an earmarked portfolio. The return on the international portfolio is transferred to the Fund's NOK account. The costs incurred by Norges Bank in connection with management of the Government Pension Fund – Global are covered by the Ministry of



Finance subject to an upper limit. With effect from 2007, more extensive information is being provided on the Government Pension Fund – Global, including full disclosure of accounting information for the Fund (see Note 23).

The value of notes and coins in circulation amounted to NOK 55.7bn, i.e. an increase of NOK 0.8bn compared with end-2006. These are recorded as interest-free liabilities in Norges Bank's accounts.

Contracts to purchase and sell financial derivatives and options contracts entered into as at 31 December 2007 are presented in a note to the financial statements.

Reference is made to the financial statements for 2007, which include the profit and loss account, the balance sheet and additional information in the notes.

#### **Distribution of profit**

Pursuant to the Norges Bank Act of 24 May 1985, the guidelines for the allocation and distribution of Norges Bank's profit were originally adopted by the Council of State on 7 February 1986. The guidelines have been revised several times, most recently by Royal Decree of 6 December 2002, and now read as follows:

 Allocations shall be made from Norges Bank's profit to the Adjustment Fund until the Fund has reached 5% of the Bank's holdings of Norwegian securities and 40% of the Bank's net foreign exchange reserves, excluding the immunisation portfolio and capital managed for the Government Petroleum Fund (now called the Government Pension Fund – Global), other claims/liabilities abroad or any other commitments that the Executive Board considers to involve a not insignificant exchange risk.

The immunisation portfolio corresponds to that part of Norges Bank's foreign exchange reserves which is allocated to a separate portfolio. The return on this portfolio will be credited to/debited from the Treasury in the accounts of the same year. The same applies to the Government Petroleum Fund portfolio.

If the size of the Adjustment Fund exceeds the corresponding figures mentioned under point 1, first paragraph, the surplus shall be reversed to the profit and loss account.

2. If the Adjustment Fund falls below 25% of the Bank's net foreign exchange reserves excluding the immunisation portfolio and capital managed for the Government Petroleum Fund, and other claims/liabilities abroad at the end of the year, available capital shall be reversed from the Transfer Fund to Norges Bank's accounts

NORGES BANK ANNUAL REPORT 2007 REPORT OF THE EXECUTIVE BOARD 15

until the Adjustment Fund reaches full size according to point 1.

- Any surplus after provisions for or transfers from the Adjustment Fund shall be allocated to the Transfer Fund.
- **4.** Any deficit in Norges Bank's accounts following the allocations described in point 2 shall be covered by transfers from the Adjustment Fund.
- In connection with the closing of the books each year, an amount corresponding to one-third of the capital in the Transfer Fund shall be transferred to the Treasury.

In accordance with a statement from the Ministry of Finance, NOK 37.0m is to be transferred from other capital to cover the write-down on previously revalued assets. The amount will be transferred to profit/loss for allocation for the year.

In accordance with the guidelines, the Executive Board proposes the following transfers and allocations:

In accordance with point 4, the loss for the year after allocations, NOK 17 538.6m, will be covered from the Adjustment Fund.

As there are no funds in the Transfer Fund, no transfer will be made to the Treasury.

#### Norges Bank's Executive Board Oslo, 20 February 2008

Svein Gjedrem (Chair)	Jarle Bergo (Deputy Chair)	Liselott Kilaas		
(Chair)	(Deputy Chair)			
Vivi Lassen	Brit K. Rugland	Asbjørn Rødseth		
Øystein Thøgersen	Jan Erik Martinsen (Employees' representative)	Gunnvald Grønvik (Employees' representative)		



Financial Statements Norges Bank 2007



# Profit and loss account

Figures in millions of NOK

		rigu	res in millions of NOK
	Note	2007	2006
Interest income and dividends	1	15 506	13 025
Change in value financial instruments	2	-3 692	6 604
Valuation adjustment of foreign exchange	3	-26 935	-4 985
Return on international reserves		-15 121	14 644
Share dividend, BIS	12	19	19
Gain/loss on other foreign financial instruments	4	3 877	-4 187
Loss on domestic financial instruments	5	- 233	- 286
Interest expenses to Treasury etc.	6	-5 235	-4 083
Net other financial activities		-1 572	-8 537
Total return financial activities		-16 693	6 107
Return on investments for Government Pension Fund - Global	23	-78 581	96 236
Transferred from/to krone account Government Pension Fund - Glob	bal 23	78 581	-96 236
Management remuneration Government Pension Fund - Global	7	1 783	1 526
Other operating income		104	224
Total operating income		1 887	1 750
Personnel expenses	7	- 709	- 580
Depreciation	15	- 79	- 87
Other operating expenses		-1 982	-1 688
Total operating expenses		-2 770	-2 355
Net operating expenses	7	- 883	- 605
Duesit /leas for the year		47 E76	E E02
Profit/loss for the year		-17 576	5 502
Transferred from Adjustment Fund	21	17 539	0
Transferred from 'Other capital'	22	37	37
Reserves		0	5 539
Allocated to Adjustment Fund	21	0	-5 539
Allocated to Transfer Fund		0	0
7 modulou to manerer ruma			
Allocated to 'Other capital'		0	0

# Balance sheet at 31 December 2007

Figures in millions of NOK

		FIG	gures in millions of NOK
ASSETS	Note	2007	2006
FOREIGN FINANCIAL ASSETS			
Securities and deposits	8	250 193	258 697
Lending	9	77 194	90 712
Claims on the IMF	10	3 099	4 132
Total international reserves	11	330 486	353 541
Other foreign assets	12	154	542
Total foreign fin. assets excl. Government Pension Fund	- Global	330 640	354 083
DOMESTIC FINANCIAL AND OTHER ASSETS			
Lending to banks etc.	13	75 627	55 647
Other domestic assets	14	1 834	2 937
Total domestic financial assets		77 461	58 584
Fixed assets	15	1 444	1 379
Gold		291	291
Total other domestic assets		1 735	1 670
Total domestic financial and other assets		79 196	60 254
Total assets excl. Government Pension Fund - Global		409 836	414 337
Investments for Government Pension Fund - Global	23	2 016 955	1 782 139
TOTAL ASSETS		2 426 791	2 196 476

		118	jaros in minions of Nork
LIABILITIES AND CAPITAL	Note	2007	2006
FOREIGN LIABILITIES			
Deposits		85	87
Borrowing	16	85 201	99 348
Other liabilities	12, 17	3 750	402
Equivalent value of allocated Special Drawing Rights, IMF	10	1 442	1 575
Total foreign liabilities		90 478	101 412
DOMESTIC LIABILITES			
Notes and coins in circulation	18	55 685	54 838
Treasury deposits	6	148 494	159 679
Deposits from banks etc.	19	53 517	24 030
Borrowing		0	2
Other liabilities	20	5 114	252
Total domestic liabilities		262 810	238 801
Total liabilities excl. Government Pension Fund - Global		353 288	340 213
Deposits in krone account Government Pension Fund - Glob	oal 23	2 016 955	1 782 139
Total liabilities		2 370 243	2 122 352
CAPITAL			
Adjustment Fund	21	55 488	73 027
Other capital	22	1 060	1 097
Total capital		56 548	74 124
TOTAL LIABILITIES AND CAPITAL		2 426 791	2 196 476
Allotted, unpaid shares in the BIS	12	253	279

### Norges Bank's Executive Board Oslo, 20 February 2008

Svein Gjedrem	Jarle Bergo	Liselott Kilaas		
(Chair)	(Deputy Chair)			
Vivi Lassen	Brit K. Rugland	Asbjørn Rødseth		
VIVI Lassell	Dift K. Rugianu	Asojom Rødsem		
Øystein Thøgersen	Jan Erik Martinsen	Gunnvald Grønvik		
	(Employees' representative)	(Employees' representative)		

# Notes

### Accounting policies

The accounting policies at Norges Bank were adopted by the Supervisory Council on 13 December 2007. Pursuant to an agreement with the Ministry of Finance, Norges Bank's accounting policies are also applied to the Government Pension Fund – Global.

# 1. General Basis for preparing the annual accounts

Norges Bank is subject to the Act of 24 May 1985 relating to Norges Bank and the Monetary System etc and is not required to comply with the Accounting Act. Nevertheless, the accounts, with some exceptions, are prepared in accordance with the Accounting Act of 1998 and supplementary regulations (for example, the regulation on annual reports and accounts for banks) and generally accepted accounting principles in Norway. The departures are due principally to special conditions applying to a central bank and are set out below.

The principal departures from the Accounting Act are as follows:

- The profit and loss account and balance sheet are presented in a manner appropriate to the Bank's activities.
- A cash flow analysis has not been prepared.
- Financial derivatives, unsettled trades and accrued interest are recorded net on the balance sheet.
- Reinvested cash collateral from securities lending is not recorded
- The foreign exchange element linked to realised and unrealised changes in the value of financial instruments is removed and entered on a separate line.
- Some of the information in the notes differs.

# Presentation of the Government Pension Fund – Global and other portfolios

The Government Pension Fund – Global is managed by Norges Bank on behalf of the Ministry of Finance in accordance with management guidelines. The portfolio under management corresponds to the balance at any given time in the Government Pension Fund - Global's krone account in Norges Bank. The entire return on the portfolio is added to the krone account. Norges Bank bears no economic risk in connection with changes in the value of the Fund. Therefore, the performance of the Government Pension Fund – Global does not affect Norges Bank's profit and loss account or Norges Bank's capital. The Government Pension Fund's net investments are recorded as an asset on a separate line. The Government Pension Fund's krone account is recorded as a liability in the same amount to the Ministry of Finance.

Norges Bank bears the economic risk for other portfolios. These are recorded in the ordinary way, with various financial instruments classified by type both in the profit and loss ac-

count and on the balance sheet, and the change in value in the profit and loss account.

# 2. Use of estimations when preparing the annual accounts

The preparation of the accounts for Norges Bank involves the use of estimates and valuations that can affect assets, liabilities, income and costs. Estimates and discretionary valuations are evaluated regularly and are based on historical experience and expectations of future events that are considered probable at the time the accounts are presented. The estimates are based on best judgement, but may differ from the final outcome.

#### 3. Currency translation

Transactions in foreign currency are recorded in the accounts at the exchange rate prevailing on the transaction date. Assets and liabilities in foreign currency are translated into NOK at the exchange rate prevailing on the balance sheet date.

In the profit and loss account, the foreign exchange element linked to realised and unrealised changes in the value of financial instruments is removed and entered on a separate line under 'Valuation changes'. Foreign exchange adjustments are calculated monthly on the basis of fair value in foreign currency at the end of the month.

#### 4. Financial instruments

#### 4.1. Recording and exclusions

Financial assets or liabilities are recorded on the balance sheet when Norges Bank becomes a party to the contractual terms of the instrument. The transactions are entered on the trade date.

Financial assets are excluded from the balance sheet when the contractual rights to the cash flows expire or when the financial asset and the majority of risk factors and return relating to ownership of the asset is transferred.

Financial obligations are excluded from the balance sheet when the obligation ceases to apply.

#### 4.2. Valuation

#### First entry

A financial asset is recorded at purchase price including direct transaction costs.

#### Subsequent valuation

Financial assets and liabilities are recorded at fair value on the balance sheet date. Fair value is the realisable value of an asset or the cost of settling a liability in an arm's length transaction between independent parties.

For securities that are traded in an active market, fair value has been set at stock exchange, broker or market maker prices.

Valuation methods are used to establish fair value for securities that are not traded in an active market. Valuation methods include the use of recent arm's length market transactions between independent parties, if such information is available, reference to current fair value of another instrument that is essentially the same, discounted cash flow calculations and option pricing models. If the valuation method is commonly used by market participants to price the instrument, and this technique has provided reliable estimates of prices achieved in actual market transactions, this technique is used. Market information is used in the valuation methods to the extent possible.

Changes in fair value are recorded in the profit and loss account.

#### 4.3. Securities lending (lending programmes)

Securities are transferred from Norges Bank to a borrower against collateral in the form of cash or securities. When the loan is terminated, the identical securities are to be returned. The borrower is obligated to compensate the lender for various events relating to the securities, such as subscription rights, dividends etc. Securities lent are not removed from Norges Bank's balance sheet. Lending fees are recorded daily as interest income on lending.

The borrower has the voting rights attached to the securities during the lending period.

Collateral received is not recorded in the balance sheet. This applies whether the collateral is reinvested or not. Unrealised gains and losses on reinvestments are recorded in the profit and loss account at market value.

#### 4.4. Repurchase/reverse repurchase agreements

Repurchase agreements do not meet the criteria for excluding the security from the accounts. Therefore, the security is not excluded from the balance sheet when the repurchase agreement is signed. During the contract period, the security will be recorded in the accounts in accordance with ordinary accounting rules for securities. Collateral received is recorded at gross value during the contract period, as a financial asset and as a short-term financial liability as borrowing at amortized cost price.

Reverse repurchase agreements are recorded on the balance sheet at amortized cost as a financial asset with cover from bank deposits during the contract period. The underlying security is not recorded on the balance sheet.

#### 4.5. Interest earned and accrued

Interest earned and accrued is recorded on the balance sheet on the same line as the appurtenant financial asset or liability.

#### 5. Taxation

Norges Bank's activities are not subject to tax.

Paid withholding tax on dividends and coupons is entered as a reduction in the income item. If withholding tax can be refunded, this will be shown as a claim until the withholding tax has been refunded.

#### 6. Management income

Income from management of the Government Pension Fund - Global is recorded as it is earned. The income is equivalent to actual accrued costs relating to external managers and estimated costs relating to internal managers.

#### 7. Lending to banks etc.

Lending is recorded at nominal value less any write-downs.
Actual loan losses/bad debts are charged as expenses.
Estimated losses are charged as an expense on the basis of a concrete assessment of each loan/debt. Estimated losses are recorded as a reduction in loans outstanding on the balance sheet.

#### 8. Fixed assets

Fixed assets are recorded at purchase price less scheduled depreciation. If the fair value of fixed assets is lower than book value and the decrease in value is not expected to be temporary, the assets will be written down to fair value.

#### 9. Gold and other collections

Norges Bank has a collection of gold coins and gold bars. The holdings are valued at purchase price, which is the value at the time the gold was reclassified from international reserves to assets and the purpose changed to long-term ownership. If the fair value (metal value) becomes persistently and substantially lower in the long term, the value will be written down. If the fair value of gold rises, the value of the holdings is not written up. Norges Bank has a substantial collection of art, gifts and museum pieces such as medals, banknotes and coins. This collection is registered, but not recorded on the balance sheet.

#### 10. Pension and payment obligations

Pensions and payment obligations are recorded in the accounts in accordance with NRS 6 Pension costs. Norges Bank has two pension schemes, a funded scheme for the Bank's employees, financed through its own pension fund, and an unfunded scheme for a number of other employees.

The Bank's payment obligations are related to restructuring measures in the form of redundancy pay, early retirement schemes and severance pay. In connection with fund-based schemes through Norges Bank's pension fund, the calculations are based on actuarial assumptions regarding life expectancy, expected wage growth and adjustment of the basic amount in the National Insurance Scheme. The economic assumptions forming the basis for the computation of pension obligations may change over time. Net pension obligations are the difference between the present value of the pension obligations and the value of pension capital that has been allocated for payment of pension benefits. Pension capital is recorded at fair value. Pension obligations and pension capital are measured at the balance sheet date. Employers' National Insurance contributions are included in the figures and are estimated on the basis of actual net underfunding.

The estimation of pension costs is based on linear distribution of pension earnings and consists of the year's accrued pension earnings less return on capital allocated for pensions.

Pursuant to NRS 6 Pension costs, the accumulated effect of changes in estimates and deviations of up to 10% in pension obligations or pension capital, whichever is the larger, can be excluded from the profit and loss account for the year in order to equalise the results.

#### Note 1. Interest income and dividends Figures in millions of NOK 2006 2007 Interest income on deposits -89 34 2 621 Share dividends 2 017 Interest income on securities 6 971 6 502 Interest income on lending 4 605 4 138 141 Interest income, deposit securities lending 203 Interest income, IMF and SDR 54 52 Interest income from financial derivatives 1 141 141 Interest income and dividends 15 506 13 025

#### Securities lending

Interest income of NOK 110m from lending equities and NOK 93m from lending bonds has been recorded in the profit and loss account under "Interest income, securities lending." As a result of negative market performance, an associated unrealised loss of NOK 454m on collateral in the form of cash

which is reinvested has been recorded under "Unrealised gains/losses on bonds reinvested in lending programmes" (see note 2). Lending and collateral levels are presented at fair value in the table below:

	Fair value
Lending of securities	
Lending, equities	17 652
Lending, bonds and other fixed income instruments	45 267
Total secured securities lending	62 919
Off balance sheet	
Collateral in the form of cash	36 797
Collateral in the form of equities	11 857
Collateral in the form of bonds and other fixed income instruments	16 382
Total collateral	65 037
Collateral in the form of cash which is reinvested	36 109
Of which:	
Lending related to reverse repurchase agreements	20 108
Asset-backed bonds	7 779
Structured Investment Vehicles	1 885
Other interest-bearing claims	6 337

Norges Bank has entered into lending agreements with JP Morgan Chase Bank, State Street Bank & Trust and Dresdner Bank AG. All these agreements contain provisions which safeguard Norges Bank's interests if the party borrowing the securities is unable to return them or if the collateral provided for the loan is not sufficient to cover losses.

Norges Bank accepts cash, equities (industrialised coun-

tries) or bonds and other fixed income instruments with a high credit rating as collateral for securities lending.

Collateral in the form of cash is reinvested in secured bank deposits (triparty/repo) or bond funds with short maturities. Norges Bank has entered into agreements with State Street Bank & Trust and Dresdner Bank AG as managers of these funds.

Ν	lote 2	. Change	in valu	ue finan	ıcial	instruments

	2007	2006
Realised gains/losses equities and units	8 975	5 469
Unrealised gains/losses equities and units	-8 029	5 380
Realised gains/losses fixed income instruments	-2 405	-844
Unrealised gains/losses fixed income instruments	-1 633	-4 115
Unrealised gains/losses bonds reinvested in lending programme	-454	0
Gains/losses on derivatives	-146	714
Change in value financial instruments	-3 692	6 604

## Note 3. Valuation adjustment of foreign exchange

Figures	in	millions	of	NOK

	2007	2006
Realised valuation change in foreign exchange	-13 359	-3 913
Unrealised valuation change in foreign exchange	-13 576	-1 072
Valuation adjustment of foreign exchange	-26 935	-4 985

# Note 4. Net other foreign financial instruments

Figures in millions of NOK

	2007	2006
Loss on borrowing	3 832	-4 147
Exchange rate change SDR	132	46
Other losses	-87	-86
Net other foreign financial instruments	3 877	-4 187

#### Note 5. Net domestic financial instruments

Figures in millions of NOK

	2007	2006
Interest expenses, borrowing	-413	-306
Exchange rate adjustment	180	20
Net domestic financial instruments	-233	-286

### Note 6. Interest expenses to Treasury etc.

Figures in millions of NOK

	2007	2006
Interest expenses to Treasury	-6 464	-4 589
Interest income on bank deposits	220	158
Interest expenses on deposits from banks	-1 107	-655
Interest expenses depots operated by banks	-59	-33
Interest income on lending	2 174	1 035
Other interest income	1	1
Interest expenses to Treasury etc.	-5 235	-4 083

In 2007, interest on deposits from the Treasury was paid at a rate of 4% per annum in the first quarter, 4.25% in the second and third quarters, and 4.75% in the fourth quarter.

### Note 7. Net operating expenses

Norges Bank's net operating expenses amounted to NOK 883m, which is NOK 278m more than in 2006. The increase is due to higher pension and restructuring expenses in 2007. In addition, NOK 128m was recorded as income from notes and coins that were invalidated in 2006, whereas there was no such income in 2007.

The Bank's operating income and operating expenses

include income and expenses associated with the management of the Government Pension Fund – Global, a total of NOK 1 783m. These expenses are covered by the Ministry of Finance up to a certain limit. The expenses associated with management also include distributed indirect and imputed costs.

Included in Norges Bank's operating expenses are the Bank's total personnel expenses which amount to NOK 709m and consist of the following components:

Figures in millions of NOK

	2007	2006
Personnel expenses		
Salaries and fees	433	401
Employer's social security contribution	61	67
Pension costs (cf. 7.1)	106	45
Restructuring expenses (cf. 7.2)	50	16
Other personnel expenses	59	51
Total personnel expenses	709	580

#### Salaries, pensions and restructuring

Remuneration to governing bodies

Remuneration to the Supervisory Council totalled NOK 559 458 in 2007.

The five external members of the Executive Board receive an annual remuneration of NOK 165 000. Alternates receive a fixed annual remuneration of NOK 33 000 and an additional NOK 4 500 for each meeting in which they participate. Total remuneration amounted to NOK 1 154 000 in 2007.

The head of the Audit Committee receives an annual remuneration of NOK 60 000 and the other committee members receive an annual remuneration of NOK 50 000.

Salaries and pensions for Central Bank Governor S. Gjedrem and Deputy Governor J. Bergo

The salaries of the Central Bank Governor and Deputy Governor are set by the Ministry of Finance and were NOK 1 519 511 and NOK 1 101 281, respectively, in 2007. In addition, they have a company car at their disposal, a free telephone and insurance covered by their employer. The combined value of these benefits is NOK 100 538 and NOK 73 392, respectively. A full old-age pension for the

Central Bank Governor and the Deputy Governor is 2/3 of the prevailing salary for the position in question. Old-age pensions are payable from the date of retirement, albeit not before the age of 65. The earning period for a full pension is 12 years. The pension is subject to coordination with other public pension schemes. At end-2007, these pension obligations were determined by actuarial assessment to be

NOK 8.5m for the Central Bank Governor and NOK 8.1m for the Deputy Governor, taking coordination with the National Insurance Scheme into account. Coordination with other public pension schemes will reduce Norges Bank's expenses. This is not taken into account in the calculations. Changes in 2007, which amounted to NOK 1.4m and NOK 1.2m, respectively, were charged to Norges Bank's operations.

#### Disbursed salaries and pensions for other directors at Norges Bank

Director	Name	Salary	Total value of other benefits
Norges Bank Investment Management	K. N. Kjær	3 218 630	12 864
Monetary policy	J. Qvigstad	1 269 822	14 153
Financial stability	K. Gulbrandsen	1 058 566	12 864
Staff and Group Services	H. Bøhn	1 058 566	10 429
Legal Department	M. Ryel	1 158 198	13 536
Communications Department	S. Meisingseth	937 926	12 864
Internal Audit	I. Valvatne (1.631.12.07)	578 204	8 042

Executive directors' salaries are set by the Central Bank Governor according to guidelines laid down by the Executive Board along with annual assessments.

The same pension rights apply to Norges Bank's directors as to other employees at the Bank, cf. the paragraph on pension schemes. Directors have the same borrowing rights in Norges Bank as the Bank's other employees. Borrowing terms are discussed in Note 13.

#### Auditing expenses

Total expenses for Central Bank Audit and their partner amounted to NOK 18.4m in 2007, including auditing and certification of the Bank's financial statements and auditing of the Bank's operations.

#### Norges Bank's pension schemes

Norges Bank's ordinary pension obligations are covered by the Bank's own pension fund, which is organised as a separate legal entity. Pension benefits are equal to 2/3 of the employee's salary at the time of retirement. The earning period for a full pension is 30 years of service. Employees contribute 2% of their gross annual salary to the pension fund. Norges Bank's contribution for 2007 was covered partly by cash payments and partly by capital saved in the premium fund. Benefits from the pension fund are coordinated with benefits from the National Insurance Scheme. Since 1 January 2007, the basis for pension benefits covered by funded schemes is limited to an amount equivalent to 12 times the basic pension of the National Insurance Scheme. A special pension scheme funded by operations has been established to cover that portion of salaries that is in excess of 12G for those employees who already had an agreement entitling

them to a pension over and above this limit. For those who were employed after 1 January 2007, the basis for calculating pension entitlement is limited to 12G.

Pension obligations related to funded schemes in Norges Bank amount to NOK 1 885.7m. The assumptions concerning mortality and other demographic factors are based on the standard K 1963 basis for group pension insurance. The IR 73 rate is used as a basis for calculating disability provisions. A 3% supplement for future administration costs is priced into the pension obligations. The basis for calculating individual pension obligations is the pension benefits the individual has earned or is receiving at 31 December 2007. Pension obligations are equivalent to the calculated cash value of earned benefits. The Bank's pension scheme covers 2 195 persons, of whom 977 are drawing pensions, 697 are active members (including all those affected by restructuring) and 521 are former members with deferred rights.

#### Norges Bank's pension and payment obligations

Norwegian accounting standards for pension costs provide the basis for calculating pension and payment obligations. Norges Bank has funded pension schemes associated with membership in Norges Bank's pension fund. In addition, the Bank has unfunded schemes that are financed directly through operations. These are special and allocated pensions, the unfunded portion of pensions for employees with salaries higher than 12 G, as well as early retirement pensions and redundancy pay agreements associated with restructuring. The payment obligations related to restructuring include the present value of all agreements, including agreements that start disbursements in 2008 or later.

Economic assumptions underlying the calculations:

	2007	2006
Discount rate	5.5 %	5.0 %
Pension and basic pension rate adjustm	ent 4.0 %	3.5 %
Expected wage growth	4.5 %	4.0 %
Expected return on pension capital	6.0 %	5.5 %
Expected annual resignations	2-3 % up to age 50, then 0	2-3% up to age 50, then 0
Demographic assumptions	K 2005 for death, IR 73 for disability	K 2005 for death, IR 73 for disability

In Norges Bank's balance sheet, the item 'Other liabilities' includes the Bank's total pension and payment obligations (including employer's National Insurance contribution), which consist of the following:

Figures in millions of NOK

Pension and payment obligations	2007	2006
Funded schemes through the pension fund (over-financing)	-219	-196
Special pensions and allocated pensions	54	52
Payment obligations associated with restructuring	129	127
Unfunded portion of pension for salaries in excess of 12G funded by operations	39	0
Norsk Kontantservice AS, part of one-time premium	22	0
Total pension and payment obligations	25	-17

#### 7.1. Pension costs

At end-2007, schemes funded through the pension fund were over-financed. Pension costs are computed in accordance with Norwegian accounting standards for pension costs and include earnings, interest expenses and expected return on the capital in the pension fund for the year.

Norges Bank's share of one-time premiums for employees of Norsk Kontantservice AS formerly employed by Norges Bank is included in pension costs.

The increase in special and allocated pensions (unfunded) is included in the Bank's overall pension costs.

Figures in millions of NOK

Pension costs	2	007	2006
Pension costs funded schemes, which consist of:		70	34
Present value earnings for the year	54	44	
Interest expenses on pension obligations	111	94	
Expected return on pension capital	-116	-107	
Administration expenses	6	6	
Changes in estimates recorded in the profit and loss account	14	0	
Members' contributions	-7	-7	
Employer's social security contribution	8	4	
Special pensions and allocated pension		6	5
Unfunded portion of pension for salaries in excess of 12 G funded by operations		6	
Norsk Kontantservice AS - employees previously employed at Norges Bank		24	6
Net pension costs for the year		106	45

#### 7.2. Restructuring costs

Restructuring costs are related to study packages, redundancy pay and early retirement pensions. The change in

payment obligations takes account of new agreements in 2007.

	rigures in millions of NON	
Restructuring costs	2007	2006
Changes in payment obligations during the period	2	-31
Disbursements from the scheme	48	48
Restructuring costs including employer's social security contribution	50	17

# Note 8. Securities and deposits

Figures in millions of NOK

	2007	2006
Deposits in foreign banks	3 665	2 640
Foreign Treasury bills	1 392	1 015
Foreign notes and short-term paper	581	1 719
Foreign bonds	156 057	161 023
Foreign equities and units	88 498	92 300
Securities and deposits	250 193	258 697

# Note 9. Lending

Figures in millions of NOK

	2007	2006
Lending related to reverse repurchase agreements	60 289	77 501
Secured lending (triparty)	17 341	13 311
Financial derivatives (Note 9.1)	-436	-100
Lending	77 194	90 712

**Note 9.1 Financial derivatives** 

Figures in millions of NOK

		Fair value			
	Purchased	Sold	Asset	Liability	Value
Foreign exchange contracts	10 812		56	65	-10
Listed futures	15 902	28 233	54	105	-51
Interest rate swaps	92 151	101 239	2 448	2 501	-53
Total return swaps	4 188	3 183	62	55	6
Credit default swaps	12 645	5 547	262	276	-15
Equity swaps	4 267	1 752	326	612	-287
Total swaps			3 097	3 446	-348
Listed options	3 455	6 318	4	5	0
Other options	19 119	14 034	540	567	-27
Total options			544	571	-27
Total derivatives			3 751	4 187	-436

#### Forward exchange contracts

This item consists of forward exchange contracts with normal settlement for future delivery. Exposure is the sum of the nominal value of the contracts entered into.

#### **Listed futures**

Exposure is the market value of the underlying instruments.

#### **Interest rate swaps**

This item includes both straight interest rate swaps and combined interest and exchange rate swaps.

Exposure indicates whether Norges Bank receives (contracts purchased) or pays (contracts sold) a fixed rate of interest.

#### **Total return swaps**

With a total return swap (TRS), the protection purchaser transfers the total return on an underlying asset to the protection seller in return for a fixed or floating rate of interest. Total return denotes the sum of coupon payments and any change in value. The underlying assets for the TRSs in which the investment portfolio invests are commercial mortgage-backed security (CMBS) and mortgage-backed security (MBS) indices.

Exposure indicates whether Norges Bank receives (contracts purchased) or pays (contracts sold) the index return.

#### **Credit default swaps**

With a credit default swap, the protection seller receives a periodic premium or lump sum from the protection purchaser as compensation for assuming the credit risk. The protection purchaser receives payment from the seller only if the credit protection of the underlying credit is triggered (credit event). A credit event might include default on the underlying credit. A credit default swap is very similar to a traditional guarantee. The protection normally expires after the first credit event.

The underlying assets for credit default swaps are corporate bonds, securities issued by sovereign states, corporate bond indices, asset-backed security (ABS) indices and commercial mortgage-backed security (CMBS) indices.

Exposure indicates whether Norges Bank has purchased or sold protection for all or part of the credit risk associated with the various types of underlying securities.

#### **Equity swaps**

Equity swaps are unlisted agreements between two counterparties to swap cash flows based on changes in the underlying securities. In addition, they receive payments in connection with dividends and corporate events. The underlying security may be an equity, a group of equities or an index.

Exposure corresponds to the market value of the underlying equities or indices.

#### **Options**

Exposure is the market value of the underlying security. Options written by the Norges Bank portfolio are recorded under "Sold". Options where Norges Bank pays a premium are recorded under "Purchased".

Λ	lote	10.	Claims	on the	International	V	lonetary	Fund
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	millions	

	2007	2006
Quota in the IMF	14 372	15 692
The Fund's NOK holdings	-13 279	-14 398
Reserve position in the IMF	1 093	1 294
Special Drawing Rights (SDR)	2 000	2 827
Earned interest	6	11
Claims on the IMF	3 099	4 132
Equivalent value of allocated Special Drawing Rights	-1 442	-1 575

The IMF's task is to work for international monetary and financial stability. The Fund gives advice to member countries and provides temporary funding in the event of balance of payment problems. A member's quota (SDR 1 671.7m) determines its financial contribution to the IMF and provides the basis for determining the amount of financing the member can obtain in the event of balance of payments problems.

The IMF can use Special Drawing Rights (SDRs) as an

instrument for supplying international liquidity. The value of the SDR is calculated as a basket consisting of US dollars, euros, sterling and the Japanese yen.

The equivalent value of allocated SDRs in the IMF shows total allocations of SDRs since the scheme entered into force in 1970. The change in the item reflects a change in the SDR exchange rate (8.6 at 31 December 2007).

# Note 11. International reserves, by portfolio The relationship between different reserve terms used in Norges Bank's publications:

Figures	in	millions	of	NOK

	Investment portfolio	Money market portfolio	Buffer portfolio	IMF reserves	Total
Securities and deposits	248 018	2 165	7	3	250 193
Other foreign exchange reserves	61 413	5 660	10 121	0	77 194
Foreign exchange reserves according to IMF defin	ition 309 431	7 825	10 128	3	327 387
IMF reserve position/SDRs	0	0	0	3 099	3 099
International reserves	309 431	7 825	10 128	3 102	330 486
Other foreign exchange liabilities	-3 188	0	0	0	-3 188
- IMF reserve position/drawing rights and loan	s 0	0	0	-3 099	-3 099
Borrowing (foreign exchange liabilities)	-85 201	0	0	0	-85 201
Foreign exchange reserves according to Norges Bank's acc	ounts 221 042	7 825	10 128	3	238 998
Outstanding accounts, separate portfolios under manag	ement -7 039	0	2 273	0	-4 766
Unrecorded unsettled cash agreements	-17		1 651		1 634
Foreign exchange for management	213 986	7 825	14 052	3	235 866

#### Percentage distribution of foreign exchange reserves for management, by currency

Currency	2007	2006
USD	34.4	32.1
CAD	2.0	2.6
Asian currencies	7.7	6.7
GBP	11.8	12.4
EUR	40.5	40.4
Other currencies	3.6	5.8
Total	100.0	100.0

### Note 12. Other foreign assets

Figures in millions of NOK

	2007	2006
BIS shares	94	94
Initiated, not yet settled trades	0	396
Other assets	60	52
Total other foreign assets	154	542

Norges Bank has been allocated a total of 8000 shares at SDR 5000 per share in the Bank for International Settlements (BIS). 25% of the shares, valued at NOK 25m, have been paid for. Norges Bank has not paid up the share capital for 75% of the shares. There is a limited liability amounting to NOK 276m attached to shares purchased in 2007 plus previ-

ously allocated shares. The portion of the conditional liability corresponding to the value of the shares at the time of allotment, i.e. NOK 23m, is recorded under the item 'Other foreign liabilities'. The remainder of the conditional liability, NOK 253m, is shown as an off-balance sheet item. In 2007, dividends on BIS shares amounted to NOK 19.5m.

# Note 13. Lending to banks etc.

Figures in millions of NOK

	2007	2006
Lending to banks, fixed-rate loans	75 176	55 170
Lending to own employees	451	477
Lending to banks etc.	75 627	55 647

The Bank's loan scheme for its own employees includes housing loans and consumer loans. Housing loans are extended in accordance with guidelines from the Supervisory Council as first mortgages within 85% of estimated value, limited to NOK 1 990 000. Consumer loans are limited to a maximum of four times the employee's monthly salary. The

loan schemes apply to all employees. In 2007, the interest rate was linked to the norm rate (the norm rate for loans on favourable terms from an employer). The Ministry of Finance sets the norm rate up to 6 times a year, and in 2007 interest rates increased from 3.75% to 5.0%.

### Note 14. Other domestic assets

Figures in millions of NOK

	2007	2006
Remuneration for management of the Government Pension Fund – Global	1 783	1 526
Outstanding accounts between separate portfolios under management	0	1 350
Domestic deposits	20	21
Other domestic assets	31	29
Inventories, banknote production	0	11
Other domestic assets	1 834	2 937

# Note 15. Fixed assets

Figures in thousands of NOK

	Vehicles Machinery, IT	Security system	Machinery, fixtures	Buildings with installations	Bank building Head office Bankpl. 2		Owellings, Bank's hol. cabins	Land	Total
Original cost at 1.1.	200 526	85 573	42 266	483 211	1 556 606	68 525	4 394	59 881	2 500 982
+ Transfers from plant under construction	6 308	204	0	14 381	0	-20 893	0	0	0
+Additions	11 599	10 505	4 536	56 778	0	79 415	0	0	162 832
- Disposals	19 872	19 979	35 117	47 786	0	0	1 008	0	123 760
Adjustments	0	0	0	-100 804	100 804	-563	0	0	-563
Original cost at 31.12.	198 561	76 304	11 685	405 780	1 657 410	126 484	3 386	59 881	2 539 491
- Accum. depreciation and write-downs	142 688	29 946	4 968	283 332	634 827	0	0	0	1 095 761
Book value at 31.12	55 873	46 358	6 717	122 448	1 022 583	126 484	3 386	59 881	1 443 730
Undepreciated remained of prev. revalued assets		0	0	4 628	996 062	0	2 950	56 580	1 060 220
Ordinary depreciation for the year	23 213	10 255	1 447	6 573	37 193	0	0	0	78 681
of which depreciation of	of 0	0	0	771	36 243	0	0	0	37 014
revalued assets									
Depreciation rate	20.00	15.00	10.00	5.00	2.00	0.00	0.00	0.00	

# Note 16. Borrowing

Figures in millions of NOK

	2007	2006
Funding related to repurchase agreements	85 197	97 386
Other borrowing	4	1 962
Borrowing	85 201	99 348

#### Note 17. Other liabilities

Figures in millions of NOK

	2007	2006
Share capital in BIS not paid up (see Note 12)	23	23
Initiated, not yet settled trades	2 772	0
Adjustment of reinvestments in lending programme	454	0
Other foreign liabilities	501	379
Other liabilities	3 750	402

#### Note 18. Notes and coins in circulation

The Bank's cash holdings have been deducted in the item 'Notes and coins in circulation'. Notes and coins in circulation are recorded at NOK 55 685m and consist of NOK 51 117m in banknotes and NOK 4 568m in coins.

Norges Bank is obliged to redeem notes and coins for 10 years following the decision that they are no longer legal tender. Norges Bank has been flexible about redeeming expired notes after the expiry of the 10-year deadline. In

2007, redeemed/invalidated banknotes and coins amounting to NOK 1.5m were charged as an expense in Norges Bank's accounts.

At 31 December 2007, there were a total of approximately 5.3m commemorative coins in circulation with a nominal value of about NOK 467.8m. This amount is not included in the item 'Notes and coins in circulation'. Norges Bank is obliged to redeem the coins at their nominal value.

### Note 19. Deposits from banks, etc.

Figures in millions of NOK

	2007	2006
Banks	53 467	23 956
Other deposits	50	74
Deposits from banks etc.	53 517	24 030

#### Note 20. Other liabilities

Figures in millions of NOK

	2007	2006
Outstanding accounts with other portfolios under management	4 766	0
Pension and payment obligations (see Note 7)	26	-17
Other domestic liabilities	322	269
Other liabilities	5 114	252

"Outstanding accounts with other portfolios under management" comprises the net value of deposits, short-term borrowing, repurchase agreements and reverse repurchase

agreements vis-à-vis other portfolios managed by Norges Bank.

### Note 21. Adjustment Fund

Figures in millions of NOK

	2007	2006
Adjustment Fund balance at 1 January	73 027	67 488
Transferred from	-17 539	
Allocated to	0	5 539
Adjustment Fund balance at 31 December	55 488	73 027

# Note 22. Other capital

Figures in millions of NOK

	2007	2006
Revaluation Fund balance at 1 January	1 097	1 134
Reversals from the Fund in 2007	-37	-37
Revaluation Fund balance at 31 December	1 060	1 097

### Note 23. Government Pension Fund – Global

At 31 December 2007, the Government Pension Fund – Global had krone deposits in Norges Bank amounting to NOK 2 017bn. The equivalent of the NOK amount is managed by Norges Bank and has been invested in foreign currency in an earmarked portfolio. The krone deposits and the managed portfolio are entered in Norges Bank's balance sheet under "Deposits in krone account Government Pension Fund – Global" (liabilities) and "Investments for Government Pension Fund – Global" (assets). The return on the portfolio was negative in 2007 and NOK 78.6bn has been transferred

from the krone account. This is recorded in the profit and loss account under "Return on investments for Government Petroleum Fund – Global" and "Transferred from/transferred to Government Pension Fund – Global". The investments, which account for approximately 83% of Norges Bank's balance sheet, represent no financial risk to Norges Bank.

Separate accounts have been prepared for the Government Pension Fund – Global. The profit and loss account, the balance sheet and the notes (GPFG1-11) follow:

Figures in millions of NOK

Profit and loss account	Note SPFG	2007	2006
Profit and loss on financial assets excl. exchange rate adjustments			
Interest income, deposits in foreign banks		431	137
Interest income, lending related to reverse repurchase agreements		33 564	25 717
Net income/costs and gains/losses from:			
- Equities and units	2	41 627	104 667
- Bonds and other fixed income instruments	2	19 750	11 710
- Financial derivatives		5 265	-85
Interest costs, funding related to repurchase agreements		-32 509	-21 613
Other interest costs		-118	-60
Other costs		-179	-6
Profit before exchange rate adjustments and management costs	1	67 831	120 468
Exchange rate adjustments		-146 412	-24 232
Loss/profit before management costs		-78 581	96 236
Accrued management fee	3	-1 783	-1 531
Net profit and loss for the year		-80 364	94 705

Figures	ın	mıl	lions	ot	NOK
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Balance sheet	Note SPFG	2007	2006
ASSETS			
FINANCIAL ASSETS			
Deposits in foreign banks		23 905	13 154
Lending related to reverse repurchase agreements		669 607	619 746
Equities and units	4	945 113	720 195
Bonds and other fixed income instruments	4	1 120 540	1 166 911
Financial derivatives	5	2 094	0
Other assets	6	5 229	328
Total financial assets	10, 1	2 766 488	2 520 334
LIABILITIES AND CAPITAL			
FINANCIAL LIABILITIES			
Short-term borrowing	7	187	57
Funding related to repurchase agreements	8	710 898	728 357
Financial derivatives		0	1 777
Unsettled trades		33 480	5 123
Other liabilities	6	3 185	1 355
Management fee due		1 783	1 526
Total financial liabilities	10, 1	749 533	738 195
Capital	9	2 016 955	1 782 139
Total liabilities and capital		2 766 488	2 520 334
The Government Pension Fund - Global is presented as follows in	Norges Bank's bala	ance sheet:	
Assets			
Investments for Government Pension Fund - Global		2 016 955	1 782 139
Liabilities			
Government Pension Fund – Global deposits		2 016 955	1 782 139

GPFG 1. Net profit and loss before foreign exchange rate adjustments Fig. in millions of NOK

	Interest	Dividends ga	Realised ains/losses g	Unrealised. gains/losses	Total
Interest income, deposits in foreign banks	431	0	0	0	431
Interest income, lending related to reverse					
repurchase agreements	33 564	0	0	0	33 564
Net income/costs and gains/losses from:					
- Equities and units	938	18 823	61 925	-40 058	41 627
- Bonds and other fixed income instruments	51 993	0	-15 215	-17 028	19 750
- Financial derivatives	3 142	0	-1 416	3 539	5 265
Interest costs, funding related to					
repurchase agreements	-32 509	0	0	0	-32 509
Other interest costs	-118	0	0	0	-118
Other costs	-179	0	0	0	-179
Net profit and loss before exchange rate					
adjustments and management fee	57 262	18 823	45 294	-53 547	67 831

# GPFG 2. Securities lending

Interest income of NOK 938m from lending equities has been recorded in the profit and loss account under "Net income/expenses and gains/losses from equities and units." Interest income of NOK 647m from lending bonds and other fixed income instruments has been recorded under "Net income/expenses and gains/losses from bonds and other fixed income instruments." As a result of negative market

performance, an associated unrealised loss of NOK 3 088m on reinvested cash collateral has been recorded under "Net income/expenses and gains/losses from bonds and other fixed income instruments". See Note 11 for further information. This means that securities lending generated a net loss of NOK 1 503m in 2007. Lending and collateral levels are presented at fair value in the table below:

Figures in millions of NOK

Securities lending	Fair value
Lending, equities	181 929
Lending, bonds and other fixed income instruments	334 424
Total lending of securities against collateral	516 352
Off balance sheet	
Collateral in the form of cash	298 012
Collateral in the form of equities	127 637
Collateral in the form of bonds and other fixed income instruments	110 049
Total collateral	535 698
Collateral in the form of cash which is reinvested	294 493
Of which:	
Lending related to reverse repurchase agreements	201 227
Asset-backed bonds	45 720
Structured Investment Vehicles	10 791
Other fixed income claims	36 755

Norges Bank has entered into lending agreements with JP Morgan Chase Bank, State Street Bank & Trust and Dresdner Bank AG. All these agreements contain provisions which safeguard Norges Bank's interests if the party borrowing the securities is unable to return them or if the collateral provided for the loan is not sufficient to cover losses.

Norges Bank accepts cash, equities (industrialised countries) or bonds and other fixed income instruments with a

high credit rating as collateral for securities lending.

Collateral in the form of cash is reinvested in repurchase agreements or diversified bond funds with short maturities and the highest possible credit rating (Aaa from Moody's). Norges Bank has entered into agreements with State Street Bank & Trust and Dresdner Bank AG as managers of these funds.

# GPFG 3. Management costs

2007 2006			
NOK 1000	Basis points	NOK 1000	Basis points
315 751		223 889	
110 400		95 689	
426 151	7.7	319 578	8.1
290 616		184 178	
115 088		79 858	
405 704	4.1	264 036	3.2
513 442		431 829	
268 546		387 816	
169 433		122 340	
951 421	25.1	941 985	28.3
1 783 275	9.3	1 525 600	9.8
fees 1 514 729	7.9	1 137 784	7.3
	NOK 1000 315 751 110 400 426 151 290 616 115 088 405 704 513 442 268 546 169 433 951 421 1 783 275	1000 points  315 751  110 400  426 151 7.7  290 616  115 088  405 704 4.1  513 442  268 546  169 433  951 421 25.1  1 783 275 9.3	NOK 1000       Basis points       NOK 1000         315 751       223 889         110 400       95 689         426 151       7.7       319 578         290 616       184 178         115 088       79 858         405 704       4.1       264 036         513 442       431 829         268 546       387 816         169 433       122 340         951 421       25.1       941 985         1 783 275       9.3       1 525 600

# $\label{eq:GPFG-4} \textbf{GPFG-4.} \ \textbf{Equities and units/bonds and other fixed income instruments} \ \textbf{Fig. in millions of NOK}$

<b>Equities and bonds</b>				
Equities and units	Cost Ma	arket value of sec.	Dividends earned	Total market value
Listed equities and units	912 736	942 210	1 110	943 320
Units in unlisted fixed income and equity funds	1 855	1 793		1 793
Total equities and units	914 591	944 003	1 110	945 113
Bonds and other fixed income instruments	Cost Ma	arket value of sec.	Accrued interest	Total market value
Government and government-related bonds	294 372	276 443	8 655	285 098
Inflation-linked bonds	98 512	94 753	562	95 315
Corporate bonds	323 181	285 590	5 465	291 055
Securitised bonds	465 056	438 035	6 675	444 709
Short-term certificates	4 404	4 362	-	4 362
Total bonds and other fixed income instruments	1 185 526	1 099 184	21 356	1 120 540

"Securitised bonds" comprises covered bonds with a market value of NOK 289bn and asset/mortgage-backed securities with a market value of NOK 156bn. Of the latter,

approximately NOK 99bn are securities issued by US federal agencies, such as Fannie Mae, Freddy Mac and Ginnie Mae (see note GPFG 11).

### GPFG 5. Financial derivatives

Figures in millions of NOK

		Exposure			Fair value
	Purchased	Sold	Asset	Liability	Value
Forward exchange contracts	61 402		278	430	-152
Listed futures	119 875	147 379	539	785	-246
Interest rate swaps	813 119	747 671	20 856	18 980	1 876
Total return swaps	24 140	18 497	404	447	-43
Credit default swaps	166 715	50 889	1 838	1 328	510
Equity swaps	30 473	15 775	2 605	3 199	-593
Total swaps			25 703	23 953	1 749
Listed options	46 907	28 926	92	29	64
Other options	146 951	78 694	3 720	3 040	680
Total options			3 812	3 069	743
Total derivatives			30 331	28 237	2 094

### Forward exchange contracts

This item consists of forward exchange contracts with normal settlement for future delivery. Exposure is the sum of the nominal value of the contracts entered into.

### **Listed futures**

Exposure is the market value of the underlying instruments.

### Interest rate swaps

This item includes both straight interest rate swaps and combined interest and exchange rate swaps.

Exposure indicates whether Norges Bank receives (contracts purchased) or pays (contracts sold) a fixed rate of interest.

#### **Total return swaps**

With a total return swap (TRS), the protection purchaser transfers the total return on an underlying credit to the protection seller in return for a fixed or floating rate of interest. Total return denotes the sum of coupon payments and any change in value. The underlying assets for the TRSs in which

the Fund invests are commercial mortgage-backed security (CMBS) and mortgage-backed security (MBS) indices.

Exposure indicates whether Norges Bank receives (contracts purchased) or pays (contracts sold) the index return.

#### **Credit default swaps**

With a credit default swap, the protection seller receives a periodic premium or lump sum from the protection purchaser as compensation for assuming the credit risk. The protection purchaser receives payment from the seller only if the credit protection of the underlying credit is triggered (credit event). A credit event might include default on the underlying credit. A credit default swap is very similar to a traditional guarantee. The protection normally expires after the first credit event.

The underlying assets for credit default swaps are corporate bonds, securities issued by sovereign states, corporate bond indices, asset-backed security (ABS) indices and commercial mortgage-backed security (CMBS) indices.

Exposure indicates whether Norges Bank has purchased or sold protection for all or part of the credit risk associated with the various types of underlying assets.

### **Equity swaps**

Equity swaps are unlisted agreements between two counterparties to swap cash flows based on changes in the underlying securities. In addition, payments are received in connection with dividends and corporate events. The underlying security may be an equity, a group of equities or an index.

Exposure corresponds to the market value of the underlying equities or indices.

#### **Options**

Exposure is the market value of the underlying assets. Options written by the Fund are recorded under "Sold". Options where Norges Bank pays a premium are recorded under "Purchased".

### GPFG 6. Other assets/liabilities

Figures in millions of NOK

	2007	2006
Withholding tax	293	237
Outstanding accounts with other portfolios under management	4 766	0
Accrued interest, securities lending	171	91
Total other assets	5 229	328

	2007	2006
Outstanding accounts with other portfolios under management	0	1 355
Adjustment of reinvestments in lending programme	3 088	0
Foreign tax liability	97	0
Total other liabilities	3 185	1 355

"Outstanding accounts with other portfolios under management" comprises the net value of deposits, loans, repurchase agreements and reverse repurchase agreements vis-à-vis other portfolios managed by Norges Bank.

The tax liability for 2007 is estimated at NOK 97m. The equivalent figure for 2006 was approximately NOK 40m. This was included in the Fund's equity holdings in 2006.

### GPFG 7. Short-term borrowing

Short-term borrowing is used in the liquidity management of the portfolio and has a maturity of between one and ten days.

# GPFG 8. Borrowing associated with repurchase agreements

Figures in millions of NOK

	2007	2006
Borrowing, repurchase agreements	708 163	728 357
Borrowing, securities lending collateral	2 735	0
Total borrowing associated with repurchase agreements	710 898	728 357

## GPFG 9. Capital

Figures in millions of NOK

	2007	2006
Deposits at 1 January	1 782 139	1 397 896
Transfers during the year	315 179	289 537
Management remuneration to Norges Bank	-1 783	-1 530
Return transferred to/from deposit account	-78 580	96 236
Capital – deposits at 31 December	2 016 955	1 782 139

# GPFG 10. Currency distribution

Figures in millions of NOK

Balance sheet	USD	CAD	EUR	GBP	JPY	Other	Total
FINANCIAL ASSETS							
Deposits in foreign banks	11 124	2 724	6 961	-864	436	3 524	23 905
Lending associated with reverse							
repurchase agreements	330 304	20 261	157 438	128 661	10 416	22 528	669 607
Equities and units	305 194	17 621	257 892	137 023	73 735	153 648	945 113
Bonds and other fixed income instrumer	nts 311 303	15 321	650 721	56 596	55 944	30 655	1 120 540
Financial derivatives	876	-142	2 425	-294	-353	-418	2 094
Other assets	-2	804	- 727	3 253	1 402	499	5 229
Total Committee and to	000 700	E0 E00	4 074 740	004.070	444 500	040 405	
Total financial assets	958 799	56 588	1 074 710	324 376	141 580	210 435	2 766 488
iotai financiai assets	958 /99	56 588	1 074 710	324 376	141 580	210 435	2 766 488
FINANCIAL LIABILITIES	958 799	56 588	1 074 710	324 376	141 580	210 435	2 /66 488
	958 799	0	1 <b>0/4 /10</b>	11	141 580	151	2 <b>/66 488</b> 187
FINANCIAL LIABILITIES	0	0	24	11	1	151	187
FINANCIAL LIABILITIES Short-term borrowing							
FINANCIAL LIABILITIES Short-term borrowing Borrowing associated with repurchase	0	0	24	11	1	151	187
FINANCIAL LIABILITIES Short-term borrowing Borrowing associated with repurchase agreements	0 263 995	0	24 306 782	11 84 249	1 21 169	151 23 705	187 710 898
FINANCIAL LIABILITIES Short-term borrowing Borrowing associated with repurchase agreements Unsettled trades	0 263 995 31 658	0 10 998 949	24 306 782 1 181	11 84 249 - 394	1 21 169 37	151 23 705 49	187 710 898 33 480

### **GPFG 11.** Risk

Investments in global securities markets entail market risk and a relatively high probability of wide variations in annual performance. For the Government Pension Fund – Global, the level of market risk is determined primarily by the benchmark

portfolio defined by the Ministry of Finance. The most important elements of market risk are the allocation to equities in the portfolio, fluctuations in equity prices, exchange rates and general interest rate levels, as well as changes in the fixed income portfolio's credit risk.

In addition to the absolute level of market risk, which is determined by the investment strategy expressed through

the benchmark portfolio, Norges Bank tries to achieve an excess return through active management.

Market risk must be seen in relation to expected returns, and an increase in market risk means higher expected returns

All investments are made in foreign currency without any currency hedging, and the market value of the portfolio in NOK will thus change in step with fluctuations in exchange rates. See GPFG 10 for information on the currency distribution.

#### Market risk

The Fund's market risk is largely determined by the benchmark portfolio's market risk. Norges Bank also takes on some risk through its active management. Norges Bank measures the Fund's absolute and relative market risk. Absolute risk is estimated on the basis of the actual portfolio, while relative risk is estimated as the standard deviation of the difference between the return on the actual portfolio and the return on the benchmark portfolio.

At the end of 2007, the portfolio's annualised market risk, measured in NOK terms, was 8.6%, which is higher than at the beginning of the year. At year-end, the value of the portfolio was NOK 2 017bn.

The level of risk in the portfolio fell during the first half of the year, but increased markedly in the second half of the year. The reason for the increase in risk was the financial market turbulence in 2007. Besides increased volatility in both the fixed income and equity markets, the risk at fund level will depend on the correlation between the two markets. This correlation has been at relatively high levels in recent years, but there was a significant reduction in 2007. Thus, part of the increase in the markets' volatility in 2007 did not materialise in the Fund's risk, because the diversification effect (as a result of investments being spread across both fixed income and equity instruments) increased.

#### Credit risk

Credit risk arises in the Fund's fixed income portfolio partly as a result of the Ministry of Finance's choice of investment strategy and partly as a result of Norges Bank's active management (credit portfolio risk). In both the equity and the fixed income portfolios, NBIM is exposed to risk vis-à-vis counterparties in the execution of transactions, vis-à-vis custodian institutions where securities are deposited, and vis-à-vis international settlement and custody systems (counterparty risk).

All fixed income instruments in the Fund's benchmark index have a rating from one of the major rating agencies: Standard & Poor's, Moody's and Fitch.

All three agencies classify the issuers of fixed income instruments on the basis of their creditworthiness. A credit rating scale from AAA to D is used for long-term bonds. The highest rating is AAA from S&P and Fitch, and Aaa from Moody's. The lowest investment grade ratings are BBB from S&P and Fitch and Baa from Moody's. Lower ratings are known as speculative grade. All bonds in the Fund's benchmark portfolio have an investment grade rating. There is no requirement for a credit rating from the rating agencies for the Fund's portfolio of fixed income instruments.

### Credit risk based on credit ratings

Figures in millions of NOK

Credit risk based on ratings from Moody's	MARKET VALUE								
	Aaa	Aa	Α	Baa	Ba	Lower	P-1	None	Total
Bonds and other fixed income instruments									
Inflation-linked bonds	40 369	8 210	30 791					18 928	98 298
Securitised debt	382 811	13 810	2 558	1 268	389	839		43 033	444 708
Corporate bonds	21 058	87 150	89 743	70 435	5 306	2 023		15 342	291 057
Short-term certificates							4 198	165	4 363
Government and government-related bonds	114 568	98 381	32 126	8 039	1 272	752		26 976	282 114
Total bonds and other fixed income instruments	558 806	207 551	155 218	79 742	6 967	3 614	4 198	104 444	1 120 540

Figures in millions of NOK

Credit risk based on ratings from S & P	MARKET VALUE								
	AAA	AA	Α	BAA	BA	Lower	A-1	None	Total
Bonds and other fixed income instruments									
Inflation-linked bonds	39 606	23 317	9 751					25 624	98 298
Securitised debt	330 893	4 981	2 841	1 694	464	1 019		102 816	444 708
Corporate bonds	19 631	56 654	109 043	80 745	5 493	2 232		17 259	291 057
Short-term certificates							4 198	165	4 363
Government and government-related bonds	95 528	80 249	64 091	10 224	2 000	37		29 985	282 114
Total bonds and other fixed income instruments	485 658	165 201	185 726	92 663	7 957	3 288	4 198	175 849	1 120 540

Credit risk based on rating from Fitch	MARKET VALUE								
	AAA	AA	Α	BAA	BA	Lower	F1	None	Total
Bonds and other fixed income instruments									
Inflation-linked bonds	32 685	20 611	1 541					43 461	98 298
Securitised debt	293 175	5 351	2 575	1 110	190	945		141 362	444 708
Corporate bonds	4 675	74 762	95 436	55 724	2 907	582		56 971	291 057
Short-term certificates							2 246	2 117	4 363
Government and government-related bonds	108 304	75 021	27 433	9 017	1 889			60 450	282 114
Total bonds and other fixed income instruments	438 839	175 745	126 985	65 851	4 986	1 527	2 246	304 361	1 120 540

The equity and fixed income portfolios also include investments in unsecured bank deposits and unlisted derivatives. The Ministry of Finance has decided that no counterparties involved in such transactions may have a credit rating lower than A-, A3 or A- from Fitch, Moody's or S&P respectively. Credit risk limits are determined by the credit rating of the counterparty, where a higher rating results in a higher limit.

#### Uncertainty in the valuation of securities

For all securities priced on the basis of sources other than observable market prices, there is some uncertainty as to whether the price used reflects a best estimate of fair value. This uncertainty is normally very limited for the bulk of the securities in which the Fund invests.

In the third and fourth quarters of 2007, valuation was particularly demanding and uncertain in the sector for securitised debt, in particular investments in structured products consisting of asset-backed securities, including mortgage-backed securities and structured investment vehicles. What began as concern about sub-prime mortgages in the US developed during the year into a more general and deeper credit and liquidity crisis. At the end of the fourth quarter of 2007, the market for some structured credit instruments therefore featured very limited liquidity and corresponding uncertainty about the valuation of these instruments. Following a number

of analyses and discussions with various market participants (price providers, brokers and external managers), valuation methods have therefore been developed to take account of this uncertainty. These methods mean that the value of some types of instruments has been revised downwards by means of a liquidity deduction from the value reported from the ordinary price sources. The size of this liquidity deduction depends on the estimated uncertainty about the price from the price source.

The following presents the estimation of market value for asset-backed securities (ABS) and structured investment vehicles (SIV):

#### Asset Backed Securities (ABS)

At the end of the fourth quarter, the Fund had exposure to various types of ABS both as part of its ongoing management of the portfolio and as part of the reinvestment of cash collateral in its securities lending programmes. To be included in the reinvestment programme for securities lending, such investments must have the highest possible credit rating (AAA/Aaa), but there is no requirement for a credit rating from the credit rating agencies for the Fund's investment portfolio. Total exposure to ABS (including MBS) considered to have limited liquidity amounted to NOK 92.5bn. Given the limited liquidity and corresponding price uncertainty for ABS, Norges Bank has established

a method for taking account of this price uncertainty. A liquidity deduction has only been made for ABS other than those issued by the US federal agencies, such as Fannie Mae, Freddy Mac and Ginnie Mae. The credit ratings from Moody's, S&P and Fitch are the key factor for the size of the deduction. A total unrealised loss on ABS of NOK 2 463m has been recorded in the profit and loss account under "Net income/expenses and gains/losses from bonds and other fixed income instruments". Of this, NOK 1 359m is related to the method described in this section, while NOK 1 104m is based on ordinary price sources. Of the total unrealised loss of NOK 2 463m, a total of NOK 1 214m relates to unrealised losses on reinvested cash collateral.

#### Structured Investment Vehicles (SIV)

SIVs are a type of ABS which suffered particularly from a shortage of liquidity at the end of the fourth quarter. Through its securities lending programmes, including the reinvestment of cash collateral (see Note 2), the Fund was exposed to the senior securities of 13 different SIVs with a combined value of NOK 10.8bn. In order to be included in the reinvestment programme, such investments must have the highest possible credit rating (AAA/Aaa). The average maturity for these SIVs was September 2008, with most of the securities maturing in the course of 2008, while the security with the longest maturity matures in November 2009. At the end of 2007. one of the SIVs to which the Fund was exposed was being wound down (in enforcement mode). Given very low liquidity and correspondingly high price uncertainty, Norges Bank has developed a method for classifying SIVs according to risk. In this context, importance is attached to gearing, liquidity gap, asset mix, and the degree to which the SIV is subject to restructuring initiatives. Following this risk classification, a total unrealised loss on SIVs of NOK 1 874m has been recorded in the profit and loss account under "Net income/costs and gains/losses from bonds and other fixed income instruments". Of this, NOK 775m is related to the risk classification method, while NOK 1 099m is based on ordinary price sources.

# Auditors' reports for 2007

The Supervisory Council organises the audit of Norges Bank in accordance with the Norges Bank Act. Central Bank Audit submits an auditor's report to the Supervisory Council concerning the Bank's annual financial statements. The Supervisory Council appointed Deloitte AS, with effect from 2007, as a cooperation partner for Central Bank Audit for the audit of investment management operations. Central Bank Audit and Deloitte submit a separate joint auditor's report to the Supervisory Council concerning the annual financial reporting of the Government Pension Fund – Global.

# Auditor's report for Norges Bank for 2007

We have audited the annual financial statements of Norges Bank for 2007, which show a loss of NOK 17 576m. We have also audited the information in the Executive Board's annual report concerning the financial statements and the proposal for the coverage. The annual financial statements comprise the profit and loss account, the balance sheet and notes to the accounts, including the financial reporting of the Government Pension Fund – Global. The annual financial statements have been prepared based on the provisions in the Accounting Act and generally accepted accounting principles in Norway, with the departures set out in the accounting policies in the notes to the financial statements. The financial statements are the responsibility of the Executive Board. Our responsibility is to express an opinion on the financial statements and other information according to the requirements of the Norges Bank Act.

We conducted our audit in accordance with the Norges Bank Act, the Audit Charter issued by the Supervisory Council and good auditing practice in Norway, including standards on auditing adopted by Den norske Revisorforening (the Norwegian Institute of Public Accountants). These auditing standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. To the extent required by good auditing practice and the Audit Charter, our audit also includes a review of Norges Bank's financial affairs and its accounting and internal control systems. We believe our audit provides a reasonable basis for our opinion.

The audit of the accounts for the Government Pension fund – Global has been conducted in cooperation with Deloitte AS in accordance with its agreement with the Supervisory Council. A separate auditor's report has been submitted jointly with Deloitte AS for the Government Pension Fund – Global.

In our opinion,

- the financial statements have been presented in accordance with laws and regulations, and provide a true and fair
  view of the financial position of the Bank as of 31 December 2007 and of the results of its operations for the
  financial year in accordance with the provisions in the Accounting Act and generally accepted accounting principles
  in Norway, adjusted as described in the note on accounting policies;
- the management has fulfilled its duty of producing a proper and clearly set out registration and documentation of accounting information;
- the information in the *Annual Report* concerning the financial statements and the proposal for covering the loss are consistent with the financial statements and comply with the laws and guidelines adopted in the Council of State.

Oslo, 20 February 2008

### **Central Bank Auditor**

Svenn Erik Forsstrøm State Authorised Public Accountant (Norway)

# Auditor's report on the financial reporting of the Government Pension Fund – Global for 2007

We have audited the financial reporting of the Government Pension Fund – Global for 2007 included in Norges Bank's financial statements for 2007. The financial reporting, showing a net loss for the year of NOK 80 364m, comprises a profit and loss account, balance sheet and notes to the accounts. The financial reporting of the Government Pension Fund – Global has been prepared in accordance with the provisions of the Norwegian Accounting Act and generally accepted accounting principles in Norway, with the departures set out in the accounting policies in the notes to the accounts. The financial reporting is the responsibility of Norges Bank's Executive Board. Our responsibility is to form an opinion on the financial reporting.

We have conducted our audit in accordance with the Norwegian Act relating to auditing and auditors and with generally accepted auditing practices in Norway, including auditing standards adopted by Den norske Revisorforening (Norwegian Institute of Public Accountants), and issue our auditor's report in accordance with International Standard on Auditing 800 "The auditor's report on special-purpose audit engagements". These auditing standards require that we plan and perform our audit to obtain reasonable assurance about whether the financial reporting is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting policies and significant accounting estimates applied, as well as evaluating the overall financial reporting. To the extent required by good auditing practice, our audit also includes a review of Norges Bank's financial affairs and its accounting and internal control systems that are relevant to the Government Pension Fund - Global. We believe that our audit provides a reasonable basis for our opinion.

### In our opinion,

- the financial reporting gives a true and fair view of the Government Pension Fund Global's financial position as at 31 December 2007 and the return for the financial year in accordance with the Accounting Act and generally accepted accounting principles in Norway with the departures set out in the accounting policies in the notes to the accounts;
- the management has fulfilled its duty to ensure proper and well arranged recording and documentation of accounting information.

Oslo, 20 February 2008

Central Bank Auditor

**Deloitte AS** 

Svenn Erik Forsstrøm (sign) State Authorised Public Accountant (Norway) Aase Aa. Lundgaard (sign) State Authorised Public Accountant (Norway)

# Resolution of the Supervisory Council on the financial statements for 2007

Pursuant to the current guidelines for the allocation and distribution of Norges Bank's profit, originally adopted in the Council of State on 7 February 1986, last amended by Royal Decree of 6 December 2002, the Supervisory Council adopted the following decision at its meeting on 28 February 2008:

- 1. The Supervisory Council takes note of the Executive Board's annual report for 2007.
- 2. With reference to the Auditor's Report from the Central Bank Auditor concerning Norges Bank's annual financial statements for 2007 and the joint Auditor's Report from the Central Bank Auditor and Deloitte AS concerning the financial reporting of the Government Pension Fund Global, the Supervisory Council approves the following transfers and allocations:
  - In accordance with a statement from the Ministry of Finance, the sum of NOK 37.0m is to be transferred from 'Other capital'. The amount is to be transferred to profit/loss for the year.
  - In accordance with paragraph 4 of the guidelines, the loss after allocations, NOK 17 538.6m, is to be transferred from the Adjustment Fund.
- 3. The Supervisory Council submits Norges Bank's annual financial statements for 2007 and the Executive Board's report for 2007, the auditors' reports and the Supervisory Council's statement on the minutes of meetings of the Executive Board and its supervision of Norges Bank in 2007 to the Ministry of Finance for submission to the King and communication to the Storting.

# The Supervisory Council's statement on the minutes of meetings of the Executive Board and its supervision of the Bank in 2007

Pursuant to Section 5, third paragraph, point four of the Act relating to Norges Bank and the Monetary System (Norges Bank Act), the Supervisory Council adopted at its meeting on 28 February 2008 the following statement, which, with reference to Section 30, second paragraph of the Norges Bank Act, is to be submitted to the Ministry of Finance for submission to the King and communication to the Storting:

In 2007, the Supervisory Council supervised the Bank in accordance with Section 5 of the Norges Bank Act.

In accordance with the Norges Bank Act, executive and advisory authority is vested in the Executive Board. The Executive Board is in charge of the Bank's operations and manages its resources (Section 5, second paragraph of the Act). The Supervisory Council supervises the Bank's operations and ensures that the rules governing the Bank's activities are observed. It organises the auditing of the Bank, including the appointment of a central bank auditor, and draws up the Charter for Central Bank Audit. The Supervisory Council adopts the Bank's annual financial statements and, on the recommendation of the Executive Board, approves the budget (Section 5, third paragraph, points 1 and 2 of the Act).

Supervision of the Bank's operations includes ensuring that the Executive Board establishes satisfactory objectives, frameworks and principles for the Bank's operations and systematically follows up the Bank's organisation, and that the Bank's activities, financial reporting and financial affairs are subject to adequate risk management and control.

Supervision relating to the rules governing the Bank's activities includes ascertaining that appropriate procedures have been established to ensure that the Bank's activities are conducted in accordance with legislation, agreements, decisions, guidelines and the framework laid down by the Supervisory Council. Supervision does not include the Executive Board's exercise of its discretionary authority under the Act.

As a basis for its supervision, the Supervisory Council has examined:

- the minutes of the Executive Board's meetings
- matters submitted by the Executive Board
- the Bank's budget and financial statements
- the Bank's accounting policies
- changes in the Banks' audit arrangements (see paragraph below)
- Central Bank Audit's plan and budget
- audit statements and reports, and matters submitted by Central Bank Audit
- matters taken up by the Supervisory Council itself.

The Supervisory Council has received all the information requested.

In 2007, the Supervisory Council had no comments concerning the minutes of Executive Board meetings, nor has its supervision of the Bank's operations revealed circumstances that constitute grounds for special remarks pursuant to Section 30, second paragraph of the Norges Bank Act.

### Changes in the Bank's audit arrangements

Norges Bank has undergone substantial changes in recent years, partly as a result of its tasks relating to the management of the Government Pension Fund – Global. These tasks also entail considerable challenges for the Bank's governing bodies relating to control and supervision of these activities.

To meet these challenges, substantial changes in the Bank's audit arrangements were made in 2007, based on decisions taken by the Executive Board and the Supervisory Council in 2006.

A new internal audit unit has been established, which reports to the Executive Board and the Audit Committee. The role of Central Bank Audit as the Bank's statutory, independent auditor and a body subject to the Supervisory Council has been made explicit. In addition, the Supervisory Council has appointed Deloitte AS as a cooperation partner for the audit of the investment management operations. The Charter for Central Bank Audit and the Supervisory Council's rules of procedure have been updated accordingly.

In the opinion of the Supervisory Council, the implemented changes in the audit arrangements have contributed to strengthening the control and supervision arrangements of both the Supervisory Council and the Executive Board, not least in relation to investment management. The changes also involve an adaptation to internationally recognised principles of corporate governance and control.

Oslo, 28 February 2008 for Norges Bank's Supervisory Council

Mary Kvidal Chair of the Supervisory Council Frank Sve
Deputy Chair of the Supervisory Council



Norges Bank's activities

# Chapter I. Monetary Policy

# Flexible inflation targeting

Monetary policy in Norway is oriented towards low and stable inflation. The operational target for monetary policy is annual consumer price inflation of approximately 2.5%

over time. In general, direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances shall not be taken into account. The operational target provides economic agents with an anchor for inflation expectations. When there is confidence in the inflation target, monetary policy can also contribute to stabilising developments in output and employment.

Norges Bank operates a flexible inflation targeting regime, so that both variability in inflation and variability in output and employment are given weight in interest rate setting. Flexible inflation targeting builds a bridge be-

# The mandate for monetary policy in Norway

Monetary policy in Norway is conducted by Norges Bank. The Bank's activities are subject to the Norges Bank Act, adopted by the Storting (Norwegian parliament) on 24 May 1985. Section 2 of the Act defines the relationship with the government authorities, while Section 4 pertains to decisions concerning changes to the exchange rate regime for the krone. Pursuant to Sections 19 and 20, Norges Bank sets interest rates on banks' deposits with and loans from the central bank.

Pursuant to Section 2, third paragraph and Section 4, second paragraph of the Norges Bank Act, the Government issued a new regulation on monetary policy on 29 March 2001. Norges Bank's mandate for the conduct of monetary policy is laid down in the Regulation. Section 1 of the Regulation states:

Monetary policy shall be aimed at stability in the Norwegian krone's

national and international value, contributing to stable expectations concerning exchange rate developments. At the same time, monetary policy shall underpin fiscal policy by contributing to stable developments in output and employment.

Norges Bank is responsible for the implementation of monetary policy.

Norges Bank's implementation of monetary policy shall, in accordance with the first paragraph, be oriented towards low and stable inflation. The operational target of monetary policy shall be annual consumer price inflation of approximately 2.5 per cent over time.

In general, the direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances shall not be taken into account. Norges Bank issued a statement on the mandate in its submission of 27 March 2001 to the Ministry of Finance:

Monetary policy affects the economy with considerable and variable lags. Consequently, the Bank must be forward-looking in its interest rate setting. The effects of interest rate changes are uncertain and vary over time. Changes in the interest rate will be made gradually so that the Bank may assess the effects of interest rate changes and other new information on economic developments. If price inflation deviates substantially from the target for a period, Norges Bank will set the interest rate with a view to gradually returning consumer price inflation to the target. Norges Bank will seek to avoid unnecessary fluctuations in output and demand.



tween the long-term objective of monetary policy, which is to keep inflation on target and provide an anchor for inflation expectations, and the more short-term objective of smoothing developments in output.

The instrument of monetary policy is the key policy rate, which is the interest rate on banks' overnight deposits in Norges Bank. Experience shows that the key policy rate has a fairly pronounced impact on the shortest money market rates, i.e. overnight and 1-week rates. Market rates with longer maturities are influenced by the level of the key policy rate and by market expectations concerning developments in the key policy rate. Market expectations concerning the key policy rate reflect economic agents' perception of Norges Bank's monetary policy response pattern and economic developments.

Market rates have an effect on the exchange rate, securities prices, house prices and credit and investment demand. Norges Bank's key policy rate may also shape expectations concerning future inflation and economic developments. The interest rate operates through all these channels to influence total demand and output, as well as prices and wages.

Monetary policy operates with a lag. Norges Bank sets the interest rate with a view to stabilising inflation close to the target in the medium term. The relevant horizon will depend on the disturbances to which the economy is exposed and how they affect the path for inflation, output and employment ahead. Decisions concerning interest rates and other important changes in the use of instruments are normally taken at the Executive Board's monetary policy meeting every sixth week. The basis for the Executive Board's decisions and assessments are made public through a press release and a press conference. The press release is accompanied by a statement providing a detailed account of the basis for the Executive Board's interest rate decision. The interest rate decision is published at a pre-announced time.

Three times a year, at every third monetary policy meeting, the *Monetary Policy Report* is published along with the interest rate decision. In the *Report*, Norges Bank analyses the current economic situation and publishes its economic forecasts. Since 2005 Norges Bank has published its own interest rate forecast. Important elements in the assessment of how the interest rate forecast is arrived at – and that underline the importance of judgment in this assessment – are reflected in a set of criteria that should be satisfied. These criteria are included in the *Monetary Policy Report*.

The central bank only influences the shortest money market rates via the key policy rate. Market rates further ahead are also influenced by market conditions and expectations concerning future developments in the key policy rate. The most important influence on economic agents' consumption and investment decisions is therefore their expectations with regard to the future key policy rate. To be successful, monetary policy must influence these

expectations. Norges Bank's publication of its interest rate forecast may make it easier for economic agents to understand the Bank's intentions in its interest rate setting. Transparency surrounding Norges Bank's assessments on monetary policy trade-offs makes monetary policy more predictable and effective. This may promote stability in inflation and in output and employment. Forecasts based on an interest rate path that is the most realistic one in

Norges Bank's view also make it easier to interpret and evaluate the Bank's projections. Economic agents may nevertheless have a different view of inflation and output developments ahead and thus of interest rate developments.

The forecasts for the interest rate and other economic variables are based on incomplete information about the current economic situation and how the economy func-

### Work on macroeconomic models

In order to glean as much information as possible about future inflation and to gain insight into how the interest rate is affecting the economy, Norges Bank - like other central banks - uses economic models as an analytical tool.

In order to obtain a more accurate picture of today's situation and developments over the next few quarters, we rely to a large extent on various statistical forecasting techniques. These techniques and models can capture time series properties in data and correlations that in many cases feature a high degree of accuracy even though the model relationships do not follow from economic theory. Norges Bank now uses considerable resources to improve and further develop our model apparatus for such "nowcasting" in extensive collaboration with other central banks and with researchers in Norway and abroad. The results of this work and documentation will be published in forthcoming reports from Norges Bank.

In order to forecast somewhat further ahead, we must gain more insight into the forces at work and how they affect the economy. Norges Bank's work on models in recent years has aimed at constructing a theoretical macro model that can enhance our understanding of economic developments. NEMO («Norwegian Economy Model») is a new projection and monetary policy analysis model in Norges Bank.\* NEMO is based on international research and model development over the past 10-15 years and has many features in common with similar models in other central banks. When developing NEMO, emphasis was particularly placed on having a model that would serve as a useful tool for monetary policy decisions.

NEMO is based on the assumption that Norway with its own currency can determine its own level of inflation over time. A model requirement is therefore that monetary policy anchors inflation expectations. The model assumes that economic agents look ahead

when they make decisions concerning monetary transactions, consumption, investment, and wages and prices and base these decisions not only on today's economic policy, but also their expectations as to future policy. The model is based on experience from the 1970s and 1980s, which showed that we cannot reduce unemployment on a permanent basis by accepting somewhat higher inflation. Because of price and wage stickiness, monetary policy can still influence demand and hence output and employment in the short and medium term. NEMO is estimated on Norwegian data using Bayesian estimation techniques. Under the estimation procedure, we incorporate our assessments and experience concerning the functioning of the Norwegian economy, including the uncertainty surrounding these assessments. This makes the model suitable for analysing monetary policy and takes account of the uncertainty surrounding the projections.

<sup>\*</sup>For a more detailed description of NEMO, see the box in Monetary Policy Report 3/07 and Brubakk et al. (2006), www.norges-bank.no.

tions. If developments in the economy's driving forces differ from the assumptions or if the central bank changes its view of the functioning of the economy, developments in the interest rate and other variables may deviate from the forecasts. The uncertainty of the forecasts is illustrated in the accompanying fan charts. The wider the fan, the more uncertain the forecasts. The estimates are evaluated in every *Monetary Policy Report*, both in relation to the effect of new information and how they compare with forecasts from other institutions. A comprehensive evaluation of the forecasts is published annually in a separate article, while monetary policy is evaluated in the annual report.

On the basis of the analysis in the *Monetary Policy Report*, the Executive Board adopts a monetary policy strategy every fourth month for the next four months. The strategy is published at the beginning of the period to which it applies and is based on the assumption that the economy will not be exposed to unexpectedly large shocks. Interest rate decisions taken during the strategy period are based on this monetary policy strategy, which is published in the *Report*.

The conduct of monetary policy requires a reliable stream of information concerning economic developments. In 2007, approximately 1500 private and public enterprises in Norges Bank's regional network were interviewed about output and price developments and plans for investment and employment. Combined with available official statistics, the reports from the regional network form an important part of the decision-making basis. A summary of the regional reports is published on the Bank's website in connection with the publication of the *Monetary Policy Report*.

Norges Bank exercises professional judgment in interest rate setting. As a guide in the exercise of this judgment, Norges Bank uses analytical tools and economic models that describe relationships in the economy. The models combine and apply empirical and theoretical knowledge on the functioning of the Norwegian economy, contributing to a consistent analysis of the interaction between different economic variables.

To assure the quality of the analyses and the basis for decisions, the Bank maintains close contact with other central banks and the Norwegian and international academic communities. Economists from other central banks and academic institutions in Norway and other countries are regularly invited to the bank to assess the quality of the Bank's monetary policy analysis, and the Bank also recruits economists from internationally recognised institutions as visiting researchers on a short- or long-term basis. Secondments of varying duration are also available at other central banks and institutions to provide input to the Bank's monetary policy analysis and give staff the opportunity to keep up to date on various methods in the analysis and conduct of monetary policy. For a more detailed description of international cooperation, see Chapter 4.

# Monetary policy in 2007

### Developments in the period to 2007

Monetary policy operates with a lag. Inflation, output and employment in 2007 are the result of monetary policy tradeoffs made in the previous years and economic shocks.

The objective of preventing inflation expectations from becoming entrenched well below target was an important reason why the key policy rate was reduced to 1.75% in March 2004, when inflation fell and approached zero accompanied by spare capacity in the Norwegian economy. Norges Bank indicated that the interest rate would remain low until there were clear indications that inflation was beginning to rise.

Coupled with strong and sustained growth in the global economy and high oil prices, the low interest rate contributed to solid growth in demand for goods and services and in output. This gradually led to prospects for higher inflation. Since the early summer of 2005, monetary policy has been oriented towards gradually bringing the key policy rate up towards a more normal level. By the beginning of 2007, the key policy rate had been raised to 3.50% and further increases were announced.

As shown in Chart 1, the interest rate forecast in *Inflation Report* 3/06 implied that the interest rate would be increased gradually, provided economic developments were approximately as expected. The Executive Board's assessment was that the interest rate would be increased in small, not too frequent steps. A gradual normalisation of

<sup>1</sup> Forecast uncertainty was discussed in Inflation Report 3/2005 and in Jarle Bergo's speech «Interest rate projections in theory and practice» 26 January 2007.

the interest rate level would contribute to curbing growth in the Norwegian economy. Capacity utilisation had been rising for a while and had exceeded a normal level. Aggregate output was expected to continue to grow above trend up to summer 2007 and would then moderate, so that the output gap would gradually close (see Chart 2).

Overall consumer price inflation had been higher than expected in 2006 due to a sharp increase in energy prices. On the other hand, consumer price inflation excluding energy products had been markedly lower than expected in 2006, primarily due to exceptionally weak price impulses from imported consumer goods. The rise in prices for domestically produced goods and services had also slowed somewhat, mainly as a result of improved efficiency and increased competition in both product and labour markets. Towards the end of 2006, energy prices were expected to fall gradually and result in markedly lower CPI inflation through 2007 (see Chart 3). Inflation adjusted for tax changes and excluding energy products (CPI-ATE) was expected to edge up towards 2% in the first half of 2008 (see Chart 4).

# Conduct of monetary policy in 2007

Through 2007, the interest rate was raised fairly close to the level we regard as normal. The key policy rate was raised in a total of seven steps from 3.50% to 5.25% (see Table 1). The basis of the decisions was the prospect of higher inflation. Monetary policy operates with a lag, and the Bank is forward-looking in its interest rate setting. It is appropriate to raise the interest rate before inflation begins to rise. While various measures of underlying inflation in the first half of 2007 were between 1 and 1½%, the same measures showed inflation of between 11/2 and 2% in the second half of the year. Consumer price inflation picked up as expected towards the end of 2007, and underlying inflation at the end of the year was assessed to be in the interval 1¾ - 2½%. The operational target of monetary policy is annual consumer price inflation of approximately 2.5% over time.

Calculations<sup>2</sup> may indicate that the normal real interest rate for Norway is  $2\frac{1}{2}-3\frac{1}{2}\%$  (see Chart 5) and that it was in the lower end of this interval at the end of 2007. Higher key policy rates pushed up the real interest rate

Chart 1 Inflation Report 3/06: Projected key policy rate in the baseline scenario with fan chart. Per cent. 04 Q1– 09 Q4

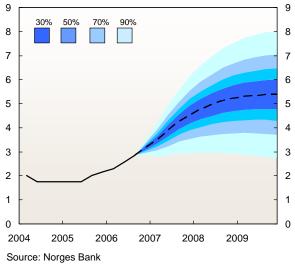
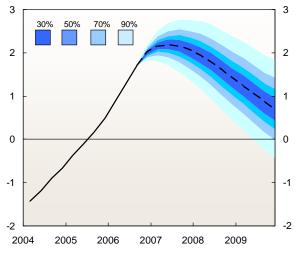


Chart 2 Inflation Report 3/06: Estimated output gap in the baseline scenario with fan chart<sup>1</sup>). Per cent. 04 Q1– 09 Q4



<sup>1)</sup> In the estimate, uncertainty regarding the current situation is not taken into account (see box on p. 48 in Inflation Report 3/06).

Source: Norges Bank

through 2007. Due to the increase in interest rates during 2007, the real interest rate became higher than what we consider a normal level.

The interest rate outlook changed in the course of 2007 as a result of new information concerning economic developments. The interest rate forecast was revised up in *Monetary Policy Report* 1/07, and again in *Monetary* 

Policy Report 2/07 (see Chart 6). In Monetary Policy Report 3/07 the interest rate forecast was revised down somewhat again. The monetary policy strategies, which the Executive Board adopted in connection with the publication of the monetary policy reports, were based on these analyses (see Chart 7).

If we look at how the interest rate forecast changed

Table 1 Interest rate decisions in 2007

Monetary policy meeting	Change in percentage points	Key policy rate after meeting
24 January	0,25	3.75
15 March	0.25	4.00
25 April	0.00	4.00
30 May	0.25	4.25
27 June	0.25	4.50
15 August	0.25	4.75
26 September	0.25	5.00
31 October	0.00	5.00
12 December	0.25	5.25

Chart 3 Inflation Report 3/06: Projected CPI in the baseline scenario with fan chart. 4-quarter change. Per cent. 04 Q1– 09 Q4

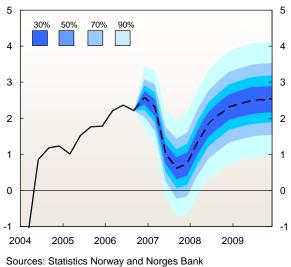
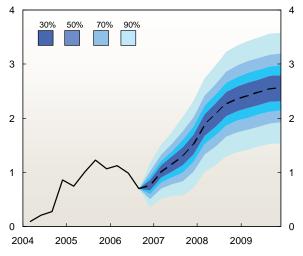


Chart 4 Inflation Report 3/06: Projected CPI-ATE<sup>1)</sup> in the baseline scenario with fan chart. 4-quarter change. Per cent. 04 Q1– 09 Q4

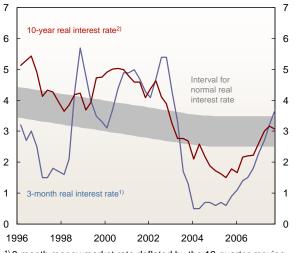


<sup>1)</sup> CPI-ATE: CPI adjusted for tax changes and excluding energy products. A further adjustment is made for the estimated effect of reduced maximum day-care rates from January 2006.

Sources: Statistics Norway and Norges Bank

<sup>&</sup>lt;sup>2</sup> See «The neutral real interest rate», Bernhardsen and Gerdrup (2006), www.norges-bank.no

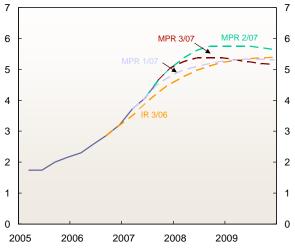
Chart 5 3-month real interest rate, 10-year real interest rate and normal real interest rate in Norway. Per cent.  $96\ Q1-07\ Q4$ 



<sup>&</sup>lt;sup>1)</sup> 3-month money market rate deflated by the 12-quarter moving average (centred) of inflation measured by the CPI. Projected CPI from MPR 3/07 forms the basis for the estimate.

 $^{2)}$  10-year swap rate deflated by the inflation target.

Chart 6 Key policy rate in the baseline scenario from IR 3/06, MPR 1/07, MPR 2/07 and MPR 3/07. Per cent. 05 Q1 – 10 Q4



Source: Norges Bank

Chart 7 Interval for the key policy rate at the end of each strategy period and actual developments. Per cent. 2 Jan 04 – 13 Mar 08

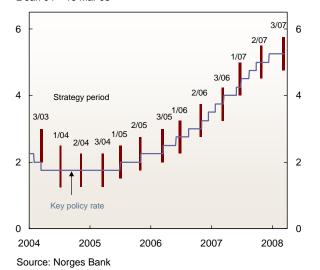
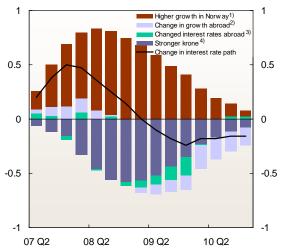


Chart 8 Factors behind changes in the interest rate path from IR 3/06 to MPR 3/07. Percentage points. 07 Q2 - 10 Q4  $\,$ 



- <sup>1)</sup> Reflects effects of unexpectedly high output growth in 2007 and associated effects.
- <sup>2)</sup> Reflects effects of changes in expected growth in the global economy.
- <sup>3)</sup> Reflects effects of expectations of changes in key policy rates among trading partners, through effects on the krone exchange rate.
- <sup>4)</sup> Reflects effects of appreciation of NOK over and above the effects of changes in expectations abroad.

Source: Norges Bank

through the year as a whole, two factors in particular had an impact (see Chart 8).3 The chart summarises the contributions to changes in the interest rate path from various factors through 2007, measured from Inflation Report 3/06 to Monetary Policy Report 3/07. The calculations underlying this chart, and the other charts showing factors behind the changes from one interest rate to another, seek to show the effects of different news and of changes in discretionary assessments. These calculations can be regarded as an evaluation of the original forecasts and a consistency check. These are based on an overall assessment of the situation in the Norwegian and international economies and our perception of how the economy functions. The columns in the charts summarise how the different factors have, in isolation, affected the interest rate forecast through their impact on the outlook for inflation, output and employment. Overall, the interest rate outlook for 2008 was revised up somewhat through the year, while it was revised down somewhat for the following years. Unexpectedly high capacity utilisation in the Norwegian economy, in isolation, pushed up the interest rate path, while a stronger krone had the opposite effect (see Chart 9). The background for changes in economic variables

80 85 90 95 95

Chart 9 Developments in the import-weighted krone exchange

rate1) in 2007. 2 Jan 07 - 31 Dec 07

1) A rising curve indicates a stronger krone exchange rate.

May

Jul

Sen

Source: Norges Bank

Mar

other than the interest rate is described in an article on the evaluation of Norges Bank's projections for 2007, published in *Economic Bulletin* 1/2008.

### Monetary policy in the period to March

According to the monetary policy strategy in *Inflation Report* 3/06, the key policy rate should be in the interval 3¼ - 4¼% in the period to the publication of the next *Report* in March 2007, conditional on economic developments that were broadly in line with projections. The *Report* stated that it would be appropriate to raise the interest rate gradually towards a more normal level at a somewhat faster pace than the Bank had envisaged until then, though this was not likely to happen at every monetary policy meeting. The interest rate was raised to 3.50% in December 2006. It was raised again at both the January and March meetings in 2007, bringing the interest rate to 4.00% at the end of the strategy period.

In *Monetary Policy Report* 1/07, published in March, the Executive Board's strategy was that the key policy rate should be increased again and be in the interval 4-5% in the period to June, provided economic developments were approximately as expected. A comparison with the interest rate forecast in the previous *Report* shows the conditions that changed in the course of winter and spring.

In Chart 10 a calculation has been used to illustrate how different factors led to changes in the interest rate path via their effects on the outlook for inflation and the output gap. The interest rate forecast in *Monetary Policy Report* 1/07 was revised up by approximately ½ percentage point at the end of 2007 compared with *Inflation Report* 3/06.

The most important reason for the upward revision of the interest rate forecast in March was unexpectedly strong growth in the Norwegian economy and indications that the level of activity might remain high somewhat longer than expected in the November 2006 *Report* (see the red columns in Chart 10). For example, employment had increased more than expected, and unemployment had continued to fall and was on a par with the levels recorded around previous cyclical peaks. The labour market was tight, and wage growth was expected to continue to pick up. There were signs that the strong pressures in the Norwegian economy would feed through to price and cost

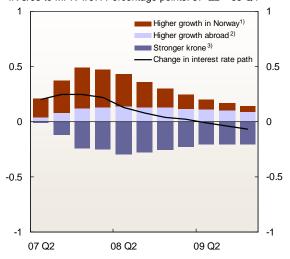
Nov

<sup>&</sup>lt;sup>3</sup>The calculations in the Annual Report have been made using a small calibrated model for the Norwegian economy; see Staff Memo 2004/3.

inflation. At the same time, growth among our trading partners was expected to be higher (see the blue columns in Chart 10). This also pointed to higher interest rates. On the other hand, the krone had appreciated in the period to *Monetary Policy Report* 1/07. Expectations of higher interest rate differentials against trading partners could only partly explain the krone appreciation. A stronger krone in the forecast lowered the interest rate path somewhat (see the blue columns in Chart 10). In spite of stronger prospects for growth in the global economy, forward interest rates abroad were approximately unchanged since the previous *Report*. Overall, underlying inflation has developed approximately as expected in the previous *Monetary Policy Report* and did not in isolation contribute to the change in the interest rate path.

The Bank maintained the view that developments in the krone exchange rate would influence how rapidly the interest rate could be raised because a substantially stronger krone could lead to a level of inflation that was too low. With an inflation target for monetary policy, the Bank would be mindful of the effects of higher interest rates on the krone exchange rate when inflation is low.

Chart 10 Factors behind changes in the interest rate path from IR 3/06 to MPR 1/07. Percentage points. 07 Q2 – 09 Q4



<sup>&</sup>lt;sup>1)</sup> Reflects effects of unexpectedly high output growth in 2006 and 2007 and associated effects.

Source: Norges Bank

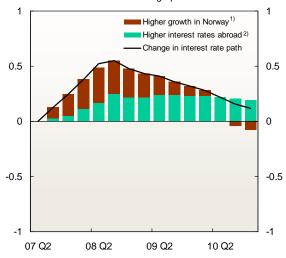
### Monetary policy in the period to June

After the monetary policy meeting in March, the interest rate was 4.00%. The outlook combined with the balance of risks indicated that the interest rate should be raised further, and the strategy from the March *Report* implied that the interest rate should be in the interval 4-5% through the second quarter. Capacity utilisation was already so high that inflation would probably gradually approach the target. At the same time, the interest rate increase would allow capacity utilisation to decrease gradually, preventing inflation from becoming too high. The key policy rate was kept unchanged at the monetary policy meeting in April and then raised by 0.25 percentage point at the May and at the June meeting. At the end of the strategy period, the key policy rate was 4.50%.

The interest rate path was revised up again in *Monetary Policy Report* 2/07. In Chart 11 a calculation has been used to illustrate how different factors led to changes in the interest rate path via their effects on the outlook for inflation and the output gap.

In the period to *Monetary Policy Report* 2/07, there were fewer signs of a slowdown in the Norwegian econ-

Chart 11 Factors behind changes in the interest rate path from MPR 1/07 to MPR 2/07. Percentage points. 07 Q4 – 10 Q4



<sup>&</sup>lt;sup>1)</sup> Reflects effects of the unexpectedly high output growth in 2007 and associated effects.

Source: Norges Bank

<sup>&</sup>lt;sup>2)</sup> Reflects effects of higher expected growth in the global economy.

<sup>&</sup>lt;sup>3)</sup> Reflects effects of appreciation of NOK over and above the effects of changes in expectations abroad.

<sup>&</sup>lt;sup>2)</sup> Reflects effects of expectations of higher key policy rates among trading partners, through effects on the krone exchange rate.

omy than had been expected. There were again prospects that the strong expansion would be sustained for a somewhat longer period than previously envisaged. The global economic outlook was still favourable. Domestic demand for goods and services showed strong growth, and household consumption was rising sharply. Norges Bank's regional network reported continued solid output growth in a number of industries. It appeared that fiscal policy in 2007 might be more expansionary than expected. Unexpectedly high capacity utilisation was the most important factor behind the upward revision of the interest rate outlook through 2007 and 2008 (see the red columns in Chart 11).

The krone exchange rate had developed as projected. At the same time, interest rate expectations in other countries had jumped since March. If Norwegian interest rates were unaffected by interest rate prospects abroad, this would in isolation have resulted in a considerable depreciation of the krone, with a more rapid rise in inflation and capacity utilisation than assumed. Higher interest rates abroad thus contributed to some extent to pushing up the interest rate outlook in Norway as well, with the greatest impact further ahead (see the green columns in Chart 11). Inflation had developed approximately as expected in the previous Report and again did not contribute in isolation to the change in the interest rate path.

According to the Executive Board's monetary policy strategy in Monetary Policy Report 2/07, the key policy rate should be in the interval 4½-5½% in the period to the publication of the next Report in October, conditional on economic developments that were broadly in line with projections.

### Monetary policy in the period to November

The key policy rate was increased by 0.25 percentage point at the monetary policy meetings in August and September and then kept unchanged at the October meeting. At the end of the strategy period, the key policy rate was 5.00%.

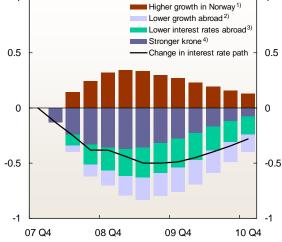
When financial market turbulence flared up in August, the outlook for the global economy weakened. At the same time, the krone appreciated. It was announced at the September meeting that the key policy rate would be raised further, but to a lesser extent than envisaged in

June. The analysis was supported by *Monetary Policy* Report 3/07 (see Chart 6).

In autumn 2007 the inflation outlook was marked by opposing forces. In the period to *Monetary Policy Report* 3/07, the krone had appreciated sharply. At the same time, growth prospects for the US and Western Europe had weakened. Market participants now expected lower key rates among our trading partners and thus a somewhat wider interest rate differential between Norway and other countries. These conditions might restrain inflation and point to a lower interest rate path compared with the June Report (see chart 12).

On the other hand, growth in the Norwegian economy had been stronger than expected, with unusually high demand for inputs and services. Capacity utilisation was assessed to be higher than in the previous Report, which engendered prospects of higher price and cost inflation. These factors pointed to a higher interest rate path (see Chart 12).

Chart 12 Factors behind changes in the interest rate path from MPR 2/07 to MPR 3/07. Percentage points. 07 Q4 -10 Q4 Higher growth in Norway 1) Lower growth abroad 2)



<sup>1)</sup> Reflects effects of the unexpectedly high output growth in 2007 and associated effects.

changes in interest rate expectations abroad.

Source: Norges Bank

61 NORGES BANK NORGES BANK'S ACTIVITIES

<sup>2)</sup> Reflects effects of expectations of lower growth in the global

economy.

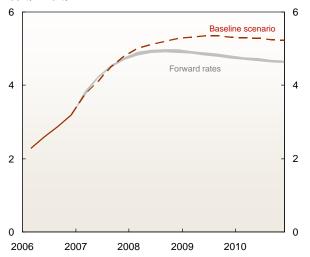
3) Reflects effects of expectations of lower key policy rates among trading partners, through effects on the krone exchange rate. 4) Reflects effects of appreciation of NOK over and above the effects of

On the whole, underlying inflation had still been approximately as expected and did not in isolation contribute to the change in the interest rate path.

Against this background, the Executive Board decided on a strategy whereby the key policy rate should be in the interval 4¾-5¾% in the period to the publication of the next *Report* in March 2008, provided the Norwegian economy was not exposed to major shocks.

In the period to the monetary policy meeting in December, overall inflation picked up markedly as a result of a sharp rise in electricity prices, but inflation was still low. The global economic outlook had become more uncertain, with increasing turbulence in money and credit markets. These conditions suggested that the key policy rate should be kept unchanged. At the same time, growth in the Norwegian economy had again been stronger than expected. In the last month, the krone had depreciated somewhat against most currencies, but was still stronger than in the first half of 2007. An overall assessment implied that it was appropriate to raise the interest rate by 0.25 percentage point to 5.25%.

# Chart 13 Monetary Policy Report 1/07: Key policy rate in the baseline scenario and estimated forward rates<sup>1)</sup>. Per cent. 06 Q1–10 Q4



 $^{\rm 1)}$  A credit risk premium and a technical difference of 0.20 percentage point have been deducted to ensure comparability with the key policy rate. The grey, shaded interval shows the highest and lowest interest rates in the period 26 Feb – 9 Mar 2007

Source: Norges Bank

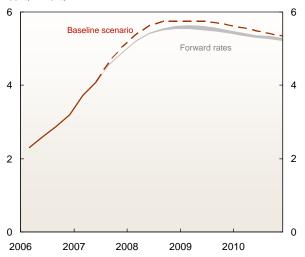
### Assessment – use of instruments

# Financial market expectations concerning the key policy rate

Norges Bank's communication on monetary policy primarily aims to influence financial market interest rate expectations. The aim of publishing Norges Bank's interest rate forecasts and monetary policy strategy is to make it possible for others to anticipate and evaluate the Bank's monetary policy.

Forward rates can under certain assumptions reflect market expectations concerning the future key policy rate. In that case, they will provide a cross-check of the Bank's interest rate forecast. Deviations may indicate that the central bank and market participants have differing perceptions of future economic developments. It may also reflect differing views concerning future monetary policy tradeoffs. In the following, the interest rate paths in the three monetary policy reports published in 2007 are compared with what we assume to be market expectations concerning the key policy rate immediately prior to publication.

Chart 14 Monetary Policy Report 2/07: Key policy rate in the baseline scenario and estimated forward rates<sup>1)</sup>. Per cent. 06 Q1– 10 Q4



 $^{1)}$  A credit risk premium and a technical difference of 0.20 percentage point have been deducted to ensure comparability with the key policy rate. The grey, shaded interval shows the highest and lowest interest rates in the period 8 - 21 June 2007

Source: Norges Bank

In *Monetary Policy Report* 1/07, Norges Bank's interest rate path was broadly in line with expectations in the period to autumn 2008 (see Chart 13). Thereafter, Norges Bank's interest rate path was somewhat higher than forward rates. The reason for this might be that market participants had a different perception of the outlook for inflation and production. Higher demand for long-term debt securities as a result of adaptation to new capital adequacy requirements may also have pushed down international long-term interest rates, which may also have contributed to lower long-term rates in Norway. In the event, forward rates would underestimate financial market expectations concerning the key policy rate.

Until the publication of *Monetary Policy Report* 2/07, estimated forward rates had increased somewhat both in the short and long term. Forward interest rates were broadly in line with the interest rate forecast in this *Report* and might indicate that financial market participants expected an increase in the key policy rate to 5½-5¾% in 2008 (see Chart 14).

In the period before Monetary Policy Report 3/07 was

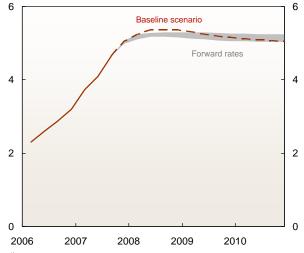
published, forward interest rates in Norway had fallen in both the short and long term. Forward rates were broadly in line with the interest rate forecast from Norges Bank and might suggest an increase in the key policy rate to about 51/4% at the end of 2008.

In the second half of 2007, forward interest rates were very close to the baseline scenario for the key policy rate, and towards the end of the year forward rates and the baseline scenario were almost identical (see Charts 15 and 16). This can be interpreted as an indication that market participants and Norges Bank shared the same perception of future economic developments and monetary policy trade-offs.

# Was interest rate setting predictable in 2007?

One indicator of predictability in interest rate setting is the impact on money market rates around the time of the Executive Board's monetary policy meetings. Substantial

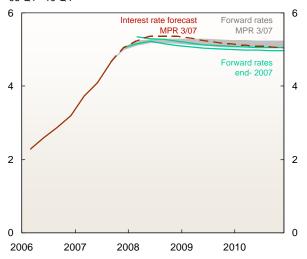
Chart 15 Monetary Policy Report 3/07: Key policy rate in the baseline scenario and estimated forward rates<sup>1)</sup>. Per cent. 06 Q1– 10 Q4



<sup>1)</sup> A credit risk premium and a technical difference of 0.20 percentage point have been deducted to ensure comparability with the key policy rate. The grey, shaded area shows forward rates at 25 Oct 2007

Source: Norges Bank

Chart 16 Monetary Policy Report 3/07 and end-2007: Key policy rate and market forward rates<sup>1)</sup>. Per cent. 06 Q1– 10 Q4



<sup>1)</sup> See footnote Chart 13. Forward rates at end-2007 indicate the highest and lowest interest rates on the market key policy rate path 12-28 Dec 2007.

Source: Norges Bank

changes in market rates may indicate that the decision was unexpected.

In 2007, the key policy rate was raised by 0.25 percentage point in seven steps, while at two of the monetary policy meetings it was kept unchanged. The effects on market rates were on the whole small and always smaller than the changes in the key rate. This indicates that changes in the key rate had largely been anticipated by market participants. Four of the interest rate decisions in 2006 were largely expected by both market makers and most macroeconomists in Norwegian financial institutions. As Chart 17 shows, the interest rate decisions in March, May, June and October had little impact on short-term market rates. The January, April, September and December decisions had a slightly greater effect on the market. Money market rates changed somewhat after these decisions were announced, but the impact was relatively moderate. Shortterm market rates edged up somewhat when the key policy rate was raised in January and September, and there was also a slight rise after the key rate increase in December.

A rise in market rates following decisions to increase the key rate may indicate that the changes were not fully anticipated. Changes in market rates in the second half of 2007 are probably also related to the turbulence in financial markets, which amplified the usual fluctuations in interest rates in this period. In April, money market rates fell when the key rate was kept unchanged. This indicated that market participants probably expected an increase in the key rate at this monetary policy meeting.

The effect of the interest rate meetings in 2007 was most pronounced for money market rates at the one-week and one-month horizons, except in October when the 12-month rate fell when a new, lower key policy rate path was introduced in the *Monetary Policy Report*. It is not surprising that the impact of greater-than-expected changes in the key rate is strongest for the shortest rates, while changes in the path for the key rate may have as great, if not greater, effect on interest rates with a somewhat longer horizon.

Chart 17 Change in the key policy rate and effect on money market rates following monetary policy meetings in 2007. Percentage points

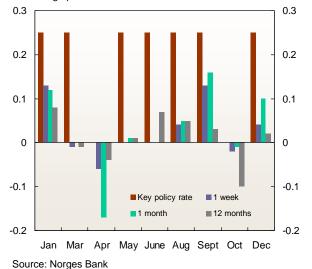
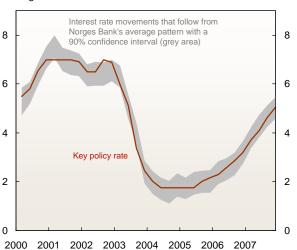


Chart 18 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting<sup>1</sup>). Per cent. 00 Q1– 07 Q4



<sup>1)</sup> Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and 3-month interest rates among trading partners. See Inflation Report 3/04 for further discussion.

Source: Norges Bank

### Other cross-checks

Another cross-check for interest rate setting may be to see how the key policy rate has reacted in the past to developments in key economic variables. Market participants will seek to form a picture of how the central bank responds to new information about the economy, and how the key rate is then set as a result of developments in economic variables. The response pattern in interest rate setting can be estimated by a reaction function where historical interest rate changes are explained on the basis of changes in macroeconomic variables. Such an estimated relationship will not capture all the elements that are given weight. In particular, it does not capture specific assessments at a particular interest rate meeting. An estimated reaction function for interest rate setting will therefore be considerably simplified and only provide an indication of how Norges Bank on average has responded to selected variables. The estimated results will also depend on the data period and econometric method.

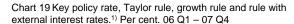
Chart 18 shows the interest rate path ensuing from the Bank's average response pattern from 2001 to 2007 and the actual path of the key rate. The estimated equation includes developments in inflation, wage growth, the Bank's forecasts for growth in mainland GDP and international money market rates. The interest rate in the previous period also has an impact. Chart 18 shows that interest rate developments through 2007 have been in line with Norges Bank's average pattern for interest rate setting.

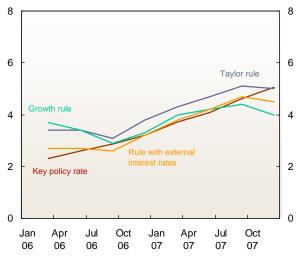
Interest rate setting can also be assessed in the light of various simple monetary policy rules. The rules must be interpreted with caution and only provide a rough indication of whether the interest rate level is appropriate to the economic situation. A common feature of many simple monetary policy rules is that the interest rate is set with a view to keeping inflation close to a specific target over time while contributing to stabilising output.

In recent years there has not in general been a persistent deviation between the key rate and the interest rate prescribed by monetary policy rules. At the beginning of 2007, the key rate was on a par with the lowest of the interest rates prescribed by the rules. After the interest rate increases through 2007, the key rate moved from below the rates prescribed by the rules to a level that was on a par with the highest of these rates (see Chart 19).

The Taylor rule<sup>4</sup> applies the output gap and inflation. The growth rule<sup>5</sup> applies instead observed GDP growth and inflation. Simple monetary policy rules do not take account of the economic outlook but only look at the economic situation today. These rules have some limitations as a reference for a small, open economy. They do not take into account that changes in the interest rate in accordance with the rules may result in changes in the exchange rate, thereby influencing the inflation outlook. In principle, the rule involving external interest rates<sup>6</sup> should be better suited to a small, open economy. The interest rate prescribed by this rule has remained very close to the key rate through most of 2007, falling in pace with external rates towards the end of the year.

Nominal GDP growth for the mainland economy can serve as another cross-check that is less reliant on methodology than simple interest rate rules. Over time,





<sup>1)</sup> The CPI-ATE adjusted for the estimated effect of reduced maximum day-care rates in 2006 has been used as a measure of inflation. Other measures of underlying inflation that have been higher than the CPI-ATE would have resulted in a higher interest rate path.

Sources: Statistics Norway and Norges Bank

<sup>&</sup>lt;sup>4</sup>Taylor rule: Interest rate = inflation target + equilibrium real interest rate + 1.5 x (inflation – inflation target) + 0.5 x output gap. See Taylor, J.B. (1993): «Discretion versus policy rules in practice», Carnegie-Rochester Conference Series on Public Policy 39, pp. 195–214. The CPI-ATE is used as a measure of inflation.

<sup>&</sup>lt;sup>5</sup>The output gap is replaced by the difference between actual economic growth and trend growth (the growth gap).

 $<sup>^6</sup>$ The rule involving external interest rates =  $0.5 \times \text{Taylor}$  rate +  $0.5 \times \text{money}$  market rates among Norway's trading partners

nominal GDP will grow in pace with the sum of the rise in prices and growth in production capacity in the economy. Experience shows that production capacity increases by about 2 - 3% annually over time. An inflation target of 2.5% implies nominal GDP growth of approximately 4.5 - 5.5% annually over time. If GDP growth is higher than this, it may be an indication that monetary policy should be tightened. Nominal GDP growth is now higher than the level assumed to be consistent with the inflation target over time (see Chart 20). One of the reasons behind the high level of nominal GDP growth is that the rise in prices included in GDP - the GDP deflator - has been higher than underlying consumer price inflation in recent years. This is partly due to the sharp rise in prices for some other goods and services, particularly exports. This change in relative prices reflects an improvement in Norway's terms of trade. In addition, there has been an unusually sharp increase in production capacity in the Norwegian economy in recent years due to inward labour migration and solid productivity growth.

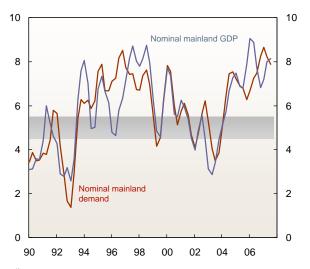
Historically, there has been a relationship between inflation and growth in the money supply. Trend growth in the money supply can serve as a rough cross-check of inflation projections generated by other models. In recent years, consumer price inflation has exhibited a falling trend, while growth in the money supply has exhibited a rising trend (see Chart 21). Higher growth in the money supply must be seen in the light of strong growth in the Norwegian economy in an environment of low interest rates and high credit growth. The high level of growth in the money supply suggested that inflation would pick up, which it gradually did through 2007. It takes time for the trend rise in prices to capture the rise in inflation, and growth in the money supply is still stronger than consumer price inflation. It is likely that the divergence between growth in the GDP deflator and consumer price inflation, as described above, has also been reflected in the relationship between the money supply and consumer prices.

# Assessment - performance over time

# Assessment of inflation and the output gap over time

In accordance with the mandate for monetary policy, Norges Bank sets interest rates with a view to achieving

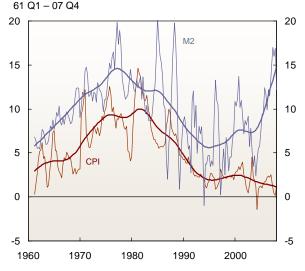
Chart 20 Nominal mainland GDP and total mainland demand<sup>1)</sup>. 4-quarter change. Per cent. 90 Q1– 07 Q3.



1) Adjusted for seasonal variations and irregular components

Sources: Statistics Norway and Norges Bank

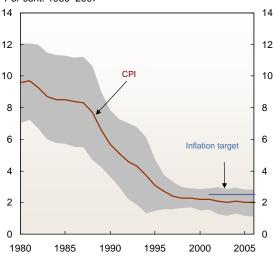
Chart 21 Consumer prices (CPI) and money supply (M2). Estimated trend rise<sup>1)</sup>. 4-quarter change. Per cent.



<sup>1)</sup> Trend calculated using HP filter. See Staff Memo 2005/2 for further discussion

Sources: Statistics Norway and Norges Bank

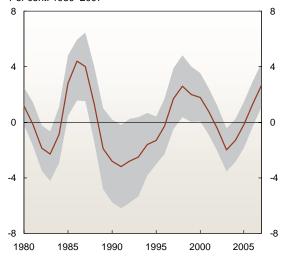
Chart 22 CPI. Moving 10-year average<sup>1)</sup> and variation<sup>2)</sup>. Per cent. 1980–2007<sup>3)</sup>



 $<sup>^{\</sup>mbox{\scriptsize 1})}$  The moving average is estimated 7 years back and 2 years ahead.

Sources: Statistics Norway and Norges Bank

Chart 23 Output gap estimates. Level<sup>1)</sup> and variation<sup>2)</sup>. Per cent. 1980–2007<sup>3)</sup>



<sup>&</sup>lt;sup>1)</sup> The output gap measures the difference between actual and estimated potential mainland GDP.

Source: Norges Bank

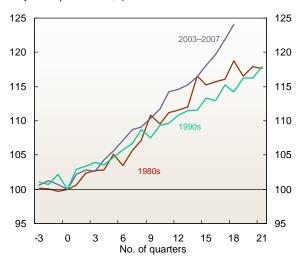
consumer price inflation (CPI) of approximately 2.5% over time. The level of consumer price inflation over a short period does not provide an adequate basis for assessing whether monetary policy objectives have been achieved over time. Chart 22 shows a ten-year moving average for annual consumer price inflation. Inflation stabilised early in the 1990s after falling from a high level in the previous decade. In the ten-year period 1998–2007, average inflation measured by the consumer price index was 1.9%.

Under a flexible inflation targeting regime, monetary policy also gives weight to the objective of stability in output and employment. Chart 23 shows developments in the output gap since 1980. In the ten-year period 1998–2007, the output gap was positive in all periods except 2003 and 2004.

The band around average inflation in Chart 22 shows inflation variability. Variability is calculated as the standard deviation over a ten-year period, seven years back and two years ahead. From a longer perspective, inflation variability has decreased. Variability in the output gap, as shown in Chart 23, also seems to have been diminishing since the end of the 1990s.

Viewed over time, inflation has been low and stable, remaining fairly close to 2.5%. The deviation probably reflects the influence in recent years of a number of positive

Chart 24 Mainland GDP (QNA). Developments after the start of a cyclical upturn. Index, quarter 0 = 100



Sources: Statistics Norway and Norges Bank

<sup>&</sup>lt;sup>2)</sup> The band around the CPI is the variation in the average period, measured by +/- one standard deviation.

<sup>&</sup>lt;sup>3)</sup> Projections for 2007-2009 from MPR 3/07 form the basis for this estimate.

<sup>2)</sup> The band shows the variation in the output gap measured by +/- one standard deviation. The variation is calculated as the average standard deviation over a ten-year period, seven years back and two years ahead.

<sup>&</sup>lt;sup>3)</sup> Projections from MPR 3/07 form the basis for this estimate.

supply-side shocks, including strong growth in productivity, an ample supply of labour from other countries and a slower rise in prices for imported goods. This is reflected in strong growth in the Norwegian economy, while inflation was for a long period lower than expected.

Favourable supply-side conditions are reflected in output and employment. When the key policy rate was reduced in 2003, demand and output picked up quickly. As shown in Chart 24, growth picked up more quickly than during the upturns in the 1980s and 1990s and output growth has been markedly stronger in recent quarters. Nevertheless, employment growth was somewhat more moderate than in the 1980s. It was for a long period more in line with developments in the 1990s, but has risen in the past two years (see Chart 25). It also took time for unemployment to fall after employment picked up. Both employment and the labour supply showed strong growth in 2007. Capacity utilisation was higher than normal, wage growth increased and inflation picked up gradually towards the target of 2.5%.

### **Inflation expectations**

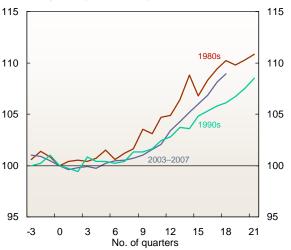
For monetary policy to contribute to stabilising developments in output and employment, economic agents must be confident that the inflation target will be reached. Ex-

perience indicates that inflation expectations can remain stable even if inflation varies somewhat as long as the interest rate is used actively to dampen the effects and monetary policy is oriented towards achieving the inflation target over time. Inflation will not be on target at all times, but with confidence in monetary policy expected inflation in the long term will be close to target. This in itself contributes to stabilising inflation.

TNS Gallup has been commissioned by Norges Bank to carry out quarterly surveys of inflation expectations. The 2007 Q4 expectations survey suggests that inflation expectations are stable. Economists in the financial industry and academia, as well as employer and employee organisations, expect annual inflation of 2.5% two years ahead (see Chart 26). Five years ahead, economists expect inflation of 2.5%, while employer and employee organisations expect inflation of 2.7% (see Chart 27).

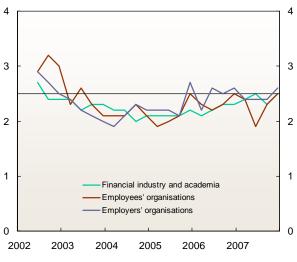
Figures from Consensus Forecasts Inc., which polls various institutions on their forecasts for consumer price inflation in Norway twice a year (April and October), show fairly similar inflation expectations. At both the 5-year and 10-year horizons, inflation is expected to be approximately 2.5%. Information about economic agents' inflation expectations is also provided by the yield curve in the fixed income market. Long-term forward rates can –

Charter 25 Number employed (QNA). Developments after the start of a cyclical upturn. Index, quarter 0 = 100



Sources: Statistics Norway and Norges Bank

Chart 26 Expected consumer price inflation 2 years ahead. Per cent. 02 Q2–07 Q4



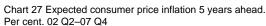
Source: TNS Gallup



under certain assumptions – give an indication of expected inflation.<sup>7</sup> Chart 28 shows the difference between long-term forward rates in Norway and the euro area. Because the inflation target is higher in Norway, this difference should be in the range of ½-1 percentage point, depending on risk premiums for interest rate instruments. A greater difference can be a warning that inflation expectations in Norway are increasing more than implied by the inflation target. Overall, these indicators suggest that there is confidence in the inflation target.

# Liquidity management in the money market

The Executive Board sets the interest rate on banks' sight deposits and overnight loans in Norges Bank. The purpose of Norges Bank's liquidity policy is to ensure that the Executive Board's interest rate decisions have a broad impact on short-term money market rates. Through its liquidity policy, Norges Bank ensures that the banking system has surplus liquidity on a daily basis, in the form of banks' sight deposits at Norges Bank. The shortest



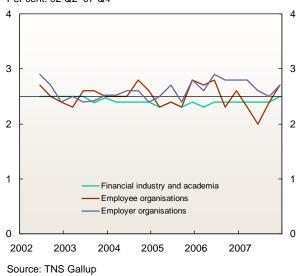
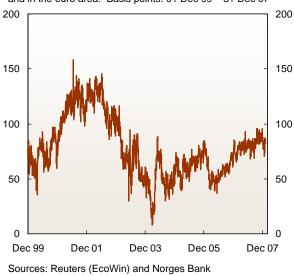


Chart 28 Difference between long-term forward rates in Norway and in the euro area. Basis points. 01 Dec 99 – 31 Dec 07



<sup>&</sup>lt;sup>7</sup> See Kloster, A. «Estimating and interpreting interest rate expectations», Economic Bulletin 2000/3, Norges Bank.

money market rates will therefore normally be slightly higher than the sight deposit rate, which is Norges Bank's key policy rate.

Developments in Norges Bank's key policy rates and money market rates are illustrated in Chart 29. The chart shows that with effect from 16 March 2007, Norges Bank set the interest rate on overnight loans at 1 percentage point higher than the key policy rate. Thus, the difference between the key policy rate and the interest rate on overnight loans was narrowed from 2 to 1 percentage point. The decision did not entail any change in Norges Bank's monetary policy.

Liquidity policy instruments are fixed-rate loans (F-loans), currency swaps and fixed-rate deposits (F-deposits). F-loans are Norges Bank's primary liquidity supplying instrument. If liquidity in the banking sector is not regarded as adequate to keep short-term money market rates slightly higher than the sight deposit rate, Norges Bank offers to supply liquidity to banks through F-loans. The maturity of an F-loan will depend on the variations in the banking system's estimated liquidity requirements. F-loans are auctioned to banks through an Internet-based system. The interest rate on F-loans is normally set using a multi-price auction and is usually slightly higher than the sight deposit rate. Liquidity can also be supplied via

currency swaps. Currency swaps have not been used in liquidity management since 2001. Norges Bank can withdraw liquidity in order to reduce the banking system's surplus liquidity via F-deposits. F-deposits have not been used since April 2003. Under the current monetary policy regime, it makes little difference whether the banking system's surplus liquidity is deposited as sight deposits or as F-deposits with Norges Bank.

Norges Bank draws up projections for banks' structural liquidity. The banking system's structural liquidity is banks' sight deposits in their sight deposit accounts at Norges Bank before the central bank supplies or withdraws liquidity using liquidity policy instruments. The banking system's structural liquidity is influenced by incoming and outgoing payments over the government's account in Norges Bank, government loan transactions, Norges Bank's transactions in the foreign exchange and government securities markets and changes in notes and coins in circulation. Government transactions result in substantial fluctuations in structural liquidity in the course of a year (see Chart 30). The general pattern is that liquidity falls markedly on days when direct and indirect tax payments fall due and then accumulates again as a result of government spending and Norges Bank's foreign exchange purchases for the Government Pension Fund - Global.

Chart 29 Norges Bank's interest rates and short-term money market rates (money market rates one day forward). Nominal rates. Per cent

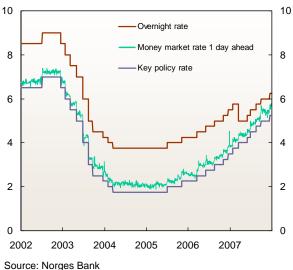
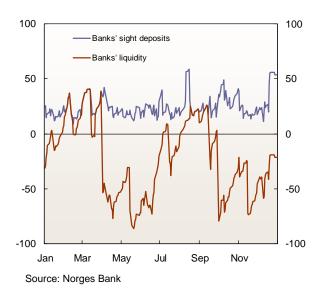


Chart 30 Banks' liquidity in 2007. In billions of NOK. 01 Jan 07 – 31 Dec 07





As oil taxes have risen, uncertainty has increased in the short-term fixed income market. Norges Bank sought to reduce the uncertainty by supplying most of the liquidity required in the form of fixed-rate loans with an extended maturity period. This measure probably helped to reduce the impact on the shortest money market rates in the periods when oil tax payments fall due (see Chart 31) and was implemented in consultation with major market participants. This was a means of ensuring that the Executive Board's interest rate decisions had a broad

impact on short-term money market rates.

Due to the turbulence in international financial markets, Norges Bank provided extra liquidity several times in the second half of 2007. When the full impact of the turbulence reached money markets on 9 August, Norges Bank provided more liquidity than usual at the regular F-loan auction. When oil tax payments fell due on 1 October, it was also necessary to supply extra liquidity over a longer period than usual. At the turn of the year, more liquidity than usual was supplied at two F-loan auctions.

Chart 31 Banks' sight deposits and money market rates 1 day ahead less the key policy rate. 15-day moving average. 01 Jan 07 – 31 Dec 07

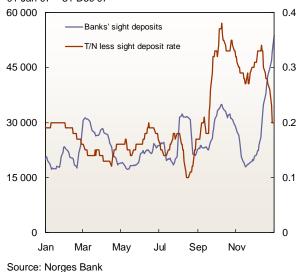
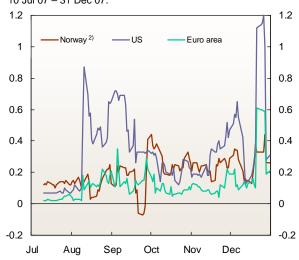


Chart 32 Spread between 1-week money market rate and expected key policy rate<sup>1)</sup>. Percentage points. 10 Jul 07 – 31 Dec 07.



<sup>&</sup>lt;sup>1)</sup> The expected key rate is represented by the Overnight Indexed Swap (OIS)

Sources: Bloomberg, Reuters (EcoWin) and Norges Bank

<sup>2)</sup> Projection

At the turn of the year, surplus liquidity amounted to NOK 53bn.

Despite the extra liquidity, market turbulence resulted in short money market rates in the second half of 2007 that were higher than key policy rate expectations would imply (see Chart 32). This was related to the impact on Norwegian interest rates of international market turbulence and high interest rates for USD. Banks rely heavily for their funding on loans in USD, which are exchanged for NOK through currency swaps. Other countries, whose money markets are not based on USD loans, also experienced such contagion effects. This reflects a greater reluctance

among banks to lend to each other. When redistribution of liquidity in the interbank market is reduced, interest rates rise and the need for liquidity from Norges Bank increases.

Banks' standing loan facility at Norges Bank (overnight loans) is not often used. Due to injections of liquidity, this was also the case in 2007.

57 F-loan auctions were held in 2007. Norges Bank's daily provision of liquidity through the auctions varied between NOK 2.0 and 115.8bn, averaging NOK 56.7bn. Loan maturities varied from 1 to 42 days.

#### Regional network in 2007

In autumn 2002, Norges Bank established a regional network of firms, local authorities and regional health enterprises throughout Norway. Five times in 2007, representatives from Norges Bank interviewed business and community leaders concerning developments in their firms/enterprises and industries. Each round of interviews comprised around 290 visits. Approximately 1500 firms/ enterprises were contacted in all, representing the production side of the economy, both in terms of industry and geographical area. For six of the regions, Norges Bank engaged regional research institutions to be responsible for the network in their respective regions. The research institutions are the National Centre for Innovation and Entrepreneurship in Bodø, the Centre for Economic Research at the Norwegian University of Science and Technology (NTNU), Møreforskning in Molde,

the International Research Institute of Stavanger (IRIS), Agder Research and the Eastern Norway Research Institute (ENRI). In addition, Norges Bank covers a region consisting of four counties in Eastern Norway. Some of the main impressions from the network in 2007 are:

- Solid growth in the business sector continued in 2007, but slowed from the first to the second half of the year. Capacity utilisation was very high. Slower growth is expected in the first half of 2008.
- The export industry continued to grow in 2007. Growth in global markets ensured strong growth in demand and output and high prices in many industries.
- Manufacturing supplying the domestic market experienced a

strong and broad-based upswing in 2007. Growth was strongest in the building materials industry and suppliers to the fish farming and offshore industries. These positive developments moderated somewhat through the year, particularly in the building materials industry. A weaker housing market and capacity constraints were important reasons for this.

- Among suppliers to the petroleum industry, growth in 2007 was slower than in 2006. This is due to the phasing-out of the large-scale projects Snøhvit and Ormen Lange, delays in other large projects and capacity constraints. Owing to capacity problems, there only seems to be scope for moderate growth in the first half of 2008.
- Growth declined sharply in the building and construction sector



in 2007. The most important reasons for this were a weaker housing market and a long period of full capacity utilisation in this sector. Many of the respondents said that in the period ahead they would give priority to profitability over continued growth.

- Growth in retail trade was strong in the first half of 2007 and somewhat weaker in the rest of the year. Sales levels were very high. The service sector exhibited solid growth throughout 2007, particularly in corporate and commercial services.
- Capacity utilisation remained high throughout 2007. In November 2007, 67% of the firms reported that they had some or substantial problems in meeting growth in demand, 53% due to labour shortages. The percentage was about the

same as in November 2006. Engineers in particular were in short supply, followed by skilled workers for manufacturing and building and construction.

- All the industries reported moderate growth in planned investment over the next 12 months.
   Overall, investment plans for one year ahead reported at the end of 2007 indicated somewhat weaker investment growth than plans reported at the beginning of the year.
- The high level of activity resulted in a marked increase in employment in 2007. Growth was strongest in service sectors.
- Expectations with regard to annual wage growth in 2007 rose through the year, averaging 5½% in November 2007.
- The rise in prices accelerated in all industries through 2007 and was in November the most

rapid rise ever recorded in the regional network. The rise in prices was sharpest in building and construction and corporate services. A majority of the firms in the network expected prices to rise less sharply in 2008 than in 2007, reflecting the high rise in prices in many industries in 2007.

 Operating margins increased in all industries in 2007, although growth slowed through the year.

The network was also used in 2007 to examine some topical issues. Norges Bank asked for example about developments in the competitive situation, margins and productivity. Firms/enterprises were also asked how they meet their labour needs in a tight labour market and about their use of foreign labour.

# Chapter 2. Financial stability

#### Main points

2007 has been a turbulent year for financial markets and financial institutions internationally. The turbulence has also had an impact on Norwegian markets, but the effects have not been as strong as to constitute a risk to financial stability. There is little risk of Norwegian financial markets not functioning more or less normally in the period ahead.

The international turmoil has been associated with investments in the US subprime market. Prices in the US housing market have risen substantially in recent years, and the quality of home mortgages has therefore not been a perceptible problem. However, in 2006 the rise in prices came to a halt, and in 2007 they began falling. Defaults on US home mortgages began increasing early in 2007, and subsequently prices for mortgage-backed securities also started falling. Investors who had borrowed money to buy these securities had difficulty renewing their loans. Many attempted to sell the securities, but few were willing to buy. Segments of the market for short-term mortgage-backed securities collapsed. At the same time, prices for securities with other types of credit risk fell.

Problems in raising short-term loans spread and became a major problem in many countries. Norwegian banks noticed in particular that they had difficulties raising loans in USD, but interest rates in the NOK market also rose. Norges Bank and many other central banks injected extra liquidity (see overview of the operations of Norges Bank Monetary Policy). Nonetheless, problems of tight liquidity and higher money market rates persisted to the end of the year.

It was difficult to raise USD loans despite the high capital adequacy and profitability of Norwegian banks. Moreover, there are no indications that banks will incur large loan losses in the immediate future. The financial position of Norwegian enterprises and households is sounder than it has been for a long time, and there is little likelihood that large numbers will have problems repaying

debt. Nevertheless, the high rate of debt accumulation over several years is a danger signal, and households in particular now have very high aggregate debt following the sharp rise in house prices.

The financial system consists of financial institutions, financial markets and payment systems. Financial stability implies that the system is so robust that it continues to function smoothly even if it is exposed to internal or external disturbances. The system shall be able to channel financing, execute payments and distribute risk in an efficient manner. Norges Bank's work to promote financial stability consists of the following:

- surveillance of the risk of shocks to the financial system
- prevent instability by attempting to keep the risk of disturbances at a low level
- work to maintain confidence in the means of payment
- be prepared for crisis management.

The Bank shall contribute to ensuring that financial stability as a whole is sound, and therefore monitors closely the soundness and profitability of key financial institutions and the functioning of the most important financial markets. The aim is to detect risks in good time, to enable decisions to be made in collaboration with the Financial Supervisory Authority of Norway (Kredittilsynet) and the Ministry of Finance. In 2006, a broader three-party collaboration was established between these institutions.

Pursuant to the Norges Bank Act, Norges Bank is responsible for promoting an efficient payment system. According to the Act relating to Payment Systems, the Bank shall authorise and supervise the important clearing and settlement systems in Norway. Norges Bank is responsible for payment settlements between banks' accounts in Norges Bank. The Bank shall also supply society with cash. These responsibilities were discharged without major problems in 2007. Preparations have been made for upgrading the interbank settlement system in 2008.

Norges Bank published two reports on the Bank's assessment of the stability of the financial system in 2007, and submitted its assessment to the Ministry of Finance, the financial industry and the general public. At year-end

#### The legal basis for financial stability work

Norges Bank's remit and responsibility in the area of financial stability are primarily defined in Sections 1 and 3 of the Norges Bank Act. Section 1 stipulates that the Bank shall issue notes and coins, promote an efficient payment system domestically as well as vis-àvis other countries and monitor developments in money, credit and foreign exchange markets. Section 3 states that the Bank shall inform the Ministry of

Finance when, in the opinion of the Bank, there is a need for measures to be taken by others than the Bank in the field of monetary, credit or foreign exchange policy. The Bank shall inform the public about the monetary, credit and foreign exchange situation" Three other sections in the Norges Bank Act are also relevant: Section 13 gives Norges Bank the sole right to issue Norwegian notes and coins. Pursuant to Section 17,

Norges Bank shall carry out banking transactions for the government. Section 19 authorises Norges Bank to issue loans to and make deposits in commercial and savings banks. This implies a special responsibility for ensuring that the banking system functions as intended. Under the Act relating to Payment Systems, Norges Bank has responsibility for authorising banks' clearing and settlement systems and supervising the systems.

2007, the Bank saw some danger signals which may pose a threat to the profitability and soundness of Norwegian financial institutions in the near future. Norges Bank nevertheless feels that the outlook is favourable and that there is little risk of financial markets failing to discharge their socio-economic responsibilities in a satisfactory manner. Payment systems have continued to function as intended, even during turbulent periods in the markets, and there is little risk of their being exposed to serious shocks. Norges Bank is nevertheless preparing for situations where stability may be at risk. In 2007, for example, the Bank took part in a Nordic exercise in how to handle a situation in which a major bank with operations in a number of countries experiences problems.

# The outlook for financial institutions and financial markets

#### What happened in 2007?

Financial market turbulence

There was turmoil in international financial markets in the latter half of 2007. Interest rates rose and house prices fell in the US. Many borrowers with a weak financial situation and poor debt-servicing capacity failed to make interest and principal payments on their loans. This led to increased loan losses. US banks sell many of their mortgage loans onwards in the form of mortgage-backed securities (securitisation), particularly to insurance associations, funds and other capital managers in the US and other parts of the world.

The turbulence in the mortgage market spread quickly to money and credit markets because banks incur a large portion of the credit risk for housing loans. The banks themselves own mortgage-based securities, and they have sold credit insurance and provided lines of credit to special purpose vehicles that have invested in securities. Many banks in the US and Europe have taken or will have to take doubtful loans, which they had intended selling on the bond market, on their own balance sheet. But there is little information in financial markets on the risk of the individual investor. In particular, there is uncertainty regarding the scale of the losses of large international financial institutions. The price of insurance against losses on loans to these institutions has increased substantially.

In autumn 2007, banks worldwide were more cautious about lending one another money because of uncertainty as to which of them might incur substantial loan losses. Many banks were uncertain regarding both their own future supply of liquidity and that of other banks. This led to a considerable widening of the spread between money market rates and expected key rates in the US and other countries (see Chart 33). Several central banks injected large amounts of short-term liquidity into the banking

system. The turbulence in money and credit markets eased in September and October. In November, uncertainty flared up again when banks had to acknowledge that losses were larger than previously assumed, and the spread between money market rates and expected key rates widened again. In December, several central banks announced that they would supply a substantial amount of liquidity, with a fairly long maturity, with the result that the money market picked up. Nevertheless, interbank rates remain higher than the level that will probably be normal once confidence is restored to the market.

Problems in the US mortgage market also led to a marked increase in the spread between corporate and government bond yields. The increase reflects expected lower growth and a higher risk of bankruptcies and the fact that investors generally demand a higher risk premium for holding these securities. Losses on mortgage-backed securities may, for instance, have impaired investors' risk-bearing capacity and thus contributed to a rise in risk premiums. Reduced liquidity in credit markets and higher money market spreads may also be having an impact.

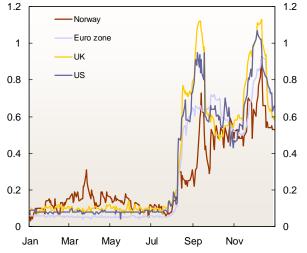
The effect on Norwegian banks

An investigation of the largest Norwegian banks conducted by Kredittilsynet showed that none of them were active in the US subprime mortgage market. However, some had a limited risk of loss through hedge funds that may be exposed to this market.

The turbulence has nonetheless also had an impact on Norwegian financial markets. The spread between Norwegian money market rates and expected key rates increased considerably in autumn 2007 (see Chart 33). Norges Bank has supplied extra liquidity to banks through loan schemes, as other central banks have done. For a period, a number of Norwegian banks found that it was difficult to procure liquidity in USD.

Up to the present, banks' accounts have been little affected. Results for 2007 were solid, but not as good as the previous year measured in relation to total assets (see Chart 34). Banks have solid financial strength. They have suffered some exchange losses on their bond portfolios due to higher credit premiums on corporate bond yields. Over time, higher financial costs are likely to be passed on to the banks' borrowers. A number of banks have recently

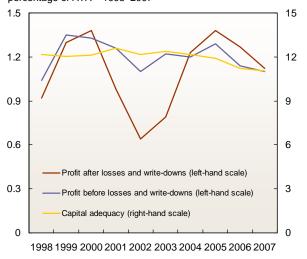
Chart 33 Difference between 3-month money market rate and expected key policy rate<sup>1)</sup>. 1 January - 31 December 2007



 $<sup>^{1)}\,\</sup>mathrm{The}$  expected key rate is measured by the Overnight Indexed Swap  $^{2)}\,\mathrm{Norges}$  Bank's estimates

Sources: Bloomberg and Norges Bank

Chart 34 Banks' capital adequacy and pre-tax profit as a percentage of ATA<sup>1).</sup> 1998–2007



<sup>1)</sup> All banks with the exception of foreign-owned branches in Norway

Sources: Norges Bank and Kredittilsynet

raised their lending rate by more than the increase in the key policy rate.

Strong household debt growth and low household saving ratio

Household debt growth has been strong for several years, primarily driven by a sharp rise in house prices and in household disposable income. After many years of high growth, house prices fell back slightly in autumn 2007. The turnover of resale homes remains relatively high, but the supply of dwellings for sale has increased sharply in relation to demand. Borrowing growth has declined slightly.

Household debt as a share of disposable income increased markedly in 2007 to a historically high level (see Chart 35). If debt is viewed in relation to disposable income less the normal cost of living, the household debt burden is nonetheless lower now than in the late 1980s.

There are figures for the debt of individual households at end-2005. Most households had a low debt burden (less than 300 % of disposable income) in 2007 (see Chart 36). Only 10% of indebted households had a debt burden of

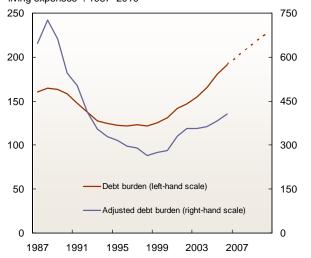
more than 500%, but these households had a large share of total household debt. A large share of households with a high debt burden are young, with low or moderate income.

In 2006, household net saving bordered on zero. Figures for the first three quarters indicate that the saving ratio was also low in 2007. Thus households are not accumulating reserves for leaner times. Nonetheless, households' financial position is sound on balance, after many years of high growth in incomes and financial assets. This, coupled with strong growth in house prices, means that there is low credit risk attached to banks' loans to households.

#### Solid financial strength in enterprises

As a result of the strong growth in the global economy and in Norway, enterprises have posted solid results in recent years. The performance of listed companies indicates that 2007 was also a good year for enterprises. Bankruptcy figures fell, and this past autumn enterprises in Norges Bank's regional network reported solid demand and output growth.

Chart 35 Debt burden  $^{1)}$  and debt burden adjusted for general living expenses  $^{2)}$ .  $1987-2010^{3)}$ 

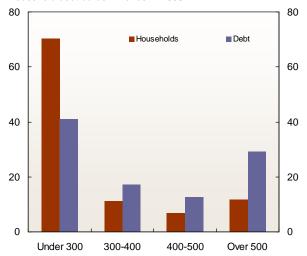


<sup>1)</sup> Loan debt as a percentage of liquid disposable income adjusted for estimated reinvested dividends

 $^{\rm 3)}$  Projections for 2007  $^{\rm -}$  2010

Sources: Statistics Norway, SIFO and Norges Bank

Chart 36 Households with debt by debt burden<sup>1)</sup>. Debt by household debt burden. Per cent. 2005



<sup>1)</sup> Debt burden is debt as a percentage of disposable income. Disposable income is income less interest and taxes. Total debt was NOK 1 470 billion. The number of households was 1.7 million.

Sources: Statistics Norway and Norges Bank

<sup>&</sup>lt;sup>2)</sup> Disposible income less general living expenses, as estimated by the National Institute for Consumer Research, plus housing costs

So far, higher interest rates and borrowing costs have had little impact on enterprise performance. Earnings before tax, depreciation and amortisation increased as a share of interest-bearing debt in 2006. However, strong debt growth and rising financial costs through 2007 may have impaired enterprises' debt-servicing capacity.

Book equity is at a historically high level, due both to solid profitability and to injections of fresh equity. Debt-servicing capacity and equity are the most important factors behind developments in bankruptcies and non-performing loans. Norges Bank's model of the enterprise sector therefore indicates that few bankruptcies and defaults can be expected on loans to enterprises in the immediate future. The credit risk associated with banks' loans to enterprises will probably remain low in the short term. However, macroeconomic projections indicate that borrowing costs and the number of bankruptcies may increase in the period to 2010.

#### The outlook for financial institutions

The outlook for the financial system remains satisfactory. After several years of high earnings, banks are solid and well equipped to cope with a period of weaker results. This reflects the sound financial position of households and enterprises, resulting in very low loan losses. But debt has grown rapidly, and a higher interest rate level coupled with lower income growth may make it more difficult for customers to service their debt in the future. Banks must expect slightly higher loan losses than they have had in recent years.

Strong competition for customers will continue to squeeze banks' interest margins. In addition, growth in lending to households will probably moderate due to higher interest rates, an already high level of debt and slower house price inflation. Growth in banks' interest income will probably be slower than previously. At the same time, turbulence in money and credit markets has increased financing costs.

The prospect of higher losses and lower growth in net interest income will exert pressure on banks' profits. Earnings may be somewhat weaker than in recent years, and this may place greater demands on banks' cost management.

#### What are Norges Bank's responsibilities?

Norges Bank's monitoring is intended to identify trends that may undermine the earnings of financial institutions and create imbalances that may pose a risk to the stability of the financial system. Twice a year the Bank publishes the *Financial Stability* report, which focuses on the situation of banks.

Norges Bank places special emphasis on assessing systemic risk in the financial sector. Banks play a key role in credit provision and payment services. They differ from other financial institutions in that they finance their operations through deposits from the general public. Developments in banks are therefore important to financial stability.

#### What has Norges Bank done in 2007?

Norges Bank uses broad-based underlying data to monitor the financial system. The data consist of both statistical material and information obtained directly from financial market participants. Regular meetings are held with banks to discuss current problems. All this information forms the basis for the assessments published in the *Financial Stability* report. In 2007, there was an even stronger focus on identifying and communicating the most important risk factors for the financial system. Stress tests were used to demonstrate some of the risk factors that may have an impact. Advice was also provided on risk-reducing measures.

Twice a year, Norges Bank presents an overall assessment of financial stability in Norway in a submission to the Ministry of Finance. The submission is based on the *Financial Stability* reports, and is sent in connection with the publication of the reports. Both submissions in 2007 indicated that the outlook for the financial system was satisfactory. At the same time, risk factors that might pose a threat to the positive picture were pointed out.

Norges Bank's submission of 29 November stated that the risk to Norwegian financial institutions and financial markets appears to be somewhat greater than at year-end 2006. We will monitor four factors in particular:

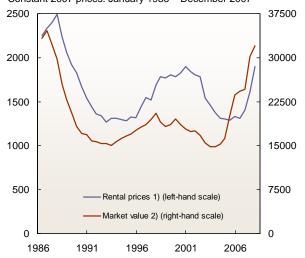
 Risk of a global downturn The problems in the US mortgage market and turbulence in money and credit markets may result in slower growth in the global economy. This will mean weaker earnings for Nor-



wegian enterprises and will thereby affect Norwegian banks through increased losses, lower lending growth and less demand for other banking services.

 Conditions in money and credit markets Developments in international financial markets will still affect Norwegian banks and enterprises. The interest premium on loans with credit risk increased in the autumn, and willingness to take risk has diminished. The same ap-

Chart 37 Rental prices and market value of office space in Oslo. Constant 2007 prices. January 1986 – December 2007



- 1) Office space of good standard in downtown Oslo
- 2) Centrally located office building of satisfactory standard in the Oslo area

Source: OPAK

plies to the markets in which Norwegian banks and enterprises raise loans.

- High household debt The debt of Norwegian households is historically high, and the saving ratio is unusually low. A higher saving ratio is desirable in the interests of households' situation, but at the same time a change could lead to lower demand in the Norwegian economy, weaker corporate earnings and, after a period, higher bank losses.
- High rise in commercial property prices Selling prices and rents have increased substantially over the past year (see Chart 37). Property investors are expecting a strong rise in prices and rental levels, but lower demand in the Norwegian economy may have a dampening effect. A concurrent rise in interest rates could constitute a risk to the earnings of property companies and result in higher losses for banks. It should be borne in mind that the property industry accounted for a large share of loan losses during the banking crisis in 1988-1993.

In its submission of 1 June, Norges Bank pointed to much the same factors, but also stated that the low risk premiums in financial markets could increase substantially, making the financing of Norwegian enterprises and banks more costly. This did in fact happen in the course of the summer and autumn.

Norges Bank has separate meetings with the Ministry of Finance and with Kredittilsynet regarding the conclusions in the *Financial Stability* reports. Stability questions and crisis management are also discussed at regular tripartite meetings between the Ministry of Finance, Kredittilsynet and Norges Bank.

Norges Bank places emphasis on communicating the financial stability analyses to the general public. An important purpose of the reports is to increase the knowledge level and create debate regarding circumstances that have a bearing on financial stability. The analyses also aim to

influence financial market participants by providing them with a better basis for taking steps to reduce their risk.

The *Financial Stability* report is presented at a press conference, which is webcast live. The report is discussed at bilateral meetings with the Norwegian Savings Banks Association and the Norwegian Financial Services Association. The report is presented to individual banks and in public speeches. In a speech at the Norwegian Savings Banks Association's annual meeting on 11 October, the Governor discussed the circumstances that led to global financial turbulence and what can be learned from it.

#### Stress testing

The stress testing programme is to take place in the period 2007 – 2010. The purpose is to further develop the system of models we use to evaluate how banks tolerate turbulence that affects the debt-servicing ability of borrowers and their own earnings and cost developments. The model system consists of:

- a satellite model associated with Norges Bank Monetary Policy's macroeconomics model; it is used to input financial stability considerations into monetary policy and to include financial variables in the Bank's baseline scenario for the Norwegian economy;
- a small simultaneous macroeconomics model (SMM), which is used to evaluate risk factors that are exogenous to the financial system;
- a model for estimating the probability of enterprise bankruptcy (SEBRA), which is used to estimate banks' credit risk in connection with loans to enterprises;

- a household model, which is used to estimate households' financial margin and banks' credit risk in connection with loans to households:
- a model for the accounts of the five largest banks, which is used to estimate the banks' capital adequacy and earnings.

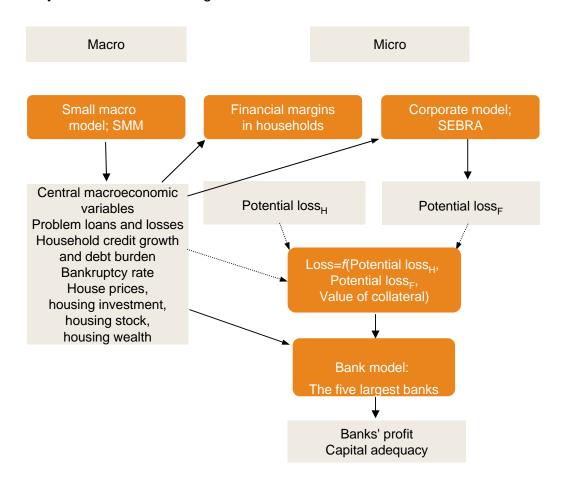
The models form a recursive system (see chart). The macroeconomics model (SMM) is used to design different macroeconomics scenarios where shocks may have one or more sources and persist over a period of time. The SMM results are used in the corporate model, the household model and the bank model to project the variables in these models. The corporate and household models provide information on which industries and household categories will have most problems in servicing their bank debt. The bank model provides information on the extent to which the largest and most systemically important banks will have problems in the form of low

earnings and poor capital adequacy. The method for utilising the macro-scenario for projections in the enterprise model was changed in 2007, so that a broader set of macro-variables is used.

The stippled portion of the chart shows that we plan to model bank losses as a function of potential losses from the household and enterprise models, plus mortgage values, which stem from the macro-model in the form of house prices. This will provide an alternative and more micro-based estimate of bank losses than the estimate that comes directly from the macro-model.

Both the *Financial Stability* reports in 2007 contained stress tests, and in the second report the whole of the new system was used. The consequences of a marked fall in household expectations and subsequent changes in the housing market are examined in these analyses in combination with other negative tendencies.

#### System for stress testing



Norges Bank has developed models that are used in the work of analysing and evaluating financial stability (see box on stress testing). In 2007, the two macroeconomics models were expanded to include estimated relationships for housing investment and for enterprises' problem loans. Problem loans are non-performing loans and other loans identified by banks as particularly exposed to losses. A new, somewhat simplified model of the enterprise sector has been estimated and is now being used. Data that cover all Norwegian households in 2004 and 2005 have been used as a basis for calculations in the household analyses. The bank model has been updated with the most recent accounts figures. Modelling of the banks' total net interest income and commission income has reached an advanced stage.

# The framework conditions for financial institutions and financial markets

#### What happened in 2007?

Over the past year, several major regulatory changes have been made with a view to strengthening the stability of the financial system. Attempts have been made to adjust requirements regarding risk and provide incentives for improving risk management. The changes have largely been developed in the EU as part of the work to achieve a harmonised set of rules and regulations in Europe. Norway has implemented the EU rules through the EEA Agreement.

New capital adequacy rules for banks

The new capital adequacy rules (Basel II) entered into force on 1 January 2007. The aim is to create greater consistency between the capital requirements and the risk of the individual bank. The rules have three pillars: Pillar 1 sets out minimum capital requirements (8%). Pillar 2 consists of an assessment of the total capital requirements of the individual institution and individual review by supervisory authorities. Pillar 3 concerns institutions' publication of information designed to promote stronger discipline in the markets. Ten Norwegian banks assessed their capital requirements pursuant to Basel II in 2007,

while the others used a transitional arrangement whereby they assessed their capital requirements according to the old capital adequacy rules (Basil I). With effect from 1 January 2007, all banks are required to use Basel II.

New financial strength regulations for insurance In contrast to the EU, insurance companies in Norway have been subject to the same capital adequacy requirements as banks (Basel I), but they will not be subject to the new Basel II requirements. While waiting for the new solvency rules for insurance in the EU (Solvency II), the Ministry of Finance has established adjusted capital

#### **Covered bonds**

The regulation relating to covered bonds came into force on 1 June 2007. The backdrop to the regulations is that banks' lending has increased more than deposits in recent years. When deposits do not cover lending, the difference must be covered in other manners. Covered bonds are the result of the result of a long period of work on alternative sources of funding.

Banks cannot issue covered bonds, but several Norwegian banks have established mortgage companies that can issue these bonds. Banks can transfer loans that do not have too high a risk to mortgage companies that finance the loans with covered bonds, thereby reducing the need to borrow in the capital markets. Up to the present, only low-risk mortgage loans have been transferred from banks to these mortgage companies. The nature of the financing, and the organisation of

the mortgage credit institutions is of little relevance to the customers, as customer contact is still dealt with by the banks.

The owners of these bonds have a preferential claim on a selected pool of the mortgage company's assets. Because the loans that are financed are very secure, the covered bonds can be issued with lower yields than ordinary bank bonds, thereby reducing funding costs. Housing loans can also be sold in the form of bonds. It is primarily insurance companies, pension funds and others that prefer a safe long-term return that invest in covered bonds.

Mortgage companies that issue covered bonds must largely finance their activities by means of these bonds. They are required to register the bonds in accordance with the regulatory provisions. The mortgage companies are subject to the Basil II capital adequacy

requirements and to supervision by Kredittilsynet, which also appoints an independent inspector. The inspector shall oversee that the register is correctly maintained and regularly informs Kredittilsynet of his or her assessments.

At the end of 2007, the mortgage companies of DnB NOR, the Terra Group and the SpareBank1 Alliance had issued covered bonds for a total of about NOK 50bn. The issues were denominated in NOK, EUR and CHF with maturities of between 2 and 9 years. All rated issues were assigned an AAA rating, and all have achieved yields that were lower than the owner banks would have had to pay. The turbulence in financial markets in the second half of 2007 may have reduced the issuance of new bonds in the market. The turbulence has led to somewhat higher yields, but less so than for bonds with a higher credit risk.

adequacy requirements for insurance companies, with effect from 1 January 2007. The EU Commission adopted a proposal for Solvency II in summer 2007, but it cannot enter into force until 2011/2012 at the earliest. The proposal is based on three pillars, in the same way as the capital adequacy requirements for banks.

#### International accounting standards

Since 2005, listed financial groups have been required to set up their corporate accounts according to international standards (IFRS). IFRS is intended to make accounts easier to understand and easier to compare. With effect from 2007 Q2, banks forming part of listed groups are required to set up their accounts according to IFRS, but they are permitted to use a simplified version. Other banks may choose to use either IFRS or the ordinary rules in the accounting legislation.

#### New acts relating to securities trading

New acts relating to securities trading and regulated markets that implement the EU Markets in Financial Instruments Directive (MiFID), the Transparency Directive and the Takeover Bid Directive, entered into force on 1 November 2007 and 1 January 2008. These acts replace the previous Securities Trading Act and Stock Exchange Act. The new acts include new requirements for investment firms' reporting of prices and trading, and extend the area that is subject to authorisation to include investment advisory services. The rules regarding when binding offers must be made for the acquisition of a company have also been made more stringent.

#### What are Norges Bank's responsibilities?

Norges Bank endeavours to ensure that financial institutions and financial markets can fulfil their responsibilities in the Norwegian economy. Financial institutions and other financial market participants shall as far as possible have framework conditions that provide an incentive to do what is most profitable from a socio-economic point of view. Whereas Norges Bank has a direct responsibility for the rules for the payment system, the Bank shall primarily advise the Ministry of Finance and Kredittilsynet regarding the rules applying to financial institutions and financial markets.

#### What has Norges Bank done in 2007?

Norges Bank did not submit its own proposals for amendments to the rules governing the financial industry in 2007. The Bank submitted comments to 13 cases of proposed amendments, primarily from the Ministry of Finance, that had been circulated for comment. Norges Bank expressed its views on the following: a draft regulation to a new Act relating to securities trading, a draft regulation relating to securities trading where notification is required etc., a draft regulation relating to covered bonds and a draft regulation relating to the duty to provide information in connection with the offering of structured products. Norges Bank mainly supported the proposals, but submitted remarks in some of the cases.

Norges Bank has one member on the Banking Act Commission. The commission was appointed in 1990 to review the financial legislation with a view to modernising and coordinating it. The commission's mandate has subsequently been expanded on a number of occasions, most recently in 2007, when it was asked to review legal instruments for savings banks.

#### Payment systems

#### What happened internationally in 2007?

A Single Euro Payment System

In Europe, the banking industry, central banks and public authorities are working to achieve a Single Euro Payment Area (SEPA). The aim is to make cross-border euro payments within the EU as simple, efficient and secure as payments within a member state. The European banking industry has therefore commenced the establishment of joint schemes for the EU/EEA countries. In spring 2007, the Norwegian banking industry decided to join the first of these schemes, and the banks are now entering into agreements to this end.

#### The EU Directive on Payment Services

A common legal framework is needed to bring about a European payments market. The new Directive on Payment Services provides this legal platform. The Directive was formally approved by the EU Parliament and Commission on 13 November 2007, and specifies which institutions

can offer payment services to the general public. It defines rights and obligations for users and suppliers of payment systems. The Directive is expected to increase efficiency and cut costs. The Ministry of Finance has appointed a working party to submit proposals for transposing the Directive into Norwegian law.

#### Upgrading of the EU settlement system

TARGET (Trans-European Automated Real-time Gross settlement Express Transfer system) was established in connection with the launching of the euro in 1999. TARGET was an interlinkage of the settlement systems of EU countries, and Norwegian banks are connected to TARGET through EU schemes. In November 2007 a new version was launched – TARGET2 – with a single shared platform for settlement systems. TARGET2 makes it simpler for banks to handle payment flows and improve the efficiency of their liquidity management. TARGET2 also makes better provision for handling contingency situations.

A centralised European securities settlement system? The ECB and the Eurosystem are considering establishing a centralised settlement system for securities denominated in euros. According to plan, the system will be owned and operated by the Eurosystem. The ECB points out that cross-border securities settlement in the euro area is expensive, and believes that a shared system would result in considerable savings for participants. If Norwegian participants are in favour, it may be relevant to settle Norwegian securities in the same system in the future. Norges Bank is monitoring developments in the project, and coordinating the views of participants in Norwegian securities markets.

#### What happened in Norway in 2007?

The use of payment services

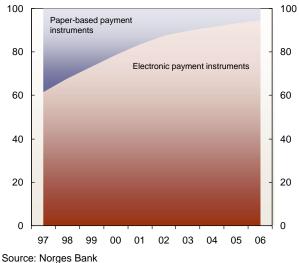
In Norway, the use of electronic payment services has been growing for a number of years. They are produced at a lower cost than paper-based services and enable more rapid execution of payments. The trend has therefore increased the efficiency of the Norwegian payment system. Norges Bank publishes an *Annual Report on Payment Systems* which describes central developments in the system,

and is an important part of Norges Bank's oversight of the payments system.<sup>8</sup> The report for 2006 was the twentieth consecutive report.

The trend of increased use of electronic payments systems continues (see Chart 38), with more and more payments taking place by means of cards and Internet banking. At end-2006, there were more than 9m payment cards in Norway, 17% more than a year earlier. The number of card payments rose by 14%, with an average 185 payments per inhabitant. The numbers of payment terminals and merchants with terminals also increased. Norway is one of the countries in the world where cards are used most. The increase in the use of credit cards is higher than the increase in the use of debit cards. Private individuals and enterprises use Internet banking more than before, and make increasing use of electronic invoicing and direct debit agreements. At the same time, paperbased services are used less. In 2006, retail customers transferred NOK 585bn using Internet banking services. This is three times the amount transferred five years ago. Retail customers paid 82% of their bills electronically.

Prices for electronic payment services are lower than for paper-based services (see Chart 39). Prices that reflect the production costs of the services contribute to the transition from paper-based to electronic payment services.

Chart 38 Use of paper-based and electronic payment instruments. 1997–2006. Transactions as a percentage of total



<sup>&</sup>lt;sup>8</sup> Since the statistics for 2007 are not yet available, the statistical data below have been obtained from the *Annual Report* for 2006

#### Upgrading of infrastructure

NICS (Norwegian Interbank Clearing System) is the most important channel for transactions that are to be settled individually in Norges Bank. NICS reported very high turnover in 2007 (see Chart 40). The bulk of the transactions, measured by value, were received in SWIFT format and transmitted individually (gross) to the NBO interbank system. On average, 600 of these transactions were sent daily in 2007. By way of comparison, a daily average of around 5.5m transactions undergo retail clearing. NICS had stable operations in 2007. The number of disruptions has been more or less unchanged since 2006, and is low compared with previous years.

Bankenes BetalingsSentral AS, which is NICS' operations centre, plans to change the technological platform for its entire operation. Changes are also to be made in the manner in which NICS functions. One important change is that the size of the payment and not the payment method will determine whether the transaction is sent for individual settlement in Norges Bank (gross) or whether it will form part of a netting transaction. This sorting will reduce the amount that goes to netting and thereby reduce the consequences of a settlement not proceeding smoothly. Changes in BBS and NICS are to take place in several stages in the period 2008 to 2010.

The Norwegian Central Securities Depository (VPS) settles trades involving equities, bonds, notes and short-term paper, and calculates net positions for the participants in the securities settlement. Securities settlement is carried out in VPS, while cash positions are settled in NBO. Only banks can take part directly in settlements in Norges Bank. Brokers take part in the settlement through the incorporation of their positions in the position of a bank in which they are customers. In 2007, work commenced to consider changes in the Norwegian securities settlement system.

#### What are Norges Bank's responsibilities?

Oversight and supervision

Pursuant to the Norges Bank Act, Norges Bank is responsible for promoting an efficient payment system. Such a system shall enable users to make payments rapidly, securely and cost-effectively. A modern economy with a large number of payment transactions makes considerable demands on the efficiency of the payment system. Participating in payment systems can expose banks to risk. This applies particularly in interbank systems where banks net and settle large amounts among themselves.

An important aspect of Norges Bank's oversight is ensuring that international guidelines for interbank systems

Chart 39 Weighted average of prices for electronic and paperbased payment services. 1998–2007. Nominal prices in NOK

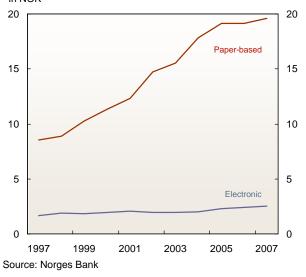
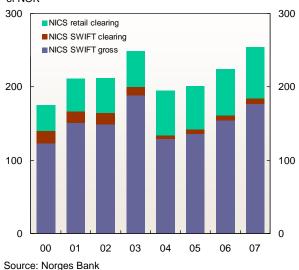


Chart 40 Average daily turnover in NICS. 2000–2007. In billions of NOK



are followed. The most central guidelines in this respect are the ten core principles laid down by the Committee on Payment and Settlement Systems (CPSS) in 2001. The core principles set out guidelines for how legal, financial and operational risk should be delimited. CPSS also provides recommendations for what central banks can do to ensure that interbank systems comply with the core principles.

The Act relating to Payment Systems makes Norges Bank the authorisation and supervisory authority for the Norwegian interbank systems. The purpose of the Act is to ensure that interbank systems are organised in such a way as to ensure financial stability, and the Act therefore stipulates requirements concerning the design of the system. Through its supervision of the authorised systems, Norges Bank ensures compliance with the requirements of the Act. The Act gives Norges Bank the right to require changes in systems.

Norges Bank's oversight extends beyond monitoring for compliance with the concessionary requirements. The oversight also covers unauthorised interbank systems and systems for settling transactions involving different financial instruments. In its oversight, Norges Bank places emphasis on conditions other than those for which requirements are made in the Act relating to Payment Systems. The requirements concerning authorisation and supervision do not apply to Norges Bank's own settlement system, NBO, but the system is nevertheless overseen in accordance with international recommendations.

Norges Bank also monitors important development trends in payment systems designed for the banks' customers. These systems are highly efficient in Norway, partly because of the increasing use of electronic rather than paper-based instruments. Prices play an important part by encouraging users to choose the instrument that is most effective.

#### Banking services for the government

Norges Bank is responsible for the management of the central government's liquid assets and debt in Norwegian kroner. A prime consideration is to gather government liquidity each day in the government's sight deposit account in Norges Bank. This is done by the banks that perform payment services for the central government,

i.e. DnB NOR Bank ASA, Nordea Bank Norge ASA and SpareBank 1 Gruppen. Pursuant to the Norges Bank Act, Norges Bank is obliged to provide banking services for the central government. Norges Bank has separate agreements with the Ministry of Finance and with banks concerning the performance of these services.

#### Settlement of interbank payments

Norges Bank is the settlement bank at the highest level for payments between banks in Norway. This responsibility is associated with Norges Bank's responsibility pursuant to the Norges Bank act to promote an efficient payment system both domestically and vis-à-vìs other countries, and to banks' need to maintain accounts and raise loans in Norges Bank. Because the central bank is the issuer of money, deposits in central bank money do not involve credit or liquidity risk. Therefore, the interest rate on central bank money provides the basis for interest rates in the entire economy.

A smoothly functioning settlement system is important for promoting financial stability. Interbank claims and liabilities arise as a result of banks' financial transactions, payment services and customers' positions in cash settlement of securities transactions. Final settlement of these positions is made through entries in the banks' accounts in Norges Bank.

#### What has Norges Bank done in 2007?

#### Oversight and supervision

The interbank systems that are authorised and are supervised by Norges Bank are the Norwegian Interbank Clearing System (NICS) and DnB NOR's interbank system. NICS' primary activities consist of netting small and medium-sized payments and calculating the positions of the participant banks. The positions are sent to Norges Bank and settled in Norges Bank's Settlement System (NBO). NICS is also a channel for sending large individual interbank payments for settlement in Norges Bank. DnB NOR is a settlement bank for about a hundred small and medium-sized banks.

In 2007, NICS and DnB NOR's interbank systems were evaluated in the light of international recommendations. Norges Bank's own system, NBO, was also evaluated. The assessments were published in Norges Bank's



Annual Report on Payment Systems. All the recommendations were complied with, or largely complied with.

In 2007, supervision of NICS and DnB NOR is continuing along the same lines as previously. The two system owners are to report regularly on important changes in ownership and in organisational and operating conditions. System stability is monitored by means of reports on operations. In addition to regular contact, there are regular supervisory meetings. In 2007, the restructuring of the NICS system has been an important issue. Pursuant to the Act relating to Payment Systems, Norges Bank is to notify EFTA's supervisory body of systems that are covered by the rules relating to legal protection in connection with bankruptcy. Notification has previously been given of DnB NOR's system and Norges Bank's own system, NBO. NICS has not been notified to EFTA because the agreements concerning settlement of card transactions (the BankAxept agreements) have not been approved by Norges Bank. In 2007, the banks reached consensus on a new agreement which Norges Bank has approved, and NICS has now been notified to EFTA's supervisory body. Sparebanken Midt-Norge applied to Norges Bank in 2006 for exemption from the authorisation requirement and in 2007 it took over as settlement bank for a group of savings banks. They were granted exemption because the system plays only a limited part with respect to financial stability. The system owner is to submit annual reports on operations.

As part of its supervisory activities in 2007, Norges Bank held meetings with key participants in settlement of financial instruments. Among other things, Norges Bank took part in the work of assessing changes in the Norwegian system for securities settlement (VPO).

The settlement risk associated with foreign exchange transactions was substantially reduced for Norwegian participants in 2003, when NOK was included in the international system for settlement of foreign exchange transactions, CLS – Continuous Linked Settlement. The CLS system is monitored by the central banks with currencies in the system, including Norges Bank. CLS Bank's head office is in New York, and the Federal Reserve's office has the overall supervisory responsibility.

#### Reports

In 2007, Norges Bank took part in two working groups that reported on the payment system. In September 2006 the Ministry of Finance asked Kredittilsynet, the Competition Authority and Norges Bank to evaluate the market for international payment cards to consider whether the charges the card companies are allowed to impose should

be regulated. The working party submitted its recommendations to the Ministry of Finance in autumn 2007.

In December 2006, the Ministry of Finance asked Kredittilsynet to appoint a working party to consider the question of whether bank account numbers could be permanently associated with customers, and other measures that would make it easier to change banks. The working party had representatives from Kredittilsynet, the Norwegian Financial Services Association, the Norwegian Consumer Council, the Savings Banks Association, Norges Bank and the Competition Authority. The group concluded that it would be too expensive to allow customers to keep their account number when moving to a new bank, and therefore did not recommend this measure. However, the group proposed a number of other measures to make it simpler to change banks.

#### Banking services for the government

Norges Bank's responsibility of providing banking services for the government is discharged by means of a separate account system that is part of the government's financial management. Operating services for this account system are delivered by EDB Business Partner ASA according to an agreement with Norges Bank. The operating and system solution commenced operations in November 2006.

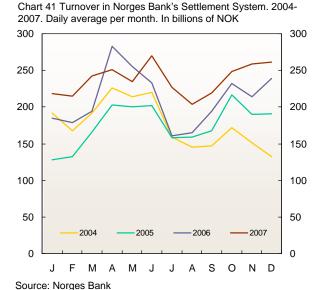
The agreement applies for three years from 2007. Norges Bank has an option to extend the agreement for two years at a time for up to six years. The day-to-day management of these accounts takes place in Norges Bank.

The government receives interest on its sight deposits in Norges Bank. The interest rate is set quarterly, and the rates in the four quarters of 2007 were 4.00%, 4.25%, 4.25% and 4.75% p.a. The Ministry of Finance sets special internal interest rates for individual government funds and deposits. The central government, represented by the Ministry of Finance, pays annual remuneration that covers the costs of the banking services provided by Norges Bank for the government.

#### Interbank settlement

At the end of 2007, 142 banks had accounts in Norges Bank. Of these, 23 had daily payment settlement in Norges Bank, either of individual payments or of netted positions. The majority of the banks only make transactions over their accounts in Norges Bank occasionally, for example in connection with raising loans, making deposits or withdrawing cash from the central bank. Because all the largest banks have daily payment settlements in Norges Bank, however, the bulk of payments are settled in the central bank. Each day payments aggregating some

Chart 42 Securities pledged as collateral for loans in Norges



Bank. Last day of each month. In billions of NOK

200

180

160

140

Collateral before haircut Collateral after haircut

120

Jan 06 May 06 Sep 06 Jan 07 May 07 Sep 07

Source: Norges Bank

NOK 150–250bn are settled in Norges Bank. Chart 41 shows turnover in Norges Bank's Settlement System in recent years.

Norges Bank extends loans to banks against collateral in the form of securities. Such loans contribute to more efficient implementation of monetary policy and payment settlements. Access to the borrowing facilities is provided for in a separate regulation and in more detailed guidelines drawn up by Norges Bank. In 2005 Norges Bank introduced new rules for collateral for central bank loans, entailing changes in the requirements regarding outstanding volume, minimum credit rating and listing in approved markets. At the same time a preliminary solution was introduced for two years for securities banks had already pledged as collateral to Norges Bank.

With effect from November 2007, all securities posted as collateral for loans in Norges Bank were to fulfil the requirements laid down in 2005. A more detailed account of the rules is presented in Norges Bank's *Annual Report* for 2005 (pages 64–65). Some rules for banks were relaxed in November 2007. Securities denominated in Australian and New Zealand dollars were allowed as collateral. It was also made easier for banks to pledge units in securities funds as collateral. These units will no longer be given a haircut for currency risk if the fund itself is hedged against currency risk. It also became permissible to post these units as collateral even if the securities fund invests in

securities that are not listed on a stock exchange or other approved market. A binding commitment to carry out this listing 14 days at the latest after the fund has purchased the securities is nevertheless required. Chart 42 shows banks' collateral in Norges Bank in the past two years.

The central banks of Denmark, Sweden and Norway permit banks to make a deposit in one of the central banks as collateral for a loan in one of the other central banks. The arrangement, which is called the Scandinavian Cash Pool, can only be used to secure intraday liquidity. It enables banks to make better use of their liquidity across borders.

Banks pay for account maintenance and settlement services in Norges Bank. The price structure consists of an access fee for new participants, annual fees for participation in the various parts of the settlement system and a unit price for transactions. Prices are set each year and announced in a circular from Norges Bank. The income shall cover Norges Bank's costs in connection with account maintenance and settlement services.

The operation and administration of the account maintenance and settlement services for Norges Bank is provided by ErgoGroup AS by to agreement with Norges Bank. In 2007, the operation of the settlement system was satisfactory and of approximately the same quality as in preceding years.

### Study of the costs of payment systems in 2007

In order to learn more about the efficiency of the Norwegian payment system, Norges Bank conducts an analysis of the costs associated with the payment system. Various types of payment cards, giro services and cash services used by the general public are studied. The costs of using pay-

ment systems occur at several levels, so three separate surveys are carried out: one survey covers the costs in banks and finance companies; one covers retail sector costs; and one analyses the payment behaviour of the general public. The surveys of the general public and the retail sector were

carried out in autumn 2007. The banks and finance companies will report their costs for 2007 in the course of spring 2008. The results of the three surveys will be combined into a joint analysis which will be completed in 2008.

<sup>&</sup>lt;sup>1</sup>The survey is based upon and continues the surveys carried out in 1989, 1994 and 2001

#### New interbank settlement system in Norges Bank

In 2003, the operation and maintenance of the IT system underlying Norges Bank's settlement system was transferred to ErgoIntegration AS (now ErgoGroup AS). In August 2004, Norges Bank commenced preparations to purchase a new settlement system solution. The reasons for this were that the tasks for which the settlement system is used have changed through the years, and that the system is nearing the end of its technical life. It would be more difficult to upgrade the system, and there are few persons with the necessary expertise in ICT systems. The general principles for the new settlement system are as follows:

- A special system shall be used for interbank settlements which has been developed internationally, with adaptations for the Norwegian infrastructure.
- Communication with other systems shall be in accordance with internationally accepted standards.
- An external supplier shall continue to be responsible for the operation of the settlement system.

- The settlement system shall be cost-effective and comply with Norges Bank's requirements regarding functionalities, stability and availability.
- The banking industry shall participate actively in all the main stages of the introduction of the system.

In March 2006, Norges Bank signed an agreement with the Italian company SIA S.p.A. (now SIASSB) for the delivery of software for a new interbank settlement system. The supplier was selected in accordance with the Public Procurement Act following a tendering round with potential suppliers from the EEA. SIASSB collaborates with the South African company Perago on the delivery of system solutions to a number of central banks and financial agents in other countries.

Since the signing of the agreement, Norges Bank and the supplier have worked together to adapt the new system solution to Norges Bank's requirements and to ready the new system for use. The aim is to put it into operation in 2008.

The new settlement system will have the same general functions as the current system. One of

the most important changes will be that all payment orders will be transmitted to the system by the international messaging system SWIFT or by means of NBO Online, a type of Internet banking system. At present both SWIFT and some specifically Norwegian systems are used. The new settlement system has several functions that do not exist in the present system and which the banks have elected not to use initially. As they gain experience with the new settlement system, the banks may wish to use the new functions which may improve liquidity management and make the processing of transactions more efficient.

Norges Bank and banks are the main users of the settlement system. Norges Bank is therefore in close communication with the banking industry on the new system. The Bank is also in contact with other central banks that have undertaken similar processes in recent years, particularly Sveriges Riksbank, which has chosen the same supplier as Norges Bank.

It is intended that the banks will cover the costs to Norges Bank of installing and operating the new settlement system.

#### Notes and coins

## Developments in the use of notes and coins in 2007

The value of banknotes and coins in circulation has increased in the last four years. In 2007, the value of cash in circulation rose by a little over 2% to an annual average of about NOK 50.2bn (see Chart 43). Banknotes and coins in circulation nevertheless continued to fall as a share of the total means of payment used by the public (M1).

The average value of notes in circulation was NOK 45.7bn in 2007, about 3% higher than in 2006. There is a clear tendency for the number of 500-krone notes in circulation to increase and the number of 1000-krone notes to decrease.

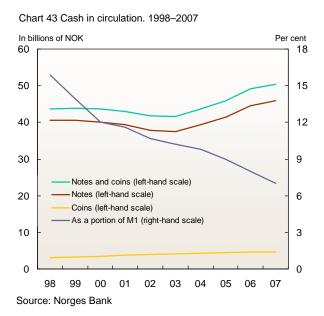
The average value of coins in circulation in 2007 was NOK 4.6bn, a decline of over 2% compared with 2006. The composition of coins in circulation shows that the share of 20-krone coins has decreased. This is a result of the ban on slot machines that came into effect on 1 July 2007, and which led to an influx of 20-krone coins into Norges Bank.

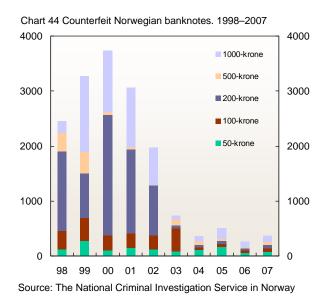
No special editions of circulation coins or gold or silver commemorative coins were issued in 2007. Commemorative coins are discussed in a separate box. The number of counterfeit Norwegian notes that were seized is low compared with other countries (see Chart 44). The increase prior to 2000 was attributable to an increase in the number of colour copying machines, scanners and printers. In the period 2002 –2004 Norges Bank added new metallic features to the 100- and 200-krone notes. The security features on the 50-krone note were also upgraded in 2004.

#### What are Norges Bank's responsibilities?

The Norges Bank Act assigns Norges Bank responsibility for issuing notes and coins. This involves ensuring that a sufficient quantity of notes and coins is produced to meet the general public's cash requirements and to ensure that this cash is available, in a manner that promotes an efficient overall payment system.

Banks order cash from and deliver surplus cash to Norges Bank. Similarly, the general public withdraws cash from and deposits surplus cash in banks. Norges Bank thus supplies banks with cash, and the banks are responsible for supplying cash to society. The central bank is also responsible for maintaining the quality of notes and coins in circulation by seeing to it that worn and damaged notes and coins are withdrawn from circulation and destroyed.





The central bank is responsible for ensuring that cash functions efficiently as a means of payment, which entails assuring the public that notes in circulation are genuine. This means that notes and coins must be equipped with security features that are difficult to copy and that make it easy for the public to differentiate between genuine and counterfeit notes and coins.

In accordance with the Norges Bank Act, Norges Bank has the sole right to issue banknotes and coins. Norges Bank must therefore function as debtor for these means of payment. Production, destruction and distribution may be performed by others, but Norges Bank must ensure that these tasks are carried out in accordance with the central bank's requirements.

#### What has Norges Bank done in 2007?

In recent years, Norges Bank has assessed its role in cash distribution with a view to optimising the distribution of responsibility among the various participants and achieving a clearer distinction between different types of services. Norges Bank wishes to have a wholesaler role in cash distribution so that banks handle the further distribution of cash on the basis of their needs. Various measures have been initiated to this end. The number of central bank depots has been reduced to five (Bergen, Oslo, Stavanger, Tromsø, Trondheim), and the banks' conditions for making deliveries to and withdrawing cash from these

depots has been adjusted. An arrangement has also been established whereby Norges Bank pays compensation in the form of interest for cash held in banks' own depots to meet their own needs. At end-2007 there were 16 private cash depots throughout the country. As a result of these changes, there has been a considerable reduction in banks' deposits in and withdrawals from Norges Bank.

Operations in Norges Bank's Printing Works were wound up on 30 June 2007, and the central bank will now purchase banknotes from other printing works. Agreements have been signed with De La Rue International Limited in the UK and Francois-Charles Oberthur Fiduciaire in France. The contracts apply for the period 2007-2012 and the first delivery will be made in 2008.

Norges Bank has a contract to purchase coins from Det Norske Myntverket AS until 31 December 2009. In autumn 2007 a tendering process commenced to select a supplier from 2010.

#### Norges Bank's cash handling costs

The costs associated with Norges Bank's role as issuer consist of the production costs for new notes and coins, the costs of maintaining the quality of notes and coins in circulation and the costs of distribution. The maintenance costs are related to the replacement of worn notes as well as the destruction of damaged, worn and invalid notes and coins. Distribution involves transport to the central bank's

Table 2 Norges Bank's cash handling costs

Figures in millions of NOK

	2003	2004	2005	2006	2007
Total costs for production of notes NB Printing Works*	45.0	48.7	48.1	50.7	24.5
Costs for purchase of coins	38.1	26.4	26.2	53.1	60.3
Total production costs	83.1	75.1	74.3	103.8	84.8
Costs for central administration and transport*	15.3	17.6	16.6	20.3	21.6
Purchase of external depot and processing services	51.5	49.1	49.2	30.6	27.3
Handling fees related to banks' deposits and withdraw	al of cash*	*	-23.7	-7.9	-6.2
Total distribution costs	66.8	66.7	42.1	43.0	42.7
Total costs	149.9	141.8	116.4	146.8	127.5

<sup>\*</sup> The figures in the table do not include house rents and share of joint overheads. Norges Bank's Printing Works' costs for 2007 included NOK 3.2m in net losses in connection with the sale of production equipment. Operations in the printing works were wound up on 30 June 2007.

<sup>\*\*</sup> Changes in practice for billing of handling fees from 2005.

depots, storage and the provision of services in connection with delivery to and receipt from banks. Norges Bank purchases management services for its own depots and banknote destruction services from Norsk Kontantservice AS (NOKAS).

Table 2 shows developments in Norges Bank's cash handling costs from 2003 to 2007. Production costs will vary from year to year, partly owing to fluctuations in production volume and to variations in the denominations produced. Replacements in note and coin series may lead to considerable variations in volumes. The more sophisticated security features designed to ensure that only genuine notes are in circulation also result in higher unit costs for the most recent note series.

The table shows a decline in total costs of NOK 19.3m from 2006 to 2007. The increased costs for purchase of coins are due to higher metal prices in 2007 than in 2006. The decline in Norges Bank's costs in the past two years in connection with the purchase of external depot and processing services and the reduction in handling fees is due in part to the establishment of private cash depots.

Compensation in the form of interest paid for holdings in private cash depots has not been taken into account in the table. NOK 58.8m in compensation was paid in 2007. Without this arrangement, it is likely that a large portion of this cash would have been deposited in Norges Bank. Thus, there has been little effect on total costs attributable to interest compensation and ordinary interest.

#### Commemorative coins

Norges Bank produces two types of coins to mark important national events. The first type, commemorative coins, are issued pursuant to Section 16 of the Norges Bank Act. These are gold and/or silver coins, and are not regarded as circulation coins. The other type consists of special editions of circulation coins, which have been issued on several occasions since 1975. These coins are issued pursuant to Section 13 of the Norges Bank Act, which is the general legal base for the issue of coins.

Guidelines have been drawn up for both types. The requirements regarding events that can be marked through the issue of a coin are largely the same for both types of coin. Coins may be issued to celebrate major national or historical events, or individuals who are of importance to Norway in a cultural, historical or national

connection. A restrictive assessment of importance must be made. Decisions with respect to the type of coin to be used are based on an assessment of the circumstances surrounding the event or person.

The guidelines appear to provide a basis for Norges Bank to issue about one commemorative coin per year. In recent years there has been an increase in the number of external proposals for issues, and as a result more discussion as to which events should be marked in this manner. To assist in deciding which events and persons fulfil the requirements in the guidelines, Norges Bank decided in 2006 to establish an advisory committee with special expertise in numismatic and national history and constitutional matters. The committee draws up a list of events and persons that could

qualify for coin issues in the years ahead, and considers proposals that are submitted. In 2007, Norges Bank also began circulating proposals to relevant authorities and interested parties for comment before taking decisions. In 2007, eight applications for commemorative coin issues were circulated for comment. Six of the applications were rejected after the consultative round, while the consultative round for the two others had not yet been completed at the end of the year.

As a result of the new case processing procedures, applications must be submitted at least 18 months before a potential date of issue. This will ensure a thorough treatment of the case and allow time for the design, production and distribution of the coins.

#### Contingency work

#### What sort of crises must the Bank be prepared for?

Since deposit coverage has declined, banks have become more dependent on market financing. The events in autumn 2007 showed that failure in the markets for banks' funding (liquidity risk) is a serious threat. Losses on US home loans (credit risk) unleashed the turbulence. There was a close, but complicated relationship between the failure of market financing and credit risk.

Large banks obtain much of their funding from abroad and in a variety of currencies, and are therefore exposed to events in other countries. Almost half of the funding of Norwegian banks is in a foreign currency. Turbulence also spreads from country to country because banks have a presence in a number of countries. Cross-border banking activities have increased in recent years. The management of crises in these banks presents a challenge to governments. A banking crisis exercise was therefore carried out in September 2007, with the participation of the Nordic and Baltic countries (see box).

The financial infrastructure is dependent on a continuous supply of power and telecommunications for ICT systems to function. The failure of ICT systems may impede the use of payment systems and interbank money transfers. In 2007, there were several cases, some of them in Oslo, of power failures with major local consequences. These problems did not cause disruptions of key parts of the financial infrastructure. However, there have been a number of cases of IT problems with Internet banking systems, and there have also been attacks on Internet banks via the Internet.

#### What are Norges Bank's responsibilities?

Should a situation arise where financial stability is threatened, Norges Bank and other authorities will be able to take steps to contain adverse effects and strengthen the financial system. Norges Bank would be able to supply extraordinary krone liquidity to individual banks or to the banking system as a whole if failure to supply this liquidity posed a threat to financial stability. One means that a central bank can use in very special cases is to supply extraordinary liquidity in foreign exchange. In Norway, the use of this means would have to be considered in the

light of the stability of Norwegian financial markets and of the Norwegian payment system.

Norges Bank is responsible for promoting efficient and robust payment systems. This responsibility entails working for stable operating systems and sound back-up and contingency arrangements in the financial infrastructure. The Contingency Committee for Financial Infrastructure was established in October 2000 to help optimise the coordination of contingency work in the financial infrastructure. The committee is also to monitor the financial industry's Civil Emergency Planning System. The most important participants in the financial infrastructure are represented on the committee. Norges Bank chairs the committee and provides a secretariat.

Exercises are carried out regularly to discuss the management of various crises that may affect the financial infrastructure.

#### What has Norges Bank done in 2007?

In 2007, various EU bodies have worked extensively to strengthen the capacity to manage a financial crisis affecting several countries. The EU Economic and Financial Affairs Council (Ecofin) has agreed on new guidelines for managing financial crises. They have also announced the advent of a new agreement on how ministries of finance, supervisory authorities and central banks must cooperate to manage crises. The agreement will apply to all EEA countries. The Committee of European Banking Supervisors (CEBS) and to some extent the Banking Supervision Committee (BSC) have also been working on crisis management. Because of the EEA agreement and the close integration of the banking systems in the EU and EEA countries, the authorities in Norway, Iceland and Liechtenstein are participating in this work. Norges Bank and Kredittilsynet have been observers in the CEBS since 2004, and since 2006 the two Norwegian institutions have been invited to BSC meetings.

In Norway, the financial stability outlook and contingency arrangements to cope with crises in the financial sector are regularly assessed at tripartite meetings of the Ministry of Finance, Kredittilsynet and Norges Bank. The turmoil in financial markets internationally was the subject of a separate meeting in 2007.

In 2007, the Contingency Committee for Financial

Infrastructure had three ordinary meetings and discussed matters relating to operating stability and risk in the financial infrastructure. Kredittilsynet presented their analysis for 2006 of the risk and vulnerability associated with the use of ICT systems in the financial industry. The committee has also reviewed contingency incidents, the testing of back-up solutions and contingency exercises.

In connection with the Contingency Committee's meeting in June, an exercise was carried out in which a situation involving the spread of a data virus in central banking industry systems was discussed. In 2007, the committee examined a report containing assessments of various solutions in situations where ordinary means of payments cannot be used. The main features of the plans in the Civil Emergency Planning System have been presented to the committee. The committee secretariat has taken part in

a seminar under the auspices of the Directorate for Civil Protection and Emergency Planning in which a scenario with outbreak of a pandemic was discussed. The secretariat also represented the committee at a meeting with the County Emergency Council for Oslo and Akershus.

Regular exercises are carried out to test contingency planning and back-up solutions for the systems that are associated with the operation of Norges Bank's settlement system. These exercises take place internally in Norges Bank and in collaboration with other key players. In 2007, exercises were carried out to test back-up solutions and the handling of disruptions of the settlement system itself, the system for pledging securities as collateral for loans, the use of the international messaging system SWIFT, and participation in the international currency trading system, Continuous Linked Settlement - CLS.

#### Contingency exercises in the Nordic countries

The turmoil in international financial markets in 2007 is a reminder that contingency exercises are important. The purpose of these exercises is to facilitate the management of future crises. Structural changes in financial markets make regular exercises necessary. An important structural change in the Nordic countries in the past ten years is the emergence of banks with cross-border activities.

After the establishment of the Nordea group in 2000, a working party was established with representatives from the Nordic central banks to discuss how they should handle a possible crisis in a bank-

ing group of this nature with operations in several countries. In 2002 an exercise was therefore carried out, with participants from the central banks and supervisory authorities of the Nordic countries.

In September 2007, the most extensive exercise up to the present of crisis management in banks with cross-border activities in the Nordic and Baltic countries was held. The purpose was for the governments of these countries to practice coordination during a crisis. Central banks, supervisory authorities and finance ministries participated in the exercise, which lasted for four days. It involved a

scenario with an economic downturn and increased loan losses in the Nordic banks. The situation rapidly deteriorated. There was turbulence in the foreign exchange market, and money market interest rates escalated. There were also technical problems in some major banks, and the issue of collateral for borrowing from the central banks was discussed. The exercise provided useful experience in crisis management. It also demonstrated that it is demanding to coordinate information and actions during such a crisis, and that many issues have still not been clarified.

# Chapter 3. Investment management

At the end of 2007, Norges Bank managed assets amounting to NOK 2 269bn in international capital markets. The bulk of this was the Government Pension Fund – Global, which is managed on behalf of the Ministry of Finance, and the Bank's international reserves. The Bank also manages the Government Petroleum Insurance Fund on behalf of the Ministry of Petroleum and Energy. Norges Bank Investment Management is also presented in a separate annual report.

## Foreign exchange reserves and claims on the IMF

Norges Bank's international reserves comprise foreign exchange reserves and claims on the International Monetary Fund (IMF). The foreign exchange reserves accounted for more than 99% of the total international reserves. Guidelines for management and performance reports for the foreign exchange reserves and the various funds managed by the Bank are published on Norges Bank's website.

The market value of the foreign exchange reserves, less borrowing in foreign currency, stood at NOK 235.9bn at the end of 2007. The foreign exchange reserves are to be available for interventions in the foreign exchange market in connection with the implementation of monetary policy or to promote financial stability. Norges Bank's Executive Board lays down guidelines for the management of the foreign exchange reserves and has delegated responsibility to the Governor for issuing supplementary rules. The reserves are divided into a *money market portfolio* and an *investment portfolio*. In addition, a *buffer portfolio* is used for the regular foreign exchange purchases for the Government Pension Fund – Global.

The main strategy for both the investment portfolio and the money market portfolio is defined by means of benchmark portfolios. These are constructed portfolios with a given country or currency distribution and with specific securities or fixed income indices in various submarkets or currencies. The benchmark portfolio provides the basis for managing and monitoring risk exposure and for evaluating the actual return Norges Bank achieves in its reserves management.

The investment portfolio accounts for the largest portion of foreign exchange reserves, and at end-2007 amounted to NOK 214.0bn. The objective of management of the investment portfolio is a high return in the long term, but it should also be possible to use the portfolio for monetary policy purposes or to promote financial stability if this is considered necessary. The management strategy for the investment portfolio has two main components. It consists partly of the long-term strategy, which is reflected in the benchmark portfolio defined by the Executive Board, and partly of active management designed to outperform the benchmark.

In June 2007, the Executive Board decided to expand the benchmark portfolio for equities to include small-cap companies. At the same time, the rules on approved markets and countries were changed. Previously, the Executive Board issued a list of approved countries, while the new rules set out certain formal requirements that must be met before investments can be made in a new country. These changes corresponded to those adopted by the Ministry of Finance for the Government Pension Fund - Global. The change in the investment portfolio was implemented on 31 August 2007.

The Executive Board has decided that the maximum ownership interest in a single company shall be 5% of the voting shares. Ownership interest refers to investments in equity instruments that allow the owner or a proxy to exercise voting rights in companies. It also refers to contracts that entitle the holder to achieve such an ownership position. Norges Bank's investments are not strategic but are purely financial. If combined holdings in the foreign exchange reserves and the Government Pension Fund – Global exceed 5%, a special report must be submitted to the Executive Board. The Executive Board has laid down common guidelines for the exercise of ownership rights in the two funds.

The entire equity portion and approximately 85% of the fixed income portion of the investment portfolio are managed internally in Norges Bank. The remainder of the fixed income portfolio is managed externally.

An upper limit has been set for the actual portfolio's deviation from the benchmark. A measure of overall risk (expected tracking error) is the limit set for the investment portfolio. In practice, this means that the difference between the return on the actual portfolio and the return on the benchmark portfolio will normally be small. The upper limit for expected tracking error is 1.5 percentage points. In 2007, an average 0.4 percentage point of this risk limit was used. If the risk remained constant at this level, the actual difference between the returns on the benchmark and the actual portfolio could be expected to average between -0.4 and +0.4 percentage point in two out of three years. It is assumed here that the management organisation is not more competent than the average of other managers.

The return on the investment portfolio for 2007 was 3.37% measured in terms of the currency basket that corresponds to the composition of the benchmark portfolio. Measured in NOK, the return was -4.69%. The difference is due to the appreciation of the Norwegian krone in relation to the benchmark's currency basket. The portfolio underperformed the benchmark by 1.12 percentage points. There was a negative excess return on the fixed income portfolio of 1.33 percentage points, while the equity portfolio underperformed the benchmark portfolio by 0.80 percentage point.

The money market portfolio is invested in short-term money market instruments, primarily secured lending to approved international banks. In accordance with the Executive Board's guidelines of 8 February 2006, the value of the money market portfolio shall normally be between NOK 3bn and NOK 10bn. It shall be invested in such a way that it can be used at short notice as a monetary policy instrument or to promote financial stability. The money market portfolio is also used to execute transactions on behalf of the IMF and to carry out foreign exchange transactions on behalf of the Government Petroleum Insurance Fund. At the end of 2007, the money market portfolio amounted to NOK 8.0bn.

In 2007, the return on the money market portfolio was 4.67% measured in terms of the benchmark's currency basket. Measured in NOK, the return was -3.85%. The difference is due to the appreciation of the Norwegian

krone against the benchmark currency basket in 2007. The management of the portfolio generated an excess return of 0.11 percentage point relative to the return on the benchmark portfolio.

The buffer portfolio receives capital when the State's Direct Financial Interest in petroleum activities (SDFI) transfers gross income in foreign currency to Norges Bank. Norges Bank may also purchase foreign currency directly in the market in order to cover the amount that is to be allocated to the Government Pension Fund – Global. The routines for these transactions are described in Chapter 5. Since only cash is transferred to the Government Pension Fund – Global, the buffer portfolio is invested exclusively in money market instruments. At the end of 2007, the size of the portfolio was NOK 14bn. Capital is normally transferred from the buffer portfolio to the Government Pension Fund - Global at the end of each month, except in December when no transfer is made. This means that at year-end the portfolio will normally be larger than the average value at other month-ends (after transfers). The return on the buffer portfolio, measured in NOK, was -2.4% in 2007.

Claims on the IMF now consist of two components: SDR (Special Drawing Rights) and reserve positions. Norges Bank's aim is to keep the SDR reserves at between SDR 200m and SDR 300m. At end-2007, holdings amounted to SDR 233m, equivalent to NOK 2 000m. Reserves in the IMF amounted to NOK 1 094m.

#### Government Pension Fund – Global

Norges Bank is responsible for the operational management of the Government Pension Fund – Global on behalf of the Ministry of Finance. The mandate is set out in a regulation and a separate management agreement between Norges Bank and the Ministry of Finance. The agreement stipulates that the Ministry of Finance covers the Bank's management costs.

At the end of 2007, the market value of the Government Pension Fund – Global was NOK 2 019bn, before deduction of Norges Bank's management fees. In 2007, the Ministry of Finance transferred a total of NOK 314bn to the Pension Fund.



The Ministry of Finance has established a strategic benchmark portfolio of equities and fixed income instruments. The benchmark portfolio consists of equity indices for 27 countries and fixed income indices in the currencies of 21 countries. The benchmark embodies the principal's investment strategy for the Government Pension Fund – Global. The strategy is an important basis for managing the risk associated with the operational management and for evaluating Norges Bank's management performance. The Ministry of Finance has set an upper limit for the actual portfolio's deviation from the benchmark.

In 2007, the Ministry of Finance decided to increase the allocation to equities in the Government Pension Fund – Global to 60%. The allocation to equities in the Fund's benchmark portfolio had been set at 40% since 1998. The Ministry also decided to increase the number of companies by including the small-cap segment in the benchmark portfolio. Norges Bank has agreed a schedule for implementing the changes with the Ministry.

In 2007, the return on the Fund was 4.26% measured in terms of the benchmark portfolio's basket of currencies. It is this measure of return that best describes developments in the Fund's international purchasing power. Measured in NOK, the return was -3.90%. Measured in terms of the Fund's currency basket, the return on the equity portfolio was 6.82%, while the return on the fixed income portfolio was 2.96%.

Measured over the 11 calendar years since capital was first transferred to the Fund's international portfolio, the annual nominal return has been 6.29% measured in terms

of the Fund's currency basket. The net real return after management costs has been 4.25% annually.

The actual return in 2007 was 0.22 percentage point lower than the return on the benchmark portfolio. There was a negative excess return on the fixed income portfolio of 1.19 percentage points, while the equity portfolio outperformed the benchmark portfolio by 1.06 percentage points.

The valued added achieved in Norges Bank's management can be calculated by comparing the actual return with the return that could have been achieved by replicating the benchmark portfolio. Both costs and returns have been higher than would have been the case in passive management. In 2007, net value added as calculated above was -0.22 percentage point, or NOK -5.2bn. For the past eight years, total value added comes to NOK 21.3bn.

#### Government Petroleum Insurance Fund

The market value of the Government Petroleum Insurance Fund was NOK 14.7bn at end-2007. The Fund is owned by the Ministry of Petroleum and Energy, and its purpose is to support the government's role as self-insurer of ownership interests in petroleum activities. The Fund is managed by Norges Bank. In 2007, the return was 5.15% measured in terms of the currency basket corresponding to the composition of the Fund's benchmark portfolio. Measured in NOK, the return was -3.28%. This was 0.16 percentage point higher than the return on the benchmark portfolio.



# Chapter 4. Research and international cooperation

#### Research activity in 2007

Research at Norges Bank provides part of the basis for the Bank's decisions. Research is focused on monetary policy and financial stability. Monetary policy research focuses in particular on the functioning of the Norwegian economy and on the formulation of monetary policy strategy and properties of the monetary policy regime. Research on financial stability focuses on equity markets and the behaviour of financial institutions. Research activities at Norges Bank are presented on the Bank's website.<sup>9</sup>

The Bank's research is anchored in the reality of the Norwegian economy as well as in the international and Norwegian research community. The research should maintain the standard required for publication in international or national journals where researchers' articles are reviewed by their peers in the field. In 2007, 8 articles were published in peer-refereed journals (see below).

Publication of articles is often a lengthy process, and thus the list of publications includes articles on research carried out several years ago. Ongoing research activity is documented in the Bank's Working Papers series. In 2007, 15 papers were published in this series. The research topics are diverse and include robust and optimal monetary policy, asset prices, exchange rate fluctuations, committee decisions and labour market rigidities. Norges Bank Working Papers is also distributed through Norges Bank's website and the internet portals Research Papers in Economics (RepEc) and BIS Central Bank Research Hub.

#### **Outreach**

A number of research projects have been presented at Norwegian and international conferences and seminars, at which Norges Bank's researchers have also contributed comments on the work of other researchers. The Bank's researchers also contribute to student guidance, teaching, and act as referees for national and international journals.

In 2007, Norges Bank organised two research workshops on monetary policy by committees (MPCs) and macroeconomic modelling. The aim of the workshop on MPCs was to discuss the ongoing research on decision-making by committees. Among the questions addressed were: What are the arguments for delegating monetary policy decisions to a committee? Why do the committees differ? What is a good institutional setup for monetary policy decisions within a central bank? The workshop on macroeconomic modelling provided a forum for central bank economists to present and discuss ongoing research on macroeconomic models. The special topic this year

<sup>9</sup> www.norges-bank.no/research/



was "Financial frictions in macroeconomic models". The programme and papers are available on Norges Bank's website. 10

As part of an international research environment, Norges Bank has extensive contact with researchers at universities and other central banks. A total of 12 researchers and 4 PhD students from various universities in Norway and abroad worked at Norges Bank on temporary part-time contracts. They engage in research in collaboration with permanent Bank staff and thus strengthen the research environment at the Bank.

Norges Bank arranges research seminars with guest lecturers, which are announced online. Scholars visiting Norges Bank present their work and take part in seminars and workshops. In 2007, the following scholars visited Norges Bank:

Bjerkholt, Olav (University of Oslo)
Blinder, Alan S. (Princeton)
Cihak, Martin (IMF)
Debortoli, Davide (UPF)
DeSantis, Massimiliano (Dartmouth College)
Eckstein, Zvi (Bank of Israel)
Faia, Ester (Universitat Pompeu Fabra)
Garratt, Tony (Birkbeck)
Girardin, Eric (GREQAM Marseille)
Golosov, Mikhail (MIT)
Goodhart, Charles (LSE)

Guibourg, Gabriela (Sveriges Riksbank)

Hall, Robert (Stanford University)

Jensen, Henrik (University of Copenhagen)

Kilian, Lutz (University of Michigan)

Lubik, Thomas (Federal Reserve Bank of Richmond)

Nakamura, Emi (Harvard University)

van Norden, Simon (HEC Montreal)

Masschelein, Nancy (National Bank of Belgium)

Mitchell, James (National Institute)

Mohn, Klaus (University of Stavanger)

Pavlova, Anna (LBS)

Pedersen, Lasse (New York University)

Rajeev, Meenakshi (Institute for Social and Economic Change, Bangalore)

Rodriguez, Inaki (University of Tromsø)

Ruge-Murcia, Francisco J. (Université de Montréal)

Sala, Luca (IGIER Bocconi)

Schmitt-Grohe, Stephanie (Duke University)

Segendorf, Björn (Sveriges Riksbank)

Sojli, Elvira (Warwick Business School)

Steinsson, Jón (Columbia University)

Sustek, Roman (Bank of England)

Sydsæter, Knut (University of Oslo)

Uribe, Martin (Duke University)

Vitale, Paolo (Università D'Annunzio and CEPR)

Wilander, Fredrik (ECON)

Wyplosz, Charles (Graduate Institute of International Studies)

<sup>10</sup> www.norges-bank.no/conferences/

#### Support for economic research

Norges Bank supports economic research activities in a number of ways. The Bank promotes focus on macroeconomics and monetary policy issues through a sponsored professorship at the University of Oslo. Norges Bank's Economic Research Fund provides financial support for researchers studying abroad, for participation in international conferences when presenting their research work and for the arrangement of research conferences in Norway.

#### Articles in refereed journals 2007:

**Akram, Q. Farooq, Gunnar Bårdsen** and **Kjersti-Gro Lindquist** (2007). "Pursuing financial stability in an inflation-targeting regime", *Annals of Finance*, vol. 3, pp. 131–153.

**Demyanyk, Yuliya, Bent E. Sørensen** and **Charlotte Østergaard** (2007). "US Banking Deregulation, Small Businesses, and Interstate Insurance of Personal Income", *Journal of Finance*, vol. 62, pp. 2763–2801

Matsen, Egil, Tommy Sveen and Ragnar Torvik (2007). "Savers, Spenders and Fiscal Policy in a Small Open Economy," *The B.E. Journal of Macroeconomics* (Topics), 7(1) Article 22.

Nason, J. M. and Shaun Vahey (2007): "The McKenna Rule and UK World War I Finance". *American Economic Review*, vol. 97, pp. 290–294

**Sveen, Tommy** and **Lutz Weinke** (2007): "Lumpy investment, sticky prices, and the monetary transmission mechanism", *Journal of Monetary Economics*, vol. 54, supplement 1, pp. 23–36

**Sveen, Tommy** and **Lutz Weinke** (2007): "Firm-specific capital, nominal rigidities, and the Taylor principle", *Journal of Economic Theory*, vol. 136, issue 1, pp. 729–737 **Ødegaard, Bernt Arne** (2007): "Price differences between equity classes. Corporate Control, Foreign ownership or Liquidity?". *Journal of Banking and Finance*, vol. 31, pp. 3621–3645

**Ødegaard, Bernt Arne** and **Richard Priestley** (2007): "Linear and Nonlinear Exchange Rate Exposure". *Journal of International Money and Finance*, vol. 26, issue 6, pp. 1016–1037

#### International cooperation

In addition to international cooperation in the field of research, there is extensive contact and cooperation between Norges Bank and other central banks and international organisations.

#### Other central banks

Norges Bank collaborates extensively with the other Nordic central banks. The annual meeting of Nordic central banks was held in Saariselka in Nord-Finland by Finlands Bank (central bank of Finland). The central bank governors discussed financial stability and monetary policy regimes, among other issues. Staff of various departments of the central banks meet at regular intervals to discuss issues relating to economic analysis, monetary policy, financial stability, payment systems, legal matters concerning central banks, human resource policy, etc.

Norges Bank has regular contact with the European Central Bank (ECB) and other central banks in EU countries. Norges Bank has established an arrangement with the ECB and the Bank of England which allows staff to work at these institutions for periods of up to 12 months. In 2007, members of Norges Bank's staff were seconded to the ECB in Frankfurt.

#### **International organisations**

Norway's small, open economy is heavily influenced by international conditions. Norges Bank therefore places considerable emphasis on its participation in and contact with international economic organisations.

Norges Bank is one of the owners of the Bank for International Settlements (BIS), whose task is to foster cooperation between central banks. In addition to providing banking services to central banks, the BIS is a research body and serves as a discussion forum for member banks. The Governor of Norges Bank regularly attends meetings at the BIS.

Pursuant to Section 25 of the Norges Bank Act, Norges Bank shall administer Norway's financial rights and fulfil the obligations ensuing from participation in the International Monetary Fund (IMF). Norges Bank has been commissioned by the Ministry of Finance to be responsible for day-to-day IMF work in Norway. In consulta-

tion with the Ministry, the Bank formulates proposals for Norwegian viewpoints on issues to be brought before the IMF Executive Board. The Ministry of Finance has the ultimate responsibility. The division of responsibilities between the Ministry and Norges Bank is set out in a written agreement.

The Government's annual Credit Report to the Storting provides a detailed account of IMF activities.

The highest decision-making body of the IMF is the Board of Governors. Norway is represented by the Governor of Norges Bank, Svein Gjedrem, and the Secretary General of the Ministry of Finance, Tore Eriksen, is his alternate. The Board normally meets once a year at the Annual Meeting of the IMF. Apart from at this meeting, the Board of Governors takes decisions by ballot. An Executive Board consisting of 24 executive directors is responsible for day-to-day business. The five Nordic and three Baltic countries comprise one constituency with a joint representative on the board.

The countries in the Nordic-Baltic constituency primarily co-ordinate their views on important IMF matters through the Nordic-Baltic Monetary and Financial Committee (NBMFC). The Norwegian members are the General Secretary of the Minister of Finance and the Deputy Governor of Norges Bank. The other countries are represented at a comparable level. The NBMFC normally meets twice a year.

The aim is for the countries in the constituency to arrive at a common stance, which the board member representing the group then presents to the IMF Executive Board. The position of board member is rotated among the Nordic countries. The representative is replaced every other year. The board member in 2006 and 2007 was from Finland, but Sweden will hold this position from 2008.

The International Monetary and Financial Committee (IMFC) has an important function as an advisory body to the Executive Board. The committee draws up policy guidelines for IMF activities. The IMFC's members are ministers or central bank governors who represent either a country or a constituency of countries. In 2006-2007, the Minister of Finance of Finland sat on the IMFC, and will be succeeded by the Minister of Finance of Sweden from 2008.

An important activity of the IMF is surveillance of

member countries' economic situation, with particular emphasis on macroeconomic conditions and financial stability. The primary emphasis is on bilateral surveillance under the Article IV consultations, which

take place annually in most countries. Norway has a twoyear interval between these consultations, provided that there are no special circumstances that call for annual consultations. In the intervening years, the IMF conducts a simplified consultation where a report is not submitted to the Executive Board of the IMF.

The most recent Article IV consultation was conducted between 15 and 26 March 2007. The IMF delegation's assessments were published on 26 March. The final report was discussed at the IMF Executive Board meeting on 4 June and published on 11 June.

## Technical assistance to the Reserve Bank of Malawi

For many years, Norges Bank has provided technical assistance to central banks in developing countries. In most cases, economists from Norges Bank are granted leave of absence to carry out missions of varying duration sponsored by international organisations or national aid organisations. On occasion, technical assistance has also been provided under an agreement made directly with another central bank, usually in the form of training at Norges Bank.

In order to promote an efficient and performanceoriented programme of assistance to central banks in developing countries, Norges Bank has agreed to assume responsibility for assisting a central bank in a developing country for a 3-5 year period. In the light of the IMF's extensive activity and wide knowledge in this area, it was deemed important for Norges Bank's assistance to be closely coordinated with IMF assistance. In September 2006, the Ministry of Foreign Affairs (represented by the Norwegian Embassy in Malawi) and the IMF entered into an agreement under which Norges Bank assumed responsibility for managing the bulk of the assistance agreed upon between the Reserve Bank of Malawi and the IMF. The agreement applies for the period September 2006 to January 2008. In 2008, the agreement was extended to end-2009. Norges Bank's assistance to the Reserve Bank of Malawi will be formally administered by the IMF, but financed by the Norwegian Ministry of Foreign Affairs.

Norges Bank will provide up to 2 person-years annually to the Reserve Bank of Malawi, consisting of 1 person-year in the form of a long-term assignment as

adviser to the Reserve Bank and up to 1 person-year in the form of short-term assignments. The short-term assignments will cover a broad range of central bank tasks.

#### Historical monetary statistics for Norway

Autumn 2007 marked Norges Bank's completion of the project Historical monetary statistics for Norway with a book publication the third of a series. The aim of the project has been to provide systematised data documenting the key features of Norwegian economic history. In collaboration with professors Ola H. Grytten and Jan T. Klovland at the Norwegian School of Economics and Business Administration, we have presented unbroken time-series for consumption back to 1516 and for wage growth back to 1726. For the other historical time series included in the project, e.g. GDP, money supply, short-term and long-term interest rates, exchange rates and house prices, we have as far as possible attempted to document developments back to the establishment of Norges Bank in 1816.

First, the project has increased our insight into monetary conditions in Norway, particularly with respect to the banking system in the 1800s. This applies both to developments in private banks'

balance sheets (annual figures for deposits, loans and equity capital) and for short-term and long-term interest rates (monthly figures for interest rate developments in the markets for discounting securities, for bank deposits and in the bond market) back to around 1820. Second, the project has made it possible to construct time-series for historical consumer prices back to 1516 and historical wage series back to 1726 through unutilised primary data from Professor Dr. Ingvar B. Wedervang's wage and price history archive. The Wedervang archive, which is kept at the Norwegian School of Economics and Business Administration in Bergen, was created in the 1930s thanks to an extensive gathering of data on wage and price conditions in Norway.1 The pioneer behind this work, professor Ingvar B. Wedervang, participated in establishing the Institute of Economics at the University of Oslo together with Ragnar Frisch in the early 1930s. When Ingvar Wedervang somewhat later moved to Bergen to become the first rector of the

Norwegian School of Economics and Business Administration, the substantial price and wage history archive moved with him. After the war, the Wedervang archive was stowed away for many years and was not used until the 1970s. In recent decades, the archive has been used to a varying extent in the research project at the Norwegian School of Economics and Business Administration. In connection with the Bank's project Historical monetary statistics for Norway, this gold mine of primary data on Norwegian economic history has been systematically used to construct unbroken and consistent price and wage data series for Norway over a long time period. Third, the project has provided very useful insight into house price developments in Norway. The chart shows real house prices for Oslo compared with the average real house price for Oslo, Bergen, Trondheim and Kristiansand back to 1850. The chart shows the relevance of timing of first home purchases. The most fortunate were those who bought a dwelling in Oslo just ahead of

<sup>&</sup>lt;sup>1</sup> Chapter 4 in *Historical and Monetary Statistics for Norway* – Part II describes how the Wedervang archive came into being and how the archive was until recently underused in analysing price and wage developments in Norway.

the Kristiania (now Oslo) housing market crash in 1899. The chart shows that it was not until recent years, i.e. more than 100 years after the crash, that real house prices for Oslo returned to the pre-crash level.

During the period we worked on the project *Historical monetary* statistics for *Norway*, Norges Bank noted considerable interest in the project also internationally, and similar projects have been initiated at other central banks. As planned, all the data and related documentation have been made available in English on Norges Bank's website to facilitate research and analysis. In connection with Norges Bank's bicentenary celebration in 2016, the Executive Board decided in December to realise a substantial book publication project in two phases in the period to the bicentenary celebration. Norges Bank's bicentenary project 1816-2016 will be conduct-

ed as a collaborative effort between Norwegian and international scholars. The historical statistics from the project Historical monetary statistics for Norway will facilitate further research and analysis and form a useful basis for studying Norwegian monetary history and Norges Bank's history in the years ahead. Project-related data and documentation are available in download format on Norges Bank's website.

#### References:

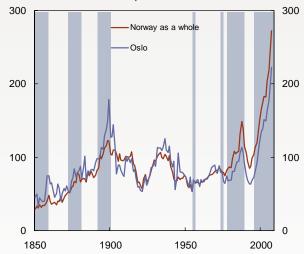
Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (2004): Historical Monetary Statistics for Norway 1819–2003, Norges Bank's Occasional Papers No. 35, Oslo

## Eitrheim, Øyvind and Jan F. Qvigstad (2005):

Tilbakeblikk på norsk pengehistorie (Norway's monetary history revisited), Conference on 7 June 2005 at Bogstad Gård, Norges Bank's Occasional Papers No. 37, Oslo

Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (2007): Historical Monetary Statistics for Norway – Part II, Norges Bank's Occasional Papers No. 38, Oslo

Real house prices 1850-2007 for Oslo and Norway as a whole (1912=100). The shaded areas denote periods of sharp increases in nominal house prices.



Sources: Norges Bank, Norwegian Association of Real Estate Agents (NEF), Association of Real Estate Agency Firms (EFF), Finn.no and Econ Pöyry



# Chapter 5. Other responsibilities

#### Foreign exchange transactions

In 2007, Norges Bank's commercial foreign exchange transactions mainly comprised foreign exchange purchases for building up the Government Pension Fund – Global (hereafter referred to as the Pension Fund). In addition, Norges Bank executed some transactions on behalf of the Government Petroleum Insurance Fund.

The Government Pension Fund - Global is built up through transfers of foreign exchange income from the state's direct financial interest in petroleum activities (SDFI) and through Norges Bank's purchases of foreign exchange in the market.

The system for transferring foreign exchange from SDFI and calculating Norges Bank's foreign exchange purchases was most recently changed in 2004. The daily foreign exchange purchases are fixed for one month at a time and are announced on the last business day of the previous month. The Ministry of Finance stipulates the

monthly allocation to the Fund. Transfers to the Pension Fund are primarily covered by foreign exchange from SDFI. If the foreign exchange income from SDFI is not sufficient, Norges Bank purchases the balance of the foreign exchange in the market. Norges Bank's foreign exchange purchases are calculated on the basis of estimates of both allocations to the Fund and SDFI's foreign exchange income. The actual transfers may differ from the estimates. Adjustments are made for the differences when the foreign exchange purchases for the following month are made. As a result, Norges Bank's foreign exchange purchases may vary considerably from month to month.

Capital is not normally transferred to the Pension Fund in December. It is therefore improbable that foreign exchange will be purchased by Norges Bank in December. Foreign exchange income from SDFI may nevertheless be transferred in order to minimise the government's exchange costs. The December transfers from SDFI cause the foreign exchange reserves to increase. The reserves are reduced again through the monthly transfers to the Fund in the first quarter of the following year.

In 2007, Norges Bank purchased foreign exchange for NOK 152.9bn in the market (see Table 3). Transfers from SDFI were equivalent to NOK 151.6bn.

Table 3. Norges Bank's daily foreign exchange purchases for the Pension Fund in 2007

(In millions of NOK)

Month	Daily amount	Total per month
January	570	12 540
February	490	9 800
March	550	12 100
April	670	11 390
May	540	10 800
June	400	8 400
July	670	14 740
August	470	10 810
September	730	14 600
October	880	20 240
November	1 250	27 500
December	0	0
2007		152 920

#### Government debt 2007

According to an agreement between the Ministry of Finance and Norges Bank, the Bank shall provide services as adviser, organiser and payment agent in connection with raising and managing domestic government loans. The Ministry of Finance pays for bank-related services provided by Norges Bank to the Ministry in connection with government debt and liquidity management, and for variable costs incurred by Norges Bank in its capacity as provider of services for the Ministry of Finance.

The government's schedule for the issue of short- and long-term securities in 2007 was published in an auction calendar in December 2006. In accordance with the 2007 auction calendar, seven auctions of government bonds and 12 auctions of Treasury bills were held. No ad hoc auctions were held. The total volume issued, excluding the government's own purchases in the primary market, amounted to NOK 23bn in government bonds and NOK 46bn in Treasury bills.

The long-term strategy for long-term government borrowing is based on maintaining a yield curve for government bonds with maturities of up to approximately 10 years. The pattern for government bond borrowing has been to issue a new 11-year bond every second year. No new bond was issued in 2007. One government bond matured in 2007.

According to the issue programme for short government paper, new Treasury bills are issued on IMM days<sup>11</sup>, and mature on the IMM day one year later. The loans are increased through subsequent auctions.

The government paper auctions have been held via the Oslo Stock Exchange trading system. The bid-to-cover ratio, which is the volume of bids in relation to the volume allocated in the auction, was 2.8 for government bonds and 2.3 for Treasury bills.

Norges Bank has entered into agreements with six primary dealers who are obligated to furnish binding bid and offer prices for agreed minimum amounts of government bonds and Treasury bills on the Oslo Stock Exchange. In return for furnishing these binding bid and offer prices, the primary dealers may borrow government paper for a limited period. The total borrowing limit for each Treasury bill is NOK 3bn. The borrowing limit for government bonds was increased in connection with the financial un-

<sup>&</sup>lt;sup>11</sup> International standard for settlement days: third Wednesday in March, June, September and December

rest in August 2007 and is currently NOK 5bn for bonds with the shortest maturities and NOK 3.7bn for each of the other bonds. Until August, the borrowing limit was NOK 2.5bn for each government bond.

Since June 2005, the government has used interest rate swaps in its domestic debt management. An interest rate swap is an agreement between two parties to exchange future interest payments associated with a given principal. The use of interest rate swaps gives the government the flexibility to change the average period during which the interest rate on the debt portfolio is fixed without changing its borrowing strategy. The Ministry of Finance has entered into framework agreements with several counterparties. Norges Bank carries out the operational functions in connection with entry into interest rate swap agreements on behalf of the Ministry of Finance. The commercial decisions are taken by the Ministry. At end-2007, the average fixed-rate period for government debt was 4.1 years. If existing interest rate swap agreements are taken into account, the fixed-rate period was 2.3 years.

Total government domestic securities debt registered in the VPS at end-2007 amounted to NOK 230bn, calculated at face value. Foreign investors own about 51% of Norwegian government domestic securities debt, while life insurance companies and private pension funds own about 23%. Foreign investors have increased their ownership share in 2007, while life insurance companies and private pension funds have decreased their share. Government domestic securities debt was equivalent to about 10% of GDP in 2007.

## Communications activities

Pursuant to the Norges Bank Act, Norges Bank is obliged to "inform the public of developments in monetary, credit and foreign exchange conditions". In addition, the Bank seeks through active communications activities to achieve the broadest possible understanding of its conduct of monetary policy, the mechanisms contributing to financial stability, and its investment management activities.

The Bank places considerable emphasis on responding to growing interest with transparency and predictability. Press conferences are regularly webcast following the Executive Board's monetary policy meetings and in connection with the publication of the Financial Stability report, the Monetary Policy Report and the annual and quarterly reports of the Government Pension Fund - Global. In 2006, Norges Bank introduced podcasting and direct mobile video transmission of its press conferences. The public can also subscribe to text messaging of the interest rate decision. Sixteen press conferences were held in 2007. Speeches given by the Governor and Deputy Governor of Norges Bank are an important part of the Bank's external communications. In 2007, 48 speeches were given and 15 of them were published on Norges Bank's website at the time that they were given. Many of the unpublished speeches were similar to those that had already been published, and at the time of these speeches the Bank made reference on its website to the previously published speeches.

Online information is an important part of the Bank's information strategy. The Bank's website is under constant development. In addition to news and the publications mentioned above, the website contains extensive information about the Bank's responsibilities. Electronic versions of the Bank's publications are also available on the website. The website also contains some statistics, although in 2007 Statistics Norway took over responsibility for a large portion of the statistics previously published by the Bank. User statistics show that Norges Bank's website had an average of 766 000 hits per month in 2007.

In addition to the Annual Report, online information and the other reports mentioned above, Norges Bank issues the following publications: The journals Penger og Kreditt and its English equivalent, Economic Bulletin, are published quarterly. A report on payment systems is published annually. Research projects are documented in the Working Papers series. Fifteen were published in 2007 and some of them have been or will be published as articles in external books and periodicals. Staff Memos contain other documentation or reports on the Bank's work on key issues. Three such reports were published electronically on the Bank's website. Norges Bank's Occasional Papers no. 38 entitled Historical Monetary Statistics for Norway – Part II was published in 2007. Doctoral Dissertations no. 6 entitled Econometrics of exchange rate pass-through by Ida Wolden Bache was also published in 2007.

NORGES BANK ANNUAL REPORT 2007 NORGES BANK'S ACTIVITIES 107

# Chapter 6. Organisation, management and use of resources

# Core responsibilities

The organisation of Norges Bank is based on clearly defined core responsibilities.

### Norges Bank shall:

- promote price stability by means of monetary policy
- promote financial stability and contribute to robust and efficient financial infrastructures and payment systems
- manage efficiently and satisfactorily the portfolios of the Government Pension Fund – Global, the Bank's own foreign exchange reserves and the Government Petroleum Insurance Fund.

### **Developments in the use of resources**

Concentration on these three core responsibilities has directed the development of the Bank. As a result of the establishment of limited companies, outsourcing, discontinuation of tasks and generally increased efficiency, the number of permanent employees has been reduced from 1 150 in 1998 to 528 at end-2007. At the same time, the number of employees engaged in the Bank's investment management activities has increased from approximately 40 in 1998 to close to 180 at end-2007. The net real resources employed, measured in relation to the price index for public expenditure, have been reduced by 28%. Restructuring costs are not included. The costs of managing the Government Pension Fund - Global are covered by means of income from the Ministry of Finance. By 2010 Norges Bank is to be a lean and efficient specialist enterprise with a strong focus on its core responsibilities.

The box below provides an overview of changes since 1998, and Chart 45 shows developments in costs and staffing.

Restructuring has had consequences for many employees. Norges Bank is using human resource policy programmes to facilitate restructuring. These include sev-

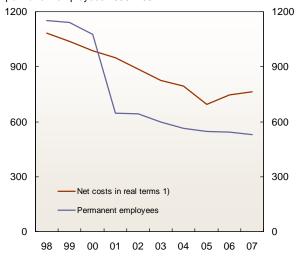
# Restructuring

- Norges Bank Investment Management (NBIM) has been expanded from 41 employees in 1998 to close to 180 in 2007.
- The Royal Norwegian Mint was established as a separate company in 2001 and sold in 2003.
- Cash handling was established as a separate company (NOKAS) in 2001. Norges Bank owned 33.5% of the shares until 2006, when they were sold.
- Norges Bank has concentrated on its role as wholesaler and

- reduced the number of depots for cash handling.
- Banknote production was terminated in 2007. Contracts
  with foreign companies for the purchase of banknotes were entered into in 2006. The first deliveries will be made in 2008.
- Norges Bank discontinued a range of banking services for public enterprises and its own employees in 2004.
- Responsibility for producing statistics on non-financial sec-

- tors for the balance of payments was transferred to Statistics Norway in 2005. Responsibility for financial market statistics was transferred to Statistics Norway on 1 January 2007.
- Operation of Norges Bank's settlement system was outsourced in 2003.
- Staff and support functions have been dimensioned for the "new" Norges Bank.

Chart 45 Developments in net costs (real 2007-kroner) and permanent employees 1998 -2007



1) Deflated by price index for public expenditure

Source: Norges Bank

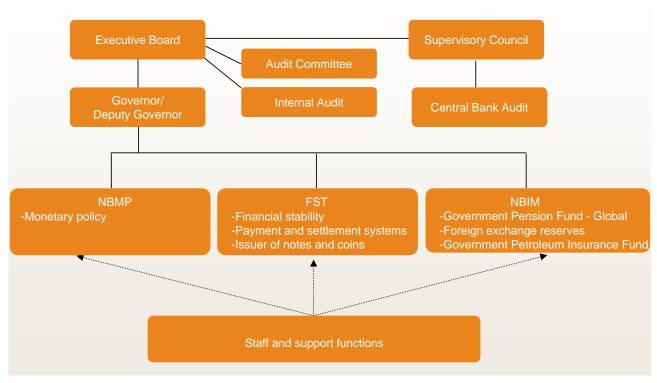
erance pay, study grants with termination agreements, redundancy pay and early retirement. In 2007, applications for termination from 22 employees were approved using human resource policy programmes. Between 1999 and the end of 2007, a total of 334 termination agreements were concluded<sup>12</sup>. Of these agreements, 177 expired at the end of 2007, and 20 will apply in the period 2008-2011.

## **Operational areas as core units**

The Bank's activities are concentrated on the three operational areas Norges Bank Monetary Policy (NBMP), Norges Bank Financial Stability (NBFS) and Norges Bank Investment Management (NBIM). An additional area provides staff and support services (see Chart 46).

The structure of few, but relatively large units provides a suitable span of control for the Governor and Deputy Governor. The areas have clearly defined interfaces with the other units, and currently employ between a good 80 and close to 180 persons.

Chart 46 Norges Bank's organisation



Broken lines indicate delivery of services, while solid lines indicate reporting.

NORGES BANK ANNUAL REPORT 2007 NORGES BANK'S ACTIVITIES 109

<sup>&</sup>lt;sup>12</sup> These include five early retirement agreements approved before 1999

## High degree of delegation

The Supervisory Council is composed of fifteen members elected by the Storting (the Norwegian parliament). It adopts the budget, approves the accounts and ensures that the rules governing the Bank's activities are observed. The Bank's audit department, Central Bank Audit, reports to the Supervisory Council, which usually meets five times a year.

The Executive Board is composed of seven members appointed by the King in Council and is responsible for the Bank's executive and advisory activities. The Governor and Deputy Governor of Norges Bank are chairman and deputy chairman, respectively, of the Executive Board. The employees are represented by two members who supplement the Executive Board when administrative matters are discussed. The Executive Board normally meets every three weeks.

The Executive Board has delegated a large share of the day-to-day operations to the Governor, who has further delegated a substantial portion of operations to the operational areas. Pursuant to the last paragraph of Section 5 of the Norges Bank Act, the Governor is in charge of the "Bank's administration and the implementation of the decisions".

Subject to annual person-year and budgetary limits, each area has a large degree of freedom with respect to human resource administration and budget allocations. Guidelines for the number of person-years are set for three-year periods for most activities.

The remuneration system is changing, with emphasis on effort and performance for persons in management positions and for academics.

Norges Bank Investment Management makes extensive use of performance-based pay.

# Management and follow-up

The main management principle in Norges Bank is line management. The result is a straightforward organisation with clear lines of responsibility. The organisational areas prepare annual action plans for activities with attendant performance goals, which are approved by the Executive Management. In the course of the year, the Executive Management follows up the performance of the individual executive directors by means of an appraisal dialogue in spring and a follow-up dialogue in autumn. During the year, there are shorter follow-up talks about every three weeks.

All managers have a clearly defined responsibility in accordance with the organisation of the activity and the line management principle. Each year managers are assessed by their immediate superior and subordinate in the line. The assessment criteria are direction, drive, attitude and professional quality.

#### **Fundamental values**

Norges Bank is to be an efficient and goal-oriented organisation in line with best international practice. The Bank shall demonstrate the willingness and ability to change, and secure the confidence of the external community. Norges Bank shall be prudent in its use of resources.

In order to attain this objective, all employees shall:

- achieve results
- · be committed
- conduct themselves with a high degree of ethical awareness
- seek to attain a high professional standard and integrity.

# Distribution of costs by main function

The purpose of the distribution is to illustrate total costs for the various functions. The overview has also increased awareness with respect to achieving cost effectiveness in the joint support functions. Costs were distributed among these categories in 2007:

- monetary policy
- management of the Government Pension Fund Global
- management of the long-term foreign exchange reserves
- · financial stability
- · settlement services



- purchase, production and distribution of notes and coins
- other functions<sup>13</sup>

The basis of calculation consists of operating expenses and operating income in the Bank's internal accounts, in addition to depreciation and imputed pension costs. Emphasis has been placed on including costs and income that provide a picture of the cost of ordinary bank operations. Restructuring costs and extraordinary income are therefore excluded. At the same time, internal rent has been used instead of depreciation of the building in Oslo. As a result, operating expenses deviate from operating income in the annual accounts.

Costs in the executive areas are distributed by function. Moreover, all central staff and support expenses outside the operational areas are distributed by function.

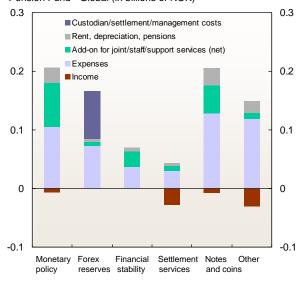
The distribution is based on assessments of costdrivers. The proportions of the distribution keys are based on discretion, and the results must be viewed accordingly. The analyses contain both costs that the individual parts of the Bank can influence and costs that are more centralbank-specific, which are generally fixed.

Gross expenses in 2007 amounted to NOK 2 631m and net expenses to NOK 766m. The corresponding figures for 2006 were NOK 2 323m and NOK 720m, respectively. Net use of resources has increased by about NOK 55m. The increase is related in particular to management of the foreign exchange reserves investment portfolio.

Management of the Government Pension Fund – Global is by far the most resource-intensive task. Gross expenses came to NOK 1 791m in 2007 and NOK 1 526m in 2006. Norges Bank's costs are covered by the Ministry of Finance according to the principle of full cost coverage.

Chart 47 shows the distribution of costs. The Government Pension Fund – Global is not included in the graphic presentation, as the magnitude of the costs differs widely from those associated with other responsibilities.

Chart 47 Use of resources 2007 by task excluding Government Pension Fund - Global (in billions of NOK)



Source: Norges Bank

NORGES BANK ANNUAL REPORT 2007 NORGES BANK'S ACTIVITIES 111

<sup>&</sup>lt;sup>13</sup> These include the organisation of historical archives, management of buildings, the Banking Law Commission, production of statistics for other bodies, services for the government and the management of the Government Petroleum Insurance Fund.

After the management of the Government Pension Fund – Global, the tasks "Monetary policy" and "Notes and coins" are the most costly.

Costs for the purchase, production and distribution of notes and coins amounted to just under NOK 200m. This is more than the amount shown in Table 2 in Chapter 2.

The figure in Chart 47 is based on a distribution of the Bank's total costs, and not a selection of costs, as in the table.

The external costs for custodian, settlement and management activities associated with the long-term foreign exchange reserves have been marked in orange in the chart.

### **Working conditions**

Norges Bank has consistently placed emphasis on the importance of providing good working conditions.

The Bank has a loan scheme for employees where the interest rate is equal to the norm interest rate.<sup>14</sup> The upper limit on housing loans is NOK 1 990 000 per employee.

The employee insurance programme comprises personal insurance (including compulsory occupational injury and occupational illness insurance), group life insurance, group accident and health insurance, business travel insurance and accident insurance for high-risk occupations. These costs account for 1.0% of total personnel expenses.

Norges Bank has its own pension fund for employees. Pension benefits are equal to 2/3 of the employee's salary up to a ceiling of 12 times the National Insurance Scheme's basic pension at the time of retirement. A separate scheme funded through the Bank's operations has been established for those who earned more than this amount as of 31 December 2006. Benefits from the pension fund are coordinated with benefits from the National Insurance Scheme. Employees contribute 2% of their gross annual salary to the pension fund.

The Bank has 96 parking places at the head office which are used by employees at no cost. The Bank owns two seminar and holiday facilities: Venastul, which is located in Ringebu Municipality, is open all year round, and in 2007 recorded a total of 7 582 guest-nights. Vindåsen, which is located in Tjøme, is only open during the summer. In 2007, it recorded 2 594 guest-nights. Net operating grants to the holiday facilities in 2007 amounted to NOK 3.5m. Capital costs are not taken into account. The Bank also has agreements with central banks in Denmark, the Netherlands, the Czech Republic and Germany for reciprocal use of holiday facilities.

Norges Bank has previously provided interest- and instalment-free loans for the purchase of nine holiday facilities for use by the employees. One of these will continue to be available to the Bank's employees, while the other eight have been sold.

<sup>&</sup>lt;sup>14</sup> The norm interest rate laid down by the Ministry of Finance for taxation of loans on favourable terms for employees.



Appendices

# Appendix A

Table 1. Norges Bank's balance sheet at 31 December 2006 and each month of 2007

Figures in millions of NOK

				3		
	200612	200701	200702	200703	200704	
ASSETS						
FOREIGN ASSETS	354 082	357 334	347 056	350 138	345 649	
International reserves <sup>1)</sup>	353 540	357 184	340 224	349 992	345 499	
Other assets	542	150	6 832	146	150	
Investments for Government Pension Fund -	Global 1 782 139	1 821 960	1 844 075	1 875 803	1 908 134	
Domestic assets	60 254	21 773	2 218	2 576	75 631	
Lending	55 647	18 490	501	469	73 506	
Other assets	2 937	1 633	59	448	461	
Fixed assets	1 379	1 359	1 367	1 368	1 373	
Gold	291	291	291	291	291	
TOTAL ASSETS	2 196 475	2 201 067	2 193 349	2 228 517	2 329 414	
LIABILITIES AND CAPITAL						
FOREIGN LIABILITIES	101 412	108 687	97 138	108 724	96 903	
Deposits	87	86	71	98	77	
Borrowing	99 348	103 002	95 166	104 122	88 749	
Other liabilities	402	4 026	345	2 953	6 549	
Equivalent value of allocated Special Drawing	Rights, IMF 1 575	1 573	1 556	1 551	1 528	
Government Pension Fund - Global, de	posits 1 782 139	1 821 960	1 844 075	1 875 803	1 908 134	
DOMESTIC LIABILITIES	238 801	196 788	181 084	172 186	252 008	
Notes and coins in circulation	54 838	50 456	49 486	49 989	49 558	
Treasury deposits	159 679	117 364	98 288	74 936	169 201	
Other deposits	24 030	25 440	17 255	38 626	20 325	
Borrowing	2	0	1 290	1	0	
Other liabilities	252	3 528	14 765	8 634	12 924	
CAPITAL	74 123	74 123	74 123	74 123	74 123	
PROFIT/LOSS	0	-491	-3 071	-2 319	-1 754	
TOTAL LIABILITIES AND CAPITAL	2 196 475	2 201 067	2 193 349	2 228 517	2 329 414	
Liabilities <sup>2)</sup>						
Allotted, unpaid shares in the BIS	279	279	279	279	279	

<sup>1)</sup> According to an agreement with the IMF, Norges Bank has changed the definition of international reserves. The changes have been made in comparable figures.

 $_{\mbox{\tiny 2)}}$  Derivative exposure is not presented in the balance sheet.

200705	200706	200707	200708	200709	200710	200711	200712
338 910	340 693	336 433	332 566	327 640	324 631	334 403	330 640
338 760	340 545	336 278	332 410	327 487	324 477	334 246	330 486
150	148	155	156	153	154	157	154
1 963 871	1 938 688	1 943 546	1 965 771	1 930 964	2 007 783	2 083 487	2 016 955
88 724	53 072	38 070	13 235	21 518	76 862	66 711	79 196
86 488	50 475	35 518	10 476	18 477	72 768	63 645	75 626
570	920	871	1 092	1 363	2 415	1 376	1 835
1 375	1 386	1 390	1 376	1 387	1 388	1 399	1 444
291	291	291	291	291	291	291	291
2 391 505	2 332 453	2 318 049	2 311 572	2 280 122	2 409 276	2 484 601	2 426 791
96 336	102 180	101 219	98 500	101 840	97 053	99 720	90 478
80	70	73	82	82	181	86	85
90 930	94 045	94 098	93 462	94 110	88 824	93 667	85 201
3 790	6 559	5 547	3 454	6 224	6 619	4 484	3 750
1 536	1 506	1 501	1 502	1 424	1 429	1 483	1 442
1 963 871	1 938 688	1 943 546	1 965 771	1 930 964	2 007 783	2 083 487	2 016 955
255 528	222 057	207 214	181 916	191 505	243 055	236 284	262 810
49 992	51 055	50 421	49 924	49 309	49 119	50 285	55 685
188 476	136 766	129 932	109 622	115 204	152 568	161 154	148 494
14 278	29 724	23 936	19 864	21 383	41 249	17 686	53 517
16	3	0	2 405	2	0	2	0
2 766	4 509	2 925	101	5 607	119	7 157	5 114
74 123	74 123	74 123	74 123	74 123	74 123	74 123	56 548
1 647	-4 595	-8 053	-8 738	-18 310	-12 738	-9 013	0
2 391 505	2 332 453	2 318 049	2 311 572	2 280 122	2 409 276	2 484 601	2 426 791
			_	_		_	
279	279	279	279	279	279	279	253

NORGES BANK ANNUAL REPORT 2007 APPENDICES 115

Table 2. Norges Bank's profit and loss accounts at 31 December 2005-2007

Figures in millions of NOK

		Figures in	millions of NOK
	2007	2006	2005
Interest income and dividends	15 506	13 025	9 190
Change in value financial instruments	-3 692	6 604	10 985
Valuation adjustment of foreign exchange	-26 935	-4 985	8 051
Return on international reserves	-15 121	14 644	28 226
Share dividend, BIS	19	19	18
Gain/loss on other foreign financial instruments	3 877	-4 187	-3 214
Loss on domestic financial instruments	- 233	- 286	- 147
Interest expenses to Treasury etc.	-5 235	-4 083	-2 872
Net other financial activities	-1 572	-8 537	-6 215
Total return financial activities	-16 693	6 107	22 011
Return on investment for Government Pension Fund - Global	-78 581	96 236	162 388
Transferred from/to krone account Government Pension Fund - Global	78 581	-96 236	-162 388
Management remuneration Government Pension Fund - Global	1 783	1 526	1 239
Other operating income	104	224	145
Total operating income	1 887	1 750	1 384
Personnel expenses	- 709	- 580	- 563
Depreciation	- 79	- 87	- 116
Other operating expenses	-1 982	-1 688	-1 396
Total operating expenses	-2 770	-2 355	-2 075
Net operating expenses	- 883	- 605	- 691
Profit/loss for the year	-17 576	5 502	21 320
	47.500	0	0
Transferred from Adjustment Fund	17 539	0	0
Transferred from 'Other capital'	37	37	72
Reserves	0	5 539	21 392
Allocated to Adjustment Fund	0	-5 539	-21 392
Allocated to Transfer Fund	0	0	0
Allocated to 'Other capital'	0	0	0
Total allocations	0	-5 539	-21 392

Table 3. Norges Bank's loans to and deposits from banks in 2007

Period	D-loans NOK bn <sup>1)</sup>	Fixed NOK bn <sup>1)</sup>	- <b>rate loans</b> Nominal rate <sup>2)</sup>	Fixed-r NOK bn <sup>1)</sup>	<b>ate deposits</b> Nominal rate <sup>2)</sup>	Sight deposits NOK bn <sup>1)</sup>
January	-	26.2	3.6	-	-	18.5
February	-	5.3	3.84	-	-	20.8
March	-	4.1	4.00	-	-	29.4
April	-	79.6	4.06	-	-	26.4
May	-	79.1	4.10	-	-	18.4
June	-	74.5	4.35	-	-	21.9
July	-	32.3	4.59	-	-	22.0
August	-	14.8	4.62	-	-	28.2
September	-	16	4.90	-	-	21.9
October	-	89.1	5.13	-	-	34.7
November	-	68.1	5.16	-	-	19.7
December	-	68.6	5.33	-	-	35.8

Table 4. Norges Bank's D-loan (overnight lending) and sight deposit rates

	D-loa	n rate	Sight deposit rate	
Period	Nominal <sup>)</sup>	Effective	Nominal	Effective
14.12.06-24.01.07	5.50%	5.65%	3.50%	3.56%
25.01.07-15.03.07	5.75%	5.91%	3.75%	3.82%
16.03.07-30.05.07	5.00%	5.12%	4.00%	4.08%
31.05.07-27.06.07	5.25%	5.38%	4.25%	4.34%
28.06.07-15.08.07	5.50%	5.65%	4.50%	4.60%
16.08.07-26.09.07	5.75%	5.91%	4.75%	4.86%
27.09.07-12.12.07	6.00%	6.18%	5.00%	5.12%
13.12.07-	6.25%	6.44%	5.25%	5.38%

NORGES BANK ANNUAL REPORT 2007 APPENDICES 117

Average of daily observations, in billions of NOK
 Average interest rate allotted. Weighted average of all F-loans/F-deposits in the period.

Table 5. Denominations of coins in circulation 2003–2007. Annual average and at end-month in 2007

In millions of NOK

	20-krone	10-krone	5-krone	1-krone	50-øre	10-øre <sup>1)</sup>	Total
2003	1 560.9	1 051.3	514.6	686.3	190.5	128.6	4 132.3
2004	1 666.6	1 049.3	537.8	717.9	198.5	128.4	4 298.7
2005	1 778.2	1 076.2	562.9	752.6	207.6	128.4	4 505.8
2006	1 848.8	1 144.7	598.4	799.2	218.4	85.6	4 695.1
2007	1 664.5	1 213.7	630.0	844.7	228.4	-	4 581.3
2007							
January	1 761.5	1 183.9	615.2	823.6	224.0	-	4 608.1
February	1 769.8	1 184.0	614.7	824.8	224.3	-	4 617.6
March	1 791.9	1 193.3	616.7	829.4	225.8	-	4 657.0
April	1 796.0	1 204.3	622.2	832.4	226.2	-	4 681.1
May	1 806.5	1 214.9	627.1	837.1	227.2	-	4 712.8
June	1 763.6	1 220.8	631.7	845.3	228.4	-	4 689.8
July	1 577.0	1 211.5	634.7	846.7	229.0	-	4 498.9
August	1 562.0	1 224.1	637.7	851.3	229.7	-	4 504.8
September	1 536.6	1 220.2	635.9	854.5	230.2	-	4 477.4
October	1 522.3	1 222.8	636.8	857.9	231.3	-	4 471.2
November	1 525.8	1 228.4	641.1	862.3	231.9	-	4 489.5
December	1 561.6	1 255.8	646.8	870.6	233.0	-	4 567.8

<sup>&</sup>lt;sup>1)</sup> As of March 2003, the 10-øre coin was no longer legal tender, but was redeemed by Norges Bank until 1 March 2003. The outstanding amount was recorded as income in Norges Bank's accounts in August 2006.

Tabell 6. Denominations of notes in circulation 2003-2007. Annual average and at end-month in 2007

In millions of NOK

	1000-krone	500-krone	200-krone	100-krone	50-krone	Total
2003	22 166.6	7 732.3	4 674.5	2 091.5	764.6	37 429.4
2004	23 555.0	8 277.5	4 792.3	2 012.0	792.5	39 429.4
2005	24 648.7	9 059.5	4 819.0	2 020.9	833.4	41 381.6
2006	25 817.5	10 373.5	5 296.3	2 119.3	916.2	44 522.8
2007	26 178.7	11 213.4	5 381.3	2 121.1	963.6	45 857.9
2007						
January	27 061.0	10 701.2	5 100.3	2 052.3	933.4	45 848.3
February	26 397.9	10 524.3	5 012.7	2 018.8	915.2	44 868.9
March	26 248.0	10 854.7	5 220.8	2 076.6	931.7	45 331.9
April	25 874.6	10 760.8	5 240.6	2 067.9	933.2	44 877.0
May	25 784.1	10 956.1	5 407.0	2 163.3	959.3	45 269.7
June	26 199.0	11 370.8	5 523.3	2 253.8	1 018.1	46 365.0
July	25 862.7	11 347.0	5 463.4	2 234.4	1 014.2	45 921.7
August	25 528.3	11 270.4	5 484.7	2 145.3	990.1	45 418.8
September	25 333.7	11 140.9	5 305.2	2 087.3	964.5	44 831.5
October	25 337.5	11 048.1	5 259.5	2 049.9	952.4	44 647.5
November	25 947.1	11 426.1	5 386.0	2 076.5	962.4	45 798.1
December	28 569.9	13 159.9	6 171.8	2 226.9	988.2	51 116.7

# Table 7. Banknotes destroyed 2003–2007

In millions of notes

	1000-krone	500-krone	200-krone	100-krone <sup>1)</sup>	50-krone	Total
2003	3.8	5.8	10.9	53.1	14.0	87.5
2004	2.7	7.8	12.5	11.6	12.3	46.8
2005	2.4	6.9	15.8	11.7	10.2	47.0
2006	2.6	7.8	16.5	12.2	10.5	49.6
2007	3.0	9.3	20.2	14.0	11.2	57.7

The table shows the total number of banknotes destroyed apart from notes from older series (50-krone and 100-krone notes from Series III, IV and V and 500-krone and 1000-krone notes from Series III and IV). The notes are destroyed when they are worn or damaged, or when a series is replaced by another. The figures in the table are influenced by the following new issues:

NORGES BANK ANNUAL REPORT 2007 APPENDICES 119

 $<sup>^{\</sup>mbox{\tiny 1)}}$  An upgraded 100-krone banknote, Series VII, was put into circulation on 25 March 2003.

Table 8. Average life of banknotes 2003-2007. In years

	1000-krone	500-krone	200-krone	100-krone	50-krone
2003	5.8	2.7	2.2	0.4	1.1
2004	8.7	2.1	1.9	1.7	1.3
2005	10.3	2.6	1.5	1.7	1.6
2006	9.9	2.7	1.6	1.7	1.7
2007	8.7	2.4	1.3	1.5	1.7

The figures show the volume of notes in circulation compared with the number destroyed in the year in question. See the footnote for Table 7 for an explanation of the changes in banknote life.

Table 9. Inflow of notes to Norges Bank 2003-2007

In millions of notes

	1000-krone	500-krone	200-krone	100-krone	50-krone	Total
2003	33.4	103.6	234.7	96.0	32.0	499.7
2004	32.4	104.9	230.1	90.2	33.1	490.7
2005	31.0	103.6	205.9	87.3	34.1	461.8
20061)	14.0	42.1	76.4	34.8	12.6	179.8
2007	12.5	32.7	48.5	24.1	8.9	126.8

The table shows the number of banknotes delivered to Norges Bank.

Table 10. Velocity of banknote circulation 2003-2007

	1000-krone	500-krone	200-krone	100-krone	50-krone	Total	
2003	1.51	6.70	10.04	4.59	2.09	5.14	
2004	1.37	6.33	9.60	4.48	2.09	4.91	
2005	1.26	5.72	8.54	4.32	2.05	4.45	
20061)	0.54	2.03	2.88	1.64	0.69	1.60	
2007	0.48	1.46	1.80	1.14	0.46	1.09	

The table shows the average number of times notes pass through Norges Bank per year.

<sup>&</sup>lt;sup>1)</sup> The large decline from 2005 to 2006 is due to changed conditions for the deposit and withdrawal of cash from Norges Bank and the establishment of private cash depots.

<sup>&</sup>lt;sup>1)</sup> See footnote for Table 9.

Table 11. Inflow of coins to Norges Bank 2003–2007

In millions of coins

	20-krone	10-krone	5-krone	1-krone	50-øre	Total
2003	216.5	119.8	84.5	353.9	60.6	835.2
20041)	281.4	117.4	83.7	361.0	63.6	907.1
2005	107.3	155.1	123.6	349.2	90.7	826.0
20062)	38.7	37.2	28.3	81.0	17.9	203.1
20073)	25.4	13.5	9.0	16.6	3,9	68.4

The table shows the number of coins delivered to Norges Bank.

Table 12. Velocity of coin circulation 2003–2007

	20-krone	10-krone	5-krone	1-krone	50-øre	Total
2003	2.77	1.14	0.82	0.52	0.16	0.62
20041)	3.38	1.12	0.78	0.50	0.16	0.64
2005	1.21	1.44	1.10	0.46	0.22	0.56
2006 <sup>2)</sup>	0.42	0.32	0.24	0.10	0.04	0.13
20073)	0.31	0.11	0.07	0.02	0.01	0.04

The table shows the average number of times coins pass through Norges Bank per year.

Table 13. Production of circulation coins at the Mint of Norway 2003–2007

In thousands of coins

	20-krone	10-krone	5-krone	1-krone	50-øre	Total
2003	30 061	957	827	24 093	19 853	75 790
2004	499	503	503	25 151	14 806	41 462
2005	553	466	503	25 648	4 963	32 133
2006	1 000	497	509	63 129	30 227	95 362
2007	493	474	9 152	47 108	20 117	77 345

The table shows the number of coins that were minted in that particular year and inscribed with that year's date.

NORGES BANK ANNUAL REPORT 2007 APPENDICES 121

<sup>&</sup>lt;sup>1)</sup>The figures are estimates due to changes made in connection with the recording of coins in Norges Bank's books.

<sup>&</sup>lt;sup>2)</sup> See footnote for Table 9.

<sup>&</sup>lt;sup>3)</sup> The change from 2006 to 2007 is due primarily to the establishment of private cash depots.

<sup>&</sup>lt;sup>1)</sup> See footnote 1 for Table 11.

<sup>&</sup>lt;sup>2)</sup> See footnote for Table 9.

<sup>3)</sup> See footnote 3 for Table 11.

Table 14. Banknote production at Norges Bank's Printing Works 2003–2007

Number of packets of 500 notes

	1000-krone	500-krone	200-krone	100-krone	50-krone
2003	0	0	30 304	60 400	50 366
2004	24 700	0	70 380	54 556	1 584
2005	45 912	52 900	0	0	71 524
2006	0	26 882	30 200	127 027	0
2007	0	0	77 700	0	0

The table shows figures for notes produced for Norges Bank and cannot be used to indicate the number of notes printed with different dates. Norges Bank's Printing Works was shut down on 30 June 2007.

Table 15. Norges Bank's banknote series 1877–2007. Period of production

	Series I	Series II	Series III	Series IV	Series V	Series VI	Series VII
1000-krone notes	1877-98	1901-45	1945-47	1949-74	1975-89	1990-99	2001-
500-krone notes	1877-96	1901-44	-	1948-76	1978-85	1991-98	1999-
200-krone notes	-	-	-	-	-	-	1994-
100-krone notes	1877-98	1901-45	1945-49	1949-62	1962-77	1977-95	1995-
50-krone notes	1877-99	1901-45	1945-50	1950-65	1966-84	1984-96	1996-
10-krone notes	1877-99	1901-45	1945-53	1954-74	1972-85	-	-
5-krone notes	1877-99	1901-44	1945-54	1955-63	-	-	-
Low denomination ba	anknotes						
1-krone notes	1917	1940-50					
2-krone notes	1918	1940-50					

Series I ceased to be legal tender on 13 July 1988. Series II notes were invalidated in connection with the monetary reform in 1945. Notes in Series III and IV and 10-krone, 50-krone and 100-krone notes in Series V ceased to be legal tender on 13 July 1989. Notes in Series I, II and III are not redeemed by Norges Bank. The 1000-krone notes in Series V ceased to be legal tender on 1 August 1991, as did the 500-krone notes in Series V on 21 June 1992. The 50-krone notes in Series VI ceased to be legal tender on 28 January 1998, as did the 100-krone notes on 5 September 1998, the 500-krone notes on 17 April 2001 and the 1000-krone notes on 26 June 2002. The 1-krone and 2-krone notes from the period 1917-1918 are no longer legal tender and are not redeemed by Norges Bank. 1-krone and 2-krone notes from the period 1940-1950 ceased to be legal tender on 13 July 1989 and are not redeemed by Norges Bank.

# Appendix B Norges Bank's management and organisation

## The Bank's governing bodies

The governing bodies of the Bank are the Executive Board and the Supervisory Council.

Pursuant to the Act on Norges Bank and the Monetary System of 24 May 1985, executive and advisory authority is vested in the Executive Board. It is in charge of the Bank's operations and manages its funds. The Executive Board consists of seven members, appointed by the King. The Governor and Deputy Governor are chair and deputy chair respectively of the Executive Board. They are appointed to full-time positions for a term of six years. The other five members are appointed for four-year terms. Two employee representatives supplement the Executive Board when administrative matters are discussed. The Executive Board normally meets every three weeks. Every second meeting is a monetary policy meeting.

The Executive Board has appointed an administration committee, which has decision-making authority in administrative matters (the internal management of Norges Bank). This committee is composed of the following members: the Governor of Norges Bank, the Deputy Governor of Norges Bank, the executive director of Norges Bank Staff and Group Services and the employee representatives on the Executive Board.

In accordance with the Norges Bank Act, the Governor of Norges Bank is in charge of the Bank's administration and the implementation of Executive Board decisions.

The Supervisory Council ensures that the rules governing the Bank's activities are observed, organises the auditing of the Bank, adopts the annual accounts and approves the budget on the recommendation of the Executive Board. The Supervisory Council consists of fifteen members elected by the Storting for four-year terms. From among the members, the Storting selects the chair and deputy chair for terms of two years. The Supervisory Council usually meets five times a year.

The composition of the Executive Board and Supervisory Council as at January 2008\*

## The Executive Board

Governor of Norges Bank Svein Gjedrem, Chair (reappointed 01.01.2005-31.12.2010)

Deputy Governor Jarle Bergo, Deputy Chair (reappointed 12.04.2002-11.04.2008)

Vivi Lassen (reappointed 01.01.2006 -31.12.2009) Alternate: Kari Broberg (reappointed 01.01.2006-31.12.2009)

Brit K. Rugland (reappointed 01.01.2006-31.12.2009) Alternate: Berit Tennbakk (01.12.2006-31.12.2009)

**Øystein Thøgersen** (reappointed 01.01.2006-31.12.2009) Alternate: Ingunn Myrtveit (reappointed 01.01.2006-31.12. 2009)

**Liselott Kilaas** (01.01.2008-31.12.2011)

Alternate: Aage Thor Falkanger (01.12.2006-31.12.2009)

Asbjørn Rødseth (reappointed 01.01.2008-31.12.2011) Alternate: Eirik Wærness (reappointed 01.01.2008-31.12. 2007)

#### **Employee representatives:**

Jan Erik Martinsen (appointed 01.01.2004 - ) Gunnvald Grønvik (acting) Eigil Nyberg (alternate) **Gunnvald Grønvik** (alternate)

# Supervisory Council

Mary Kvidal, 2006-2009 (reelected) (Chair 2008-2009)

Alternate: Lars Gjedebo, 2006-2009

Frank Sve, 2006-2009 (Deputy Chair 2008-2009) Alternate: Tone Liljeroth, 2008-2009 (new) Terie Ohnstad, 2008-2011 (reelected)

Alternate: Anne Grethe Kvernrød, 2008-2011 (new)

Eva Karin Gråberg, 2008-2011 (reelected) Alternate: Jan Elvheim, 2008-2011 (reelected)

Tom Thoresen, 2008-2011 (reelected) Alternate: Hans Kolstad, 2008-2011 (reelected) Runbjørg Bremset Hansen, 2008-2011 (reelected) Alternate: Camilla Bakken Øvald, 2008-2011 (reelected)

Kåre Harila, 2008-2011 (reelected)

Alternate: Liv Sandven, 2008-2011 (reelected)

**Anne Strifelt**, 2006-2009

Alternate: Inger Spangen, 2006-2009

Reidar Åsgård, 2006-2009 Alternate: Ola Røtvei, 2006-2009 Oskar Grimstad, 2006-2009

Alternate: Pål Morten Borgli, 2006-2009

Terje Johansen, 2006-2009

Alternate: Torhild Skogsholm, 2006-2009

Erland Vestli, 2008-2009 (new, alternate 2006-2007)

Alternate: Frode Klemp, 2006-2009 Tormod Andreassen, 2008-2011 (new) Alternate: Bjørn Lødemel, 2008-2011 (new)

Gunvor Ulstein, 2008-2011 (new)

Alternate: Beate Bø Nilsen, 2008-2011 (new)

Ivar B. Prestbakmo, 2008-2011 (new, alternate previously)

Alternate: Torunn Hovde Kaasa, 2008-2011 (new)

#### Audit

Svenn Erik Forsstrøm, State Authorised Public Accountant

123 NORGES BANK ANNUAL REPORT 2007 APPENDICES

<sup>\*</sup> On 1 February 2008, Jan F. Ovigstad was appointed new Deputy Governor for a period of six years, commencing on 1 April 2008

# Norges Bank's management and organisation

## Management

Svein Gjedrem, Governor of Norges Bank Jarle Bergo, Deputy Governor

# Norges Bank Monetary Policy

Jan F. Ovigstad, Executive Director Jon Nicolaisen, Director

## **Research Department**

Øyvind Eitrheim, Director

#### **International Department**

Audun Grønn, Director

### **Department for Market Operations and Analysis**

Jannecke Ebbesen, Director

#### **Monetary Policy Department**

Amund Holmsen, Director

#### **Human Resources and Administration**

Audun Grønn, Director

#### **Economics Department**

Anne Berit Christiansen, Director

# Norges Bank Financial Stability

Kristin Gulbrandsen, Executive Director

#### **Financial Markets Department**

Birger Vikøren, Director

#### **Payment Systems**

Inger-Johanne Sletner, Director

#### **Interbank Settlement Department**

Kjetil Heltne, Director

#### **Cashier's Department**

Trond Eklund, Director

### **Contingency Planning**

Arild J. Lund, Director

# Norges Bank Investment Management

Yngve Slyngstad, Executive Director

#### **Equities - Investments**

Yngve Slyngstad, Chief Investment Officer

#### **Equities - Operations**

Stephen A. Hirsch, Chief Operating Officer

#### **Fixed Income - Investments**

Dag Løtveit, Chief Investment Officer

### **Fixed Income - Operations**

Bjørn Egge, Chief Operating Officer

#### Risk, Performance and Accounting

Trond Grande, Head of Risk Management

#### **IT Infrastructure**

Ilse Bache, Chief Technology Officer

#### **Legal Department**

Marius Nygaard Haug, Chief of Staff and General Counsel

#### **Finance and Reporting**

Bjørn Taraldsen, Assistant Director

#### Staff

Kristin Skauan Kleven, Head of Human Resources

#### **Corporate Governance**

Anne Kvam, Head of Corporate Governance

# Norges Bank Staff and Group Services

Harald Bøhn, Executive Director Anne-Britt Nilsen, Director

#### **Staff Services**

Nils T. Eide, Director

#### **Property Management Department**

Marit Kristine Liverud, Director

### **Security Department**

Arne Haugen, Head of Security

#### **Shared Services**

Torkel Fagerli, Director

#### **ICT Department**

Øyvind Seljeseth, Director

#### **The Service Centre**

Jan Erik Johansen, Director

## **Communications Department**

Siv Meisingseth, Director of Communications

## Legal Department

Marius Ryel, Executive Director

## Internal Audit

Ingunn Valvatne, Head of Internal Audit

