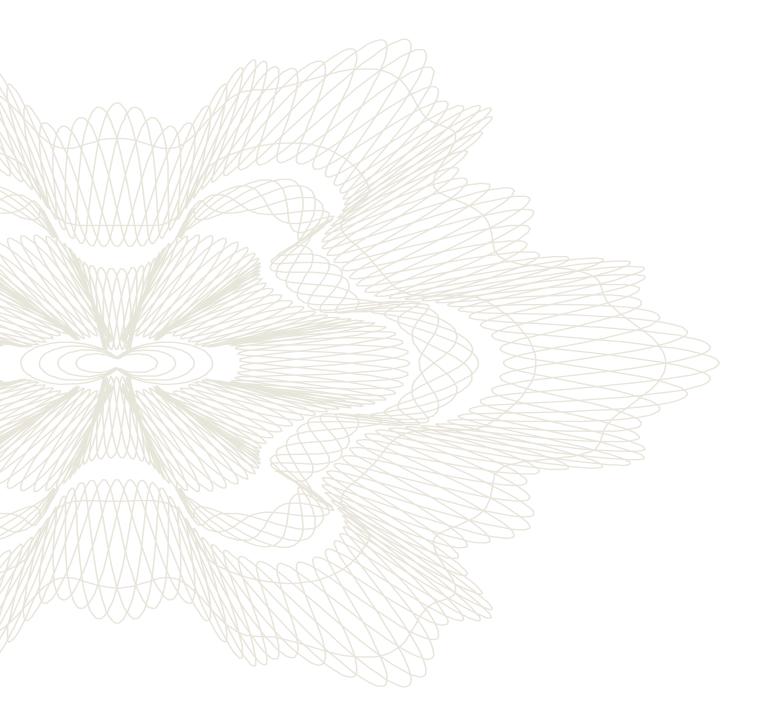
# Annual Report 2004



%NB% NORGES BANK

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# Report of the Executive Board for 2004

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 funds. The Executive Board works to realise the Bank's objectives and values with particular emphasis on achieving price stability, financial stability and added value in investment management. The Executive Board also devotes considerable attention to organisational development and the Bank's overall utilisation of resources.

The Executive Board held 17 meetings in 2004 and dealt with 120 matters. Two employee representatives supplement the Executive Board when administrative matters are discussed. In addition to ordinary Executive Board meetings, a number of seminars dealing with the Bank's core activities were held. In autumn 2004, the Executive Board visited the European Central Bank in Frankfurt.

#### Monetary policy

The operational objective of monetary policy is low and stable inflation, with annual consumer price inflation of approximately 2.5% over time. The Executive Board operates a flexible inflation targeting regime, so that weight is given to both variability in inflation and variability in output and employment.

Monetary policy affects the economy with a lag. The interest rate is set with a view to stabilising inflation at the target within a reasonable time horizon, normally one to three years. The more precise horizon will depend on disturbances to which the economy is exposed and how they affect the path for inflation and the real economy in the period ahead.

The Executive Board discusses interest rate setting and other specific changes in the use of monetary policy instruments at the monetary policy meetings, which are normally held every six weeks. The dates of monetary policy meetings are announced. Most of the material presented to the Executive Board is made public.

The Executive Board's decision is announced at a fixed, predetermined time just after the monetary policy meeting. A detailed account of the background for the interest rate decision and the Executive Board's assessments are included in the press release concerning the interest rate decision. At the press conference, the central bank governor or deputy governor provides an account of the most important reasons behind the Executive Board's interest rate decision.

Like other central banks, Norges Bank publishes reports about the economic situation, the inflation outlook and the conduct of monetary policy. In 2004, the Bank made a number of changes in its presentation of monetary policy decisions. The Bank has become more transparent with regard to the rationale behind these decisions. In the press release, Norges Bank presents a detailed account of both the main aspects of economic developments that influence interest rate decisions and of the Executive Board's assessments. In 2004, the alternatives considered by the Executive Board have also been made public. Interest rate decisions are based on a monetary policy strategy drawn up by the Executive Board every four months.

Since the July 2004 *Inflation Report* (IR 2/2004), the Executive Board's monetary policy strategy and the assessments on which it is based have been published at the beginning of the relevant strategy period. The statement concerning the time horizon for monetary policy was also adjusted, in line with the conduct of flexible inflation targeting.

In 2004, growth in the Norwegian economy was solid. Capacity utilisation in the economy increased and approached a normal level. However, inflation was low and more than 1 percentage point below the inflation target. This was partly because the increase in import prices remained unexpectedly low in 2004. The rise in prices for domestic services was also unexpectedly low, probably as a result of intensified competition in a number of service industries and in retail trade.

From December 2002 to March 2004, the key rate was reduced by 5.25 percentage points. Monetary policy easing was essential to prevent inflation expectations from becoming entrenched at a level that was too low. The krone exchange rate in 2004 was weaker than in the previous two years. The overall conduct of monetary policy has been expansionary which has resulted in expectations of a gradual increase in inflation. The objective of bringing inflation back to target and stabilising inflation expectations has been weighed against the risk that output and employment growth may eventually be too high. A more rapid or more aggressive monetary policy easing would have resulted in a higher risk of a substantial impact on the real economy and a high risk of inflation moving above target in the longer term. This could require higher interest rates at a later time. Thus, despite strong monetary policy easing, inflation was expected to be lower than the inflation target in 2004.

In 2004, monetary policy was aimed at bringing inflation up towards the target within a horizon of one to three years. During the year, special attention was given to conditions that could delay the increase in inflation or result in lower inflation. Towards the end of 2003, inflation was expected to edge up. After a fairly long period of very low inflation, the Executive Board decided that it was appropriate to be particularly vigilant if inflation did not

increase as expected. In November and December, inflation was considerably lower than expected. Therefore, at the monetary policy meeting on 28 January, the Executive Board decided to reduce the key rate by 0.25 percentage point to 2%.

Inflation fell further in January and February, partly reflecting increased competition in some markets. The inflation projections were adjusted downwards. Employment and output growth appeared to accelerate, however, so that resource utilisation in the Norwegian economy could rise to a more normal level in the course of 2004. The risk of a persistently large negative deviation from the inflation target seemed nonetheless to be high, and the key rate was reduced by 0.25 percentage point to 1.75% at the monetary policy meeting on 11 March. The Executive Board pointed out that interest rate developments in other countries could also have a considerable impact on the krone and hence on Norwegian interest rates.

Subsequent developments confirmed that activity in both the Norwegian and global economy was picking up. The fall in inflation appeared to have come to a halt. At the monetary policy meeting on 21 April, the Executive Board considered reducing the interest rate by 0.25 percentage point but concluded that it was appropriate to keep the interest rate unchanged. The Executive Board reiterated that interest rate developments in other countries could have a considerable impact on the krone and hence on Norwegian interest rates. The Executive Board kept the key rate unchanged at the monetary policy meeting on 26 May and pointed out that the inflation outlook in Norway implied that Norges Bank would not be the frontrunner when interest rates are increased in other countries.

The krone appreciated until the summer. It appeared that interest rate movements in line with market expectations would take three years to bring inflation up to target. A more expansionary monetary policy could contribute to increasing inflation at a faster pace. However, uncertainty concerning the effects of earlier monetary policy easing and the unusually low interest rate implied the exercise of caution with regard to further interest rate reductions. Instead of further reducing the interest rate, the Executive Board decided to keep the key rate unchanged for a longer period. Such an interest rate path would provide a better balance between the objective of reaching the inflation target and the objective of stable growth in the real economy than a further reduction in the interest rate. The key rate was kept unchanged at the monetary policy meeting on 1 July. The Executive Board pointed out that with the prospect of low inflation for a period ahead, wide deviations from projected developments would be required before the interest rate would be increased. The Executive Board also pointed out that the prospect of continued low inflation in Norway implied that Norges Bank should not be the frontrunner when interest rates were increased in other countries.

After this, interest rate expectations fell in the financial and foreign exchange markets. Inflation was somewhat lower than expected through the summer and into autumn. Developments in the real economy were more in line with expected developments. The Executive Board pointed out that in the conduct of monetary policy, emphasis is also placed on avoiding imbalances in the real economy and that developments in aggregate demand warranted caution with regard to further interest rate reductions. At its meeting on 11 August, the Executive Board concluded that it was appropriate to keep the key rate unchanged. The Executive Board repeated that the prospect of continued low inflation in Norway implied that Norges Bank should not be the frontrunner when interest rates were increased in other countries.

At the monetary policy meeting on 22 September, the key rate was kept unchanged. Interest rates among Norway's trading partners had gradually edged up, and the Executive Board concluded that the prospects of continued low inflation in Norway implied that Norges Bank should lag behind other countries in adjusting interest rates to a more normal level.

Inflation rose as expected from September. The Executive Board decided to keep the key rate unchanged at the monetary policy meetings on 3 November and 15 December. The Executive Board repeated that prospects of continued low inflation in Norway implied that Norges Bank should lag behind other countries in adjusting interest rates to a more normal level.

In 2004, the key rate was increased in the US and the UK. The key rate was also raised in Canada, New Zealand, Australia, Switzerland and Iceland. At the end of 2004, the key rates in most countries were higher than in Norway.

#### Financial stability

Financial stability implies that the financial system is robust to disturbances in the economy and can channel capital, execute payments and redistribute risk in a satisfactory manner. The Executive Board places great emphasis on Norges Bank's contribution to financial stability. Therefore, Norges Bank monitors the economy and the financial system in order to identify trends that may weaken financial stability. The assessments are presented in the *Financial Stability* report which was published in June and November 2004.

The outlook for financial stability at end-2004 was satisfactory. Results in Norwegian banks were better than in several years. This was primarily due to low loan losses but also to increased income from securities trading. Lower operating costs have also made a positive contribution to banks' results. Corporate profitability improved through 2004, due in part to moderate wage growth, high productivity growth, low interest rates and a marked cyclical upturn. Household debt is still growing rapidly, and more rapidly than household income. Debt in relation to disposable income is now approximately as high as it was in the early 1990s. However, due to strong growth in financial assets, an increase in the value of housing wealth, low interest rates and a cyclical upturn, the credit risk associated with banks' lending to households was relatively low at end-2004. The low interest rate level may, however, increase the risk of a continued sharp rise in the household debt-to-income ratio and in house prices. In the long term, this may increase households', and in the next round enterprises', vulnerability to economic disturbances. In its submissions to the Ministry of Finance, the Executive Board provides its assessment of financial stability, based on the *Financial Stability* reports.

The authorities must be prepared for the possibility of crises in the financial system. Norges Bank's instrument in a financial crisis is the supply of extraordinary liquidity to an individual bank or to the banking system as a whole. In March 2004, the Executive Board drew up principles for supplying extraordinary liquidity. A threat to the financial system's ability to function is a necessary precondition for an extraordinary supply of liquidity.

The Basel Committee on Banking Supervision approved new guidelines for calculating banks' capital adequacy (Basel II) in June 2004. A month later, the EU Commission submitted its final proposal for changes in the Capital Adequacy Directive for Banks. In Norway, the directives will be implemented into Norwegian law as part of Norway's EEA obligations. The new Capital Adequacy Directive paves the way for placing greater emphasis on banks' risk management systems and capital allocation, and implies that the minimum capital requirement will be more consistent with the actual risk in banks. Norges Bank has submitted several consultative statements on the proposal for the new Capital Adequacy Directive.

The IMF started its Financial Sector Assessment Programme (FSAP) in Norway in autumn 2004. This programme is designed to identify the strengths and weaknesses of a country's financial system. The FSAP comprises two main parts: A review of compliance with international standards in further specified areas, and a final report on the state of the financial system. The FSAP for Norway will be completed in the first half of 2005.

In June 2003, Norges Bank entered into an agreement with ErgoIntegration concerning outsourcing of the operation and management of the IT systems connected to Norges Bank's settlement system. In March 2004, the majority of the IT systems were transferred to hardware at ErgoIntegration AS. The work in connection with transferring operation and management from Norges Bank to EroIntegration AS was completed on 1 September 2004. After outsourcing IT operations, the stability of the settlement system has been close to the target figure of 99.90% operational time, in line with results during Norges Bank's last years of operating the IT systems.

Norges Bank is preparing for the acquisition of new system solutions for the settlement system. The background for this is that the tasks handled by Norges Bank's settlement system have changed since the existing system solutions



were developed. These systems are also approaching the end of their technological lifetime. The Bank aims to have the new system solutions in operation from 2007. Norges Bank will maintain close contact with the banking industry in their work to develop the new settlement system.

In 2004, the Executive Board evaluated Norges Bank's role in the supply of cash. The objective is to achieve an optimally efficient division of responsibility and functions among various market participants. Effective 1 January 2005, the terms for banks' cash deposits and withdrawals from Norges Bank's depots were changed. The Executive Board has also evaluated the geographic distribution of the cash depots as well as alternative models for these depots. A proposal for changes was distributed to the two banking associations for comment in December 2004.

# Investment management

Norges Bank manages the Bank's foreign exchange reserves and is responsible for the operational management of the Government Petroleum Fund on behalf of the Ministry of Finance. Norges Bank also manages the Government Petroleum Insurance Fond on behalf of the Ministry of Petroleum and Energy. At the end of 2004, Norges Bank managed assets worth NOK 1 243bn in international capital markets. The two largest funds are the Government Petroleum Fund, amounting to NOK 1 016bn, and Norges Bank's foreign exchange reserves, amounting to NOK 211bn.

In 2004, all portfolios managed by Norges Bank recorded a positive return, measured in terms of the currency basket corresponding to the composition of the individual portfolio's benchmark index. Solid developments in 2004, particularly in equity markets, contributed to returns of 8.94% and 7.75% respectively for the Petroleum Fund and the foreign exchange reserves' investment portfolio, measured in terms of the currency basket. The NOK return was 3.93% and 2.60% respectively as a result of the appreciation of the Norwegian krone. The return in terms of international currencies provides the best expression of developments in the two funds' international purchasing power. In terms of the currency baskets, the average real returns on the Petroleum Fund since 1997 and on the foreign exchange reserves' investment portfolio since 1998 have been 4.01% and 3.57% per year, respectively, after deduction of management costs.

In 2004, the Executive Board approved a strategic plan for the development of investment management operations until 2007. The main objectives in the plan are to achieve an annual excess return of at least 0.25 percentage point by means of active management and to maintain a high level of confidence among customers and the general public. Active management will be increased and conducted in accordance with the investment philosophy of many independent positions. The Fund shall be managed in a prudent manner with considerable emphasis on good internal control routines and without significant infringements of the guidelines from the principals.

The Executive Board has established that wage and personnel policy in Norges Bank's investment management shall be a means of achieving performance targets. This shall ensure that Norges Bank is a competitive employer on the Norwegian and international markets.

The Executive Board has also established guidelines for the exercise of ownership rights associated with the equity portfolios after the Ministry of Finance established its guidelines for the Petroleum Fund's portfolio. Norges Bank's guidelines aim to make corporate governance an integral part of investment activities, where the objective is to achieve a high return. In particular, it is emphasised that Norges Bank's principles for the exercise of ownership rights should be known in those enterprises where the Bank owns shares and that the board of directors in these enterprises conduct affairs in accordance with internationally accepted principles of good corporate governance.

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 operational management performance. The investment portfolio accounts for the largest portion of the foreign exchange reserves. After a gradual adaptation over a two-year period, work to increase the equity share of the investment portfolio to 30% and to include non-government-guaranteed bonds in the portfolio was completed in 2004. The investment portfolio's investment universe for fixed income instruments and equities was expanded to include new countries in 2004, and inflation-linked bonds and some emerging equity markets were also included in the benchmark portfolio. In 2004, the risk exposure in relation to the benchmark portfolio has remained well within the limits set by the Executive Board. Total risk in the portfolio is determined by the benchmark portfolio. Based on market conditions at the beginning of 2005, the standard deviation on the total NOK return is estimated at 6.4 percentage points. This means that the return in two out of three years may be expected to deviate less than 6.4 percentage points from the long-term expected return in international capital markets.

The foreign exchange reserves' other sub-portfolios are smaller. The size of the buffer portfolio was reduced considerably during the year by transferring capital to the investment portfolio. There have been no changes in the management of the money market portfolio.

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 Petroleum Fund and the Government Petroleum Insurance Fund. The list of countries where investments may be made has been expanded in accordance with advice from Norges Bank. The Ministry of Finance has also established ethical guidelines for the Petroleum Fund's investments. An Advisory Council on Ethics will advise the Ministry of Finance on how the guidelines for negative screening and the 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 in the foreign exchange reserves.

In 2004, the Ministry of Finance transferred NOK 138.2bn to the Petroleum Fund. After the Ministry of Finance decided to discontinue the Environmental Fund, the capital was transferred to the Petroleum Fund's ordinary equity portfolio at the end of November 2004. In 2004, the risk exposure in relation to the benchmark portfolio has remained well within the limits set by the Ministry of Finance. Total risk in the portfolio is determined by the benchmark portfolio. Based on market conditions at the beginning of 2005, the standard deviation on the total NOK return is estimated at 6.6 percentage points. This means that the return in two out of three years may be expected to deviate less than 6.6 percentage points from the long-term expected return.

In 2004, the actual return on all the portfolios was higher than the return on the various benchmark indices defined by the delegating authorities. The excess return was 0.53% for the Petroleum Fund, 0.08% for the foreign exchange reserves' investment portfolio and 0.20% for the Petroleum Insurance Fund. All of these portfolios have outperformed their benchmarks each year since 2000. The annual average excess return on the Petroleum Fund has been 0.45% since 1998.

The management of the Government Petroleum Fund is also described in the *Government Petroleum Fund Annual Report*.

In line with the Executive Board's decision of 17 September 2003, most of Norges Bank's gold bars were sold during the first quarter of 2004. The rest of the gold reserves comprise a large number of coins of historical and numismatic value and some gold bars for use in exhibitions (see note 11 in Norges Bank's financial statements).

## Organisation and personnel

#### Use of resources and restructuring

The Executive Board emphasises that the central bank shall discharge its responsibilities in a professional manner and at low cost. In the last few years, the Bank has concentrated its operations on its core activities which include monetary policy, financial stability and investment management as well as operational and staff functions related to these functions.

This has resulted in substantial restructuring. Until a few years ago, cash handling and the production of notes and coins accounted for a large part of the Bank's activities and use of resources. Most of these operations have now been spun off (Norsk Kontantservice AS) or sold (Den Kongelige Mynt AS). The operational activities associated with the Bank's settlement systems have been outsourced. Throughout 2004, the organisation has been further adapted as a result of earlier restructuring decisions. Operations in connection with foreign payment statistics will be transferred to Statistics Norway in the spring of 2005. The Bank's production of banknotes will be discontinued in 2007 and reductions will be made in staff and shared services until 2008.

At end-2004, there were 591 permanent and temporary employees at Norges Bank, compared with 618 at end-2003 and 1 165 at end-1998.

The number of employees is expected to be 475-500 when the approved restructuring has been completed. The number of employees engaged in the Bank's investment management operations has increased steadily in the last few years, primarily because the assets under management in the Government Petroleum Fund have grown sharply and because the Bank is employing a more active management strategy. The number of permanent and temporary employees engaged in investment management operations at end-2004 was 125 compared with 119 at end-2003. This number is expected to rise further over the next few years.

The Bank's restructuring affects many employees. Women with many years of service in the Bank represent a group that has been particularly affected. Norges Bank is using personnel policy programmes to facilitate the restructuring. In the period 1999 to end-2004, the Bank employed human resource policy measures in connection with 281 retirement agreements. In 2004, applications for retirement from 17 employees in different parts of the Bank were approved, compared with 24 the year before.

Total restructuring costs in the period 1999 to 2004 amounted to approximately NOK 347m. Most of this sum is related to agreements entered into in 2000 and 2001. In 2003 and 2004, there was a marked reduction in restructuring costs (see note 7.2 in the financial statement for more information).

Restructuring and the reduction in the number of employees has also resulted in vacant office space at the head office. In 2004, the Bank began making preparations for the redistribution, allocation and rental of available office space.

Net resources employed in the Bank's own operations have been reduced by 18% since 1998. Restructuring costs are not included. In 2004, net resources employed were at approximately the same level as in 2003.

#### **Gender equality**

Women account for 42% of the employees in Norges Bank. The share of women is higher in the lower paid job categories than in management positions or in the category economist/adviser. The Bank's gender equality programme has set targets for the share of women in different job categories. At the end of 2004, the share of women in management positions and the higher paid job categories was 27%, whereas the target for the group is 40%. The share of women in this group was 28% at end-2003. A comparison shows that on average the salary of women managers in Norges Bank was 97.4% of the salary of male managers in 2004, up from 96.5% in 2003. For the category economist/adviser, the figures were 89.6% compared with 89.9% one year earlier.

The Executive Board is following developments carefully and emphasises that the Bank should work actively to remove wage disparities and to recruit women and increase the share of women in management positions and other job categories. Regular reports are made to the Executive Board concerning developments in the gender equality programme through the year.

#### Health, environment and safety

Norges Bank has entered into an agreement to be an inclusive workplace enterprise. In 2004, absence due to illness was 4.0% of the total number of working days, compared with 4.1% in 2003. Long-term absences (16 days or more) accounted for 2.9% of total absence, the same as in 2003.

Health, environment and safety surveys are conducted in the Bank's departments on average every second year. The Executive Board is monitoring developments in the working environment any negative effects in those areas of the Bank undergoing restructuring. Norges Bank has no significant impact on the external environment.

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 employees and cooperative partners and protect the consider-able 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 will continue in 2005.



#### **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 duties in an unbiased and independent manner. The Executive Board emphasises that the Bank's employees must behave in an ethical manner. Therefore, the Executive Board has established ethical rules for the Bank's employees to prevent them from exploiting their positions to achieve unauthorised advantages for themselves or others or being disloyal to the Bank. Ethical rules have also been established for the members of the Executive Board, see the Ministry of Finance's regulation of 7 August 2000 concerning the relationship of Norges Bank's Executive Board to other credit institutions and enterprises.

#### Profit and loss account and balance sheet

Net international reserves are Norges Bank's main asset, apart from assets invested for the Petroleum Fund which are offset in the balance sheet by the Government Petroleum Fund's krone deposits. The activity in the Petroleum Fund does not have any impact on Norges Bank's results. Norges Bank has liabilities in the form of notes and coins in circulation, and domestic deposits from the central government and banks. With a balance sheet of this nature, a positive return may be expected in the long term, due to a number of factors:

- The issue of notes and coins is one of Norges Bank's main responsibilities. This means that the Bank will always have non-interest-bearing debt. The offsetting entry is the Bank's interest-bearing claims on other market participants. Because of the Bank's monopoly on banknotes, the accounts will normally show a profit (seigniorage).
- Interest is paid on government and bank deposits in Norges Bank. The foreign exchange reserves are invested in bonds and equities. Returns on bonds are expected to be higher over time than interest on deposits. Long-term returns are also expected to be higher on equities than on bonds.

Norges Bank's income consists primarily of interest and any net exchange gains on the foreign exchange reserves. Exchange and capital gains are the result of changes in exchange rates and equity prices and of interest rate changes which 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 2004 show a surplus of NOK 1.1bn, compared with a surplus of NOK 20.8bn in 2003.

Due to the appreciation of the Norwegian krone, foreign exchange reserves translated into NOK show exchange losses of NOK 10.0bn in 2004, compared with exchange gains of NOK 12.3bn in 2003. Exchange losses due to the appreciation of the krone have no effect on the international purchasing power of the foreign exchange reserves.

The rise in prices in international securities markets in 2004 resulted in a capital gain of NOK 5.7bn, compared with a capital gain of NOK 4.2bn in 2003. Interest income and dividends from foreign investments amounted to NOK 8.5bn, which is NOK 0.5bn more than in 2003.

Interest payments to the Treasury amounted to NOK 2.3bn compated with NOK 1.7bn in 2003.

The Adjustment Fund amounted to NOK 41.9bn at end-2003. Following the year's allocations for 2004, the Adjustment Fund amounts to NOK 46.1bn. If the Adjustment Fund were to reflect the ratios in the guidelines for provisions and allocation of profits, it would have been NOK 87.4bn.

Norges Bank's total balance sheet amounts to NOK 1 287.9bn. The Government Petroleum Fund is integrated into Norges Bank's accounts, and constitutes about 79% of the Bank's balance sheet. The Government Petroleum Fund's krone deposits are a liability item for Norges Bank and at year-end amounted to NOK 1 015.5bn. Norges Bank invests the equivalent of the krone deposits in an earmarked portfolio abroad. The return achieved on the international portfolio is transferred to the Fund's krone account. Norges Bank's results are therefore not affected by this portfolio's results. Norges Bank's costs associated with managing the Government Petroleum Fund are covered by the Ministry of Finance up to a certain limit.

The value of notes and coins in circulation amounts to NOK 47.6bn, which is NOK 1.3bn more than at end-2003. These are interest-free liabilities in Norges Bank's accounts.

Contracts to purchase and sell financial derivatives and options contracts were entered into at year-end and are shown as off-balance sheet items.

Reference is made to the financial statements for 2004 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 since been revised several times, most recently by the Royal Decree of 6 December 2002 and now read as follows:

1. 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, other claims/liabilities abroad or any other commitments which 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 by 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 until the Adjustment Fund reaches full size according to point 1.
- 3. 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.
- 5. Every year in connection with the closing of the books, 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, the net sum of NOK 3 084.0m is to be transferred from 'Other capital'. This amount includes a reversal of the write-up of the gold reserves and the write-down of previously written-up 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 to the meeting of the Supervisory Council on 17 February 2005:

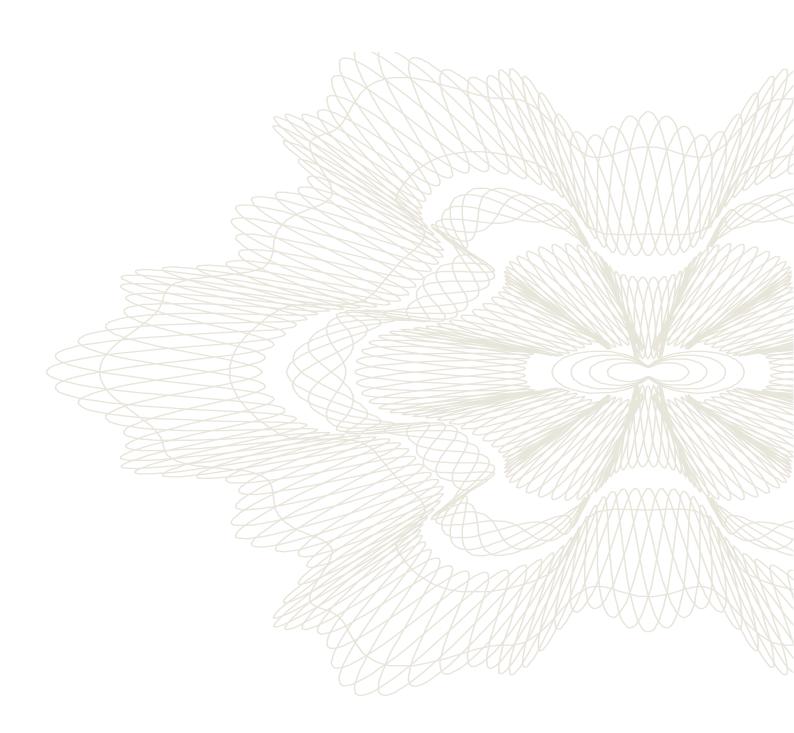
In accordance with point 1, the surplus for the year after other allocations, NOK 4 172.6m, will be allocated to the Adjustment Fund. As there is no capital in the Transfer Fund, no transfer will be made to the Treasury.

#### Oslo, 2 February 2005

Svein Gjedrem	Jarle Bergo	Liselott Kilaas
Vivi Lassen	Brit K. Rugland	Asbjørn Rødseth
Øystein Thøgersen	Sonja Blichfeldt Myhre (Employees' representative)	Jan Erik Martinsen (Employees' representative)







# **Profit and loss account**

		All figures in	thousands of NOK
	Note	2004	2003
Interest income and dividends	1	8 479 006	7 987 299
Gains/losses on financial instruments	2	5 711 102	4 182 922
Valuation adjustments on foreign exchange		-10 042 663	12 336 634
Return on international reserves		4 147 444	24 506 855
Share dividend, BIS	13	18 328	17 057
Interest expenses other foreign financial instruments	3	-1 082 010	-1 194 372
Net domestic financial instruments	4	951 834	1 496 823
Interest expenses domestic deposits	5	-2 282 615	-3 180 538
Net other financial activities		-2 394 464	-2 861 030
Return on investments for Government Petroleum Fund	6	32 937 408	132 413 815
Transferred to Government Petroleum Fund's deposit account	6	-32 937 408	-132 413 815
Operating income		1 092 233	928 204
Operating expenses		-1 756 626	-1 799 434
Net operating expenses	7	-664 393	-871 231
Profit/loss for the year		1 088 587	20 774 594
Transferred from Adjustment Fund		0	0
Transferred from 'Other capital'	28	3 084 017	107 109
Allocation of profit		4 172 604	20 881 704
Allocated to Adjustment Fund	27	-4 172 604	-20 410 606
Allocated to Transfer Fund		0	0
Allocated to 'Other capital'		0	-471 098
Total allocations		-4 172 604	-20 881 704

# Balance sheet at 31.12.2004

TOTAL ASSETS

		All figures in	thousands of NOK
ASSETS	Note	2004	2003
FOREIGN ASSETS			
Securities and deposits	8	186 186 576	152 287 297
Lending	9	74 184 316	85 779 127
Claims on the IMF	10	7 988 790	9 598 113
Gold	11	0	3 276 949
Total international reserves	12	268 359 682	250 941 485
Other foreign assets	13	39 162	33 186
Total foreign assets excl. Government Petroleum Fund		268 398 843	250 974 671
DOMESTIC ASSETS AND OTHER FIXED ASSETS			
Securities	14	0	23 281 206
Lending to banks etc.	15	494 480	12 551 794
Other domestic assets	16	1 814 517	1 900 825
Fixed assets	17	1 395 182	1 461 023
Gold	11	290 892	0
Total domestic assets and other fixed assets		3 995 072	39 194 848
Total assets excl. Government Petroleum Fund		272 393 915	290 169 519
Investments for Government Petroleum Fund	18	1 015 471 115	844 586 772

1 287 865 030

1 134 756 290

All figures in thousands of NOK

		All figures in	thousands of NOK
LIABILITIES AND CAPITAL	Note	2004	2003
FOREIGN LIABILITIES			
Deposits	19	309 491	256 061
Borrowing	20	48 993 272	49 776 077
Other liabilities	13, 21	289 202	266 797
Equivalent value of allocated special drawing rights	10	1 574 904	1 664 085
Total foreign liabilities		51 166 869	51 963 021
DOMESTIC LIABILITIES			
Notes and coins in circulation	22	47 595 079	46 249 242
Treasury deposits		88 816 265	108 586 173
Deposits banks etc.	23	37 157 728	28 343 206
Borrowing	24	61	8 228 559
Other liabilities	25	356 136	586 129
Total domestic liabilities		173 925 270	191 993 309
Total liabilities excl. Government Petroleum Fund		225 092 139	243 956 330
Deposits Government Petroleum Fund krone account	26	1 015 471 115	844 586 772
Total liabilities		1 240 563 254	1 088 543 101
Adjustment Fund	27	46 096 182	41 923 578
Other capital	28	1 205 594	4 289 611
Total capital		47 301 776	46 213 189
TOTAL LIABILITIES AND CAPITAL		1 287 865 030	1 134 756 290
Obligations	29		
Derivatives and forward contracts sold, international reserves		83 020 285	53 003 778
Derivatives and forward contracts purchased, international res	erves	87 930 604	55 485 044
Derivatives and forward contracts sold, Government Petroleur	n Fund	534 611 348	236 919 657
Derivatives and forward contracts purchased, Government Pet	roleum Fund	526 160 641	248 582 360
Allocated, not yet paid for shares in BIS	13	257 503	274 655
Rights	30		
Options sold, international reserves		340 729	646 077
Options purchased, international reserves		597 699	647 222
Options sold, Government Petroleum Fund		2 231 822	4 323 667
Options purchased, Government Petroleum Fund		3 992 457	4 331 315

# Norges Bank's Executive Board Oslo, 2 February 2005

Liselott Kilaas Svein Gjedrem Jarle Bergo

Vivi Lassen Brit K. Rugland Asbjørn Rødseth

Øystein Thøgersen Sonja Blichfeldt Myhre Jan Erik Martinsen (Employee representative) (Employee representative)

## **Notes**

# **Accounting policies**

#### General

Norges Bank's activities are not taxable, nor is Norges Bank subject to the Accounting Act. The accounts are presented in accordance with laws and regulations and generally accepted accounting principles in Norway, taking into consideration the special conditions applying to a central bank. Norges Bank departs from the rules in the Accounting Act if these differ from the recommendations of the International Monetary Fund (IMF) or practice in other central banks. The profit and loss account and balance sheet are set up in a manner appropriate to the Bank's activities. Cash flow analyses are not prepared. Norges Bank's accounts are adjusted to incorporate value-dating corrections. Securities trades are registered on the trade date. Income and expenses are recognised as they are earned or accrued, according to the accruals principle.

According to an agreement with the Ministry of Finance, Norges Bank's valuation principles are applied to the Petroleum Fund's portfolio.

#### Foreign exchange

Assets and liabilities in foreign currency are translated into NOK at market rates at 31 December 2004 quoted on WM Reuters London at 4 pm. Income and expenses in foreign currency are translated into NOK at the exchange rate prevailing on the transaction date.

#### **Securities**

The portfolio of foreign and Norwegian securities is carried at market value at 31 December 2004. The securities are classified as short-term investments. Accrued interest is included in the securities holdings.

#### Off-balance sheet financial instruments

Off-balance sheet financial instruments are contracts concerning future delivery of foreign exchange or securities at a pre-determined price. In the case of Norges Bank, these comprise forward exchange contracts, financial futures, interest rate swaps, equity swaps and options. Forward contracts are recorded at forward rates. Forward premiums/discounts, futures contracts, interest rate swaps, equity swaps and options

are carried at market value at 31 December 2004. Changes in the market value are recorded in the profit and loss account under 'Valuation changes'.

#### Valuation of stocks

Stocks of raw materials at the Printing Works are valued at the lower of average purchase price and fair value. Goods in progress and finished goods are valued at full production cost, which includes direct and indirect variable and fixed production costs. Obsolescence is taken into account.

#### Loan losses/bad debts

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. On the balance sheet, estimated losses are entered as a reduction of loans outstanding.

#### Fixed assets

On the balance sheet, fixed assets are entered at original cost plus write-ups and less write-downs and linear depreciation.

#### Gold and other collections

Norges Bank has had a collection of gold coins and gold bars. The holdings have been assessed at market value at 1 January 2004, which is the value at the time they were removed from international reserves and the purpose changed to long-term ownership. If the real value becomes persistently and substantially lower in the long-term, the value will be written down. The Bank has a substantial collection of art, gifts and museum pieces such as medals, banknotes and coins. These have not been valued or recorded on the balance sheet.

#### **Pensions**

Pensions are dealt with in the accounts in accordance with NRS 6 Pension costs from 2004.

#### **Subsidiaries**

Shares in subsidiaries and associated companies are entered according to the cost accounting method. Group accounts are not prepared.

# Note 1. Interest income and return on international reserves

	Figures in thousands of NOK	
	2004	2003
Interest income on deposits	221 850	199 928
Share dividends	1 003 365	556 531
Interest income on securities	5 316 089	6 032 511
Interest income on lending	1 849 610	1 704 312
Interest income, IMF and SDRs	66 369	45 266
Interest income on derivatives	15 126	-551 248
Other interest income	6 597	0
Interest income and return on international reserves	8 479 006	7 987 299

# Note 2. Gains/losses on financial instruments

Figures in thousands of NOK		ousands of NOK
	2004	2003
Realised gains/losses equities	997 841	-128 827
Unrealised gains/losses equities	3 349 251	5 116 567
Realised gains/losses fixed income instruments	260 140	1 005 892
Unrealised gains/losses fixed income instruments	1 803 194	-3 058 292
Gain on gold	76 981	474 059
Gains/losses derivatives	-776 305	773 522
Gains/losses on financial instruments	5 711 102	4 182 921

# Note 3. Interest expenses other foreign financial instruments

	Figures ir	Figures in thousands of NOK	
	2004	2003	
Interest on borrowing	-984 679	-1 179 129	
Other interest	-97 331	-15 244	
Interest expenses other foreign financial instruments	-1 082 010	-1 194 372	

# Note 4. Net domestic financial instruments

	Figures in thousands of NOK	
	2004	2003
Interest income on securities	572 209	623 125
Interest on borrowing	-129 641	-217 694
Realised gains/losses fixed income instruments	1 651 192	159 118
Unrealised gains/losses fixed income instruments	-1 144 326	796 810
Exchange rate adjustment, domestic financial instruments	2 399	135 464
Net domestic financial instruments	951 834	1 496 823

# Note 5. Interest expenses domestic deposits

	Figures in thousands of NOK	
	2004	2003
Interest income on bank deposits	21 195	86
Interest expenses on deposits	-394 815	-1 610 230
Interest income on lending	357 161	116 569
Interest expenses to Treasury	-2 267 332	-1 693 119
Other interest income	1 175	6 157
Interest expenses domestic deposits	-2 282 615	-3 180 538

In 2004, interest of 1.75% per annum was paid in the first quarter, 1.5% per annum in the second quarter, 1.75% per annum in the third quarter and 2.00% per annum in the fourth quarter on deposits from the Treasury, resulting in total interest expenses of NOK 2 267.3m. The same interest rates apply to deposits from public account-holders that receive interest on their deposits.

# Note 6. Return on investments for the Government Petroleum Fund

Figures in thousands of NOK 2004 26 046 307 19 560 414 Interest income 8 246 151 6 996 199 Dividends Exchange rate adjustments -46 635 797 45 985 725 55 786 976 28 575 975 Unrealised securities losses/gains Realised securities gains 21 581 006 633 103 Brokers' commissions -49 031 -16 458 Result forward trading foreign exchange -155 521 -976 2 039 765 Gains/losses futures 251 854 21 021 135 947 Gains options Gains/losses equity swaps 393 109 257 Gains/losses interest rate swaps -5 337 664 1 292 862 32 937 408 Book return on investments 132 413 815 Accrued management fees -984 136 -772 595 Consulting services -4 169 0 Net transfer krone account 31 949 103 131 641 219

# Note 7. Net operating expenses

	Figures in thousands of NOK	
	2004	2003
Operating income		
Management fees for Petroleum Fund's portfolio management	984 136	772 595
Management fees, others	14 911	13 606
Income relating to IT, accounting and security services	6 118	9 769
Charges and commissions	24 414	22 018
Rental income	11 109	12 331
Sales income Norges Bank's Printing Works	421	19 199
Gain on sale of fixed assets	8 959	19 771
Other income	42 165	58 914
Total operating income	1 092 233	928 204
Operating expenses		
Management and settlement services	-595 006	-377 093
Consulting and IT services	-64 404	-123 100
Custodian services	-87 961	-82 847
Central bank services and cash depots	-48 565	-50 904
Information systems financial markets	-61 838	-56 362
Fees and transaction charges	-7 650	-6 298
Property management	-65 379	-55 317
Software, hardware, fittings and fixtures, offices and telecommunications	-152 278	-96 278
Materials, Norges Bank's Printing Works	-25 964	-26 680
Loss on sale of properties and operating assets	-2 275	-484
Wages, fees and other personnel expenses	-456 516	-481 204
Pension costs (see 7.1)	430	-195 712
Restructuring expenses (see 7.2)	7 833	-43 126
Depreciation and write-down (see note 17)	-108 125	-110 278
Other expenses	-88 929	-93 751
Total operating expenses	-1 756 626	-1 799 434
Net operating expenses	-664 393	-871 231

#### Salaries, pensions and restructuring

The salaries of the central bank governor and deputy governor are set by the Ministry of Finance, and in 2004 were NOK 1 160 800 and NOK 966 300 respectively. In addition, each has a company car at his disposal (benefits estimated at NOK 96 300 and NOK 119 300 respectively), a free telephone and insurance.

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-2004, these commitments were determined by actuarial assessment to be NOK 3.9m and NOK 4.0m, respectively, when coordination with the National Insurance Scheme is taken into account. Changes in 2004, which are NOK 1.9m and NOK -0.3m, respectively, are charged to Norges Bank's operations. The negative cost for the deputy governor is due to the fact that pension rights had already been established in the Pension Fund up to the time he started as deputy governor. Coordination with other public pension schemes is not taken into account in the calculations.

Remuneration to the Supervisory Council and the Executive Board totalled NOK 1.3m.

#### The Pension Fund

Norges Bank's ordinary pension obligations are covered by the Bank's own Pension Fund, which is organised as a foundation. Pension benefits are equal to 2/3 of the employee's salary at the time of retirement. Benefits from the pension fund are coordinated with the National Insurance Scheme. Employees contribute 2% of their gross annual salary to the Pension Fund. Norges Bank's contribution for 2004 has been covered by cash payments.

In 2004, pension obligations increased by NOK 77.9m and at year-end amounted to NOK 1 860.9m. The assumptions concerning mortality and other demographic factors are based on the standard K 1963 basis for collective pension insurance. The IR 73 rate has been used in the calculation of 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 benefit the individual has earned or is receiving at 31 December 2004. Pension obligations are equivalent to the calculated cash value of earned benefits.

The Bank's pension scheme covers 2 137 persons, of whom 977 are drawing pensions, 717 are active members (including all those affected by restructuring) and 443 are former members with deferred rights. The pension scheme also includes 308 persons at Det norske Myntverket AS and Norsk Kontantservice AS.

Norges Bank's pension and payment obligations Since 2004, Norwegian accounting standards for pension expenses have been implemented and provided the basis for calculating pension and payment obligations. Norges Bank has secured pension schemes associated with membership in Norges Bank's Pension Fund. In addition, the Bank has unsecured schemes that are funded directly over operations. These are special and allocated pensions, and early retirement pensions and redundancy pay agreements associated with restructuring. The calculations are based on a 5.5% discount rate, 2.5% basic pension adjustment, 2.5% adjustment of the basic amount in the national insurance scheme, 3% future wage growth and standard turnover. The payment obligations related to restructuring include the present value of all agreements, including agreements that start payments in 2005 or later.

In Norges Bank's balance sheet, the item "Other liabilities" includes the Bank's total pension obligations (including employers' national insurance contribution) which include:

Figures in thousands of NOK

I igu	ires in thousand	13 01 11012
Pension obligations, all plans	2004	2003
Secured schemes through the Pension		
Fund (over financing) (see. 7.1)	-84 136	-
Special pensions and allocated pension	ns 46 683	44 562
Payment obligations associated		
with restructuring (see 7.2)	180 111	240 273
Total obligations	142 658	284 835

# 7.1 Pension costs/secured schemes in the Pension Fund

From the accounting year 2004, obligations associated with the secured schemes are included in the balance sheet. The calculation of net pension obligations is based on general economic assumptions as well as an assumption of 6% return on the capital in the Pension Fund. At end-2004, the scheme was overfinanced. The portion of the capital in the Pension Fund valued at fair value exceeds the present value of the accrued pension obligations by NOK 84.1m.

#### Pension costs for the year

	rigures in mousands of NOK
Overfinancing at implementation 31 December 2004	- 84 136
Contribution to Pension Fund incl. employer's national insurance contribution	83 706
Negative pension expenses associated with secured pensions	- 430

#### 7.2 Restructuring expenses

Restructuring expenses are associated with study packages, redundancy pay and early retirement pensions and consist of changes in payment obligations and disbursements through 2004. The costs are distributed as follows:

	Figures 1	Figures in thousands of NOK	
	2004	2003	
Change in payment obligations	-60 162	-566	
Direct disbursements	52 329	43 692	
Total restructuring costs	-7 833	43 126	

In 2004, negative restructuring expenses of NOK 7.8m have been entered in the profit and loss account. This is because when entering expenses in 2003, full withdrawals were assumed for the restructuring period until payments are superseded by a shift to the Pension Fund or other agreed termination. For some employees, the withdrawals have been lower than estimated. The calculation method has been changed from 2003 to 2004, which has also contributed to reducing the liabilities for 2004.

# Note 8. Securities and deposits

	Figures in thousands of NOK	
	2004	2003
Deposits abroad	3 005 244	6 738 355
Foreign Treasury bills	111 509	744 108
Foreign notes and short-term paper	934 269	1 422 966
Foreign bonds	129 113 139	111 432 629
Foreign equities	54 568 305	33 605 012
Initiated, not yet settled trades	-1 545 891	-1 655 774
Securities and deposits	186 186 576	152 287 297

# Note 9. Lending

	Figures in thousands of NOK	
	2004	2003
Lending associated with repurchase agreements	47 084 618	29 681 319
Secured lending (triparty)	27 912 237	56 162 649
Valuations forward exchange contracts and derivatives	-812 540	-64 841
Lending	74 184 316	85 779 127

# Note 10. Claims on the IMF

	Figures in thousands of NOK	
	2004	2003
Quota in the IMF	15 692 717	16 581 342
The Fund's NOK holdings	-10 443 065	-9 940 483
Reserve position in the IMF	5 249 652	6 640 858
Special drawing rights	2 180 797	2 236 633
Loan to the IMF	534 638	703 460
Earned interest	23 703	17 162
Claims on the IMF	7 988 790	9 598 113
Equivalent value of allocated special drawing rights	-1 574 904	-1 664 085

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 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.

Loans to the IMF take the form of capital contributions to the Poverty Reduction and Growth Facility (PRGF), which was established to promote economic growth and reduce poverty in the poorest countries.

The IMF can use special drawing rights (SDRs) as an instrument for supplying international liquidity. The value of SDRs is calculated as a basket consisting of US dollars, euros, pound sterling and Japanese yen.

The equivalent value of allocated special drawing rights in the IMF shows total allocations of SDRs since the scheme entered into force in 1970. No SDR allocations have been made since 1990. The change in the item is an expression of a change in the exchange rate for SDRs (9.39 at 31 December 2004).

# Note 11. Gold

Gold reserves consist of	Weight in kg 31.12.04	Market value at 31.12.04	Weight in kg 31.12.03	Market value at 31.12.03
		(NOK m)		(NOK m)
Bars	88.0	7.9	33 543.4	2 993.9
Coins	3 171.4	283.0	3 171.4	283.0
	3 259.4	290.9	36 714.8	3 276.9

Most of Norges Bank's gold bars were sold in the first half of 2004. The reason for the decision to sell was that the gold reserves at 31 January 2003 only amounted to about 1% of Norges Bank's international reserves and thus made an insignificant contribution to spreading the risk in the reserves. The rest of the gold reserves comprise some gold bars and gold coins which only have sentimental value and which will be kept for use in exhibitions.

In relation to historic cost price, Norges Bank's gain on the sale of the gold was NOK 2 804.1m. Previous

write-ups of NOK 2 727.1m will be transferred from "Other capital" and form part of the profit/loss for the year, while NOK 77.0m is shown as realised gain under "Return on international reserves".

At 31 December 2004, the gold reserves have been removed from international reserves in the accounts and transferred to the line "Gold". The market value at the time of removal is set at cost price for the gold collection. The previous write-ups on the remainder of the gold reserves have been transferred from "Other capital" and are included in the profit/loss for the year.

# Note 12. International reserves, by portfolio

Relationship between different reserve terms used in Norges Bank's publications. Figures in thousands of NOK

	Investment portfolio	Money market	Buffer portfolio	IMF reserves	Total
	•	portfolio	Ť		
Securities and deposits	185 963 286	459	100 117	122 715	186 186 576
Other foreign exchange reserves	48 641 928	6 091 564	19 450 824	540 097	74 724 412
Foreign exchange reserves according to					
IMF definition	234 605 215	6 092 022	19 550 940	662 811	260 910 988
IMF reserve position/SDRs	0	0	0	7 448 693	7 448 693
International reserves	234 605 215	6 092 022	19 550 940	8 111 504	268 359 682
- IMF reserve position/SDRs and loans	0	0	0	-7 988 790	-7 988 790
Borrowing (foreign exchange liabilities)	-48 993 334	0	0	0	-48 993 334
Foreign exchange reserves according to					
Norges Bank's accounts	185 611 881	6 092 022	19 550 940	122 715	211 377 558
Foreign currency claims on residents	666 869	0	21 812	0	688 681
Domestic foreign exchange assets					
(foreign exchange deposits)	-1 109 000	82 000	2 025 000		998 000
Foreign exchange assets	185 169 750	6 174 022	21 597 752	122 715	213 064 239

#### Percentage distribution of foreign exchange assets

Currency	2004	2003
US dollar	35.4	36.6
Canadian dollar	1.6	1.3
Japanese yen	6.2	5.2
Pound sterling	9.4	9.0
Euro	42.6	44.8
Other currencies	4.8	3.1
Total	100.0	100.0

# Note 13. Other foreign assets

	Figures in thousands of NOK	
	2004	2003
BIS shares	24 700	24 700
Other assets	14 462	8 486
Other foreign assets	39 162	33 186

Norges Bank has been allocated a total of 8000 shares at SDR 5000 in the Bank for International Settlement (BIS). 25% of the shares, valued at NOK 24.7m, have been paid for.

Norges Bank has not paid up the share capital for 75% of the shares. Previously allocated shares have a limited liability which amounts to NOK 280.4m.

The portion of the conditional liability corresponding to the value of the shares at the time of allotment, i.e. NOK 22.9m, is recorded under the item "Other foreign liabilities". The remainder of the conditional liability, NOK 257.5m, is shown as an off-balance sheet item. In 2004, dividends on BIS shares totalled NOK 18.3m.

# Note 14. Securities

1 tote 14. Securities	Figures in t	Figures in thousands of NOK	
	2004	2003	
Treasury bills	0	11 852 700	
Government bonds	0	11 428 542	
Valuation forward exchange contracts	0	-36	
Initiated, not yet settled trades	0	0	
Securities	0	23 281 206	

Holdings of Norwegian government securities were transferred to the Ministry of Finance on 1 December 2004. Norges Bank will continue to manage this portfolio on behalf of the Ministry of Finance.

In line with developments in other countries, Norges Bank may not extend credit directly to the government. This resulted in a change in Section 18 of the Norges Bank Act which means that Norges Bank may not purchase government securities in the primary market. Norges Bank can undertake purchases and sales of government securities in the central government's own holdings as authorised. The change in Section 18 of the Norges Bank Act entered into effect on 1 January 2005.

# Note 15. Lending to banks etc.

	Figures 1	Figures in thousands of NOK	
	2004 2003		
Lending to banks	69	12 006 939	
Lending to own employees	494 412	544 855	
Lending to banks etc.	494 480	12 551 794	

The Bank offers loans to its employees and in 2004 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 six times a year and the rates for 2004 have been 3.25% from January to April and 2.5% from April to December.

# Note 16. Other domestic assets

	Figures in thousands of NOK		
	2004	2003	
Assets relating to the Government Petroleum Fund	984 136	772 595	
Domestic deposits	708 011	917 951	
Other domestic assets	56 868	142 064	
Inventories, banknote production	14 807	17 520	
Shares in subsidiaries	100	100	
Shares in associated companies	17 169	17 169	
Other current and fixed assets	33 426	33 426	
Other domestic assets	1 814 517	1 900 825	

#### Shares in Bankplassen Parkeringsanlegg A/S

Norges Bank owns 100 per cent of the shares in Bankplassen Parkeringsanlegg A/S. The shares are recorded at cost, NOK 100 000, which is the nominal value of the shares. Norges Bank has paid NOK 33m for its own parking places.

#### **Shares in Norsk Kontantservice AS (NOKAS)**

Norges Bank owns 33.5 per cent of the shares in NOKAS. The company was established and began operations on 1 July 2001 and had share capital of NOK 50m. In 2003, the share capital was increased to NOK 51.1m. Norges Bank's relative ownership interest has not changed, and after paying NOK 0.42m in 2003, the Bank owns shares with a cost price of NOK 17.7m.

# Note 17. Fixed assets

Figures in thousands of NOK

	Vehicles, machinery,	Security	Machinery,	Buildings with in-	Bank	Plant under			
	IT equipment	system	fixtures	stallations	building	construction	Dwellings	Land	Total
Original cost at 1.1	193 731	42 078	44 383	427 765	1 550 021	23 086	2 950	62 316	2 346 329
+ Transfers from plant	13 835	7 317	0	1 100	0	-22 252	0	0	0
under construction									
+ New orders	30 608	5 245	1 942	11 051	0	16 857	0	0	65 702
- Disposals	30 487	51	1 792	382	21 915	0	0	2 435	57 062
Adjustments	0	0	0	0	0	-1	0	0	-1
Original cost at 31.12	207 687	54 588	44 532	439 534	1 528 106	17 690	2 950	59 881	2 354 969
- Accum.depreciation	108 329	27 768	26 384	373 991	423 314	0	0	0	959 787
and write-downs									
Book value at 31.12	99 358	26 820	18 149	65 543	1 104 792	17 690	2 950	59 881	1 395 182
Non-written-off remain	nder 0	0	0	41 273	1 104 792	0	2 950	56 580	1 205 594
of previously revalued	assets								
Ordinary depreciation	26 998	4 829	3 752	36 047	36 499	0	0	0	108 125
for the year									
Of which write-off of	0	0	0	35 002	36 499	0	0	0	71 501
revalued assets									
Depreciation rate	20.00	15.00	10.00	5.00	2.00	0.00	0.00	0.00	

# Note 18. Investments for Government Petroleum Fund

Figures in thousands of NOK 2004 2003 Short-term assets, incl. deposits in foreign banks 9 154 482 20 189 654 Money market investments in foreign financial institutions against collateral in the form of securities 380 117 331 287 041 828 Borrowing from foreign financial institutions against collateral in the form of securities -406 193 548 -298 603 119 631 256 143 482 341 421 Foreign fixed income paper Foreign equities 407 673 369 354 316 808 72 774 -5 548 358 Adjustment of forward contracts and derivatives Total portfolio before management fees and consulting services 1 016 459 420 845 359 367 Accrued management fees -984 136 -772 595 Consulting services -4 169 1 015 471 115 844 586 772 Total portfolio

At 31 December 2004, the Government Petroleum Fund had krone deposits in Norges Bank amounting to NOK 1 015.5bn. The equivalent of the NOK amount is managed by Norges Bank and has been invested in foreign currency in an earmarked portfolio. The return on the

portfolio is added to the Petroleum Fund's krone account as return on this account. Therefore, the investments, which account for about 79% of Norges Bank's balance sheet, represent no financial risk for Norges Bank.

#### Currency distribution in Government Petroleum Fund. Per cent

Currency	2004	2003
US dollar	34.6	33.6
Canadian dollar	1.5	1.6
Asian currencies	10.3	11.2
Pound sterling	10.8	11.4
Euro	37.8	37.8
Other currencies	5.0	4.4
Total	100.0	100.0

# Note 19. Deposits

	Figures in	n thousands of NOK
	2004	2003
Banks	105 416	111 213
Other customers	204 074	144 848
Deposits	309 491	256 061

# Note 20. Borrowing

	Figures i	n thousands of NOK
	2004	2003
Funding related to repurchase agreements	48 926 495	49 690 004
Other borrowing	66 777	86 074
Borrowing	48 993 272	49 776 077

# Note 21. Other liabilities

	Figures i	n thousands of NOK
	2004	2003
Share capital in BIS not paid up (see Note 13)	22 900	22 900
Other foreign debt	266 302	243 897
Other liabilities	289 202	266 797

# Note 22. 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 47 595.1m, with NOK 43 192.1m in banknotes and NOK 4 403.0m 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 2004, redeemed/invalidated banknotes and coins were charged to the accounts in the amount of NOK 1.4m.

At 31 December 2004, a total of 5.3m commemorative coins with a nominal value of some NOK 444.1m were in circulation. 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 23. Deposits banks etc.

	Figures in	thousands of NOK
	2004	2003
Banks	37 062 390	28 116 504
Deposits employees and pensioners	0	39 551
Other deposits	95 338	187 151
Deposits banks etc.	37 157 728	28 343 206

# **Note 24. Borrowing**

	Figures i	n thousands of NOK
	2004	2003
Funding related to repurchase agreements	0	8 228 559
Other borrowing	61	0
Borrowing	61	8 228 559

# Note 25. Other liabilities

	Figures	in thousands of NOK
	2004	2003
Pension and payment liabilities (see Note 7)	142 658	285 588
Other domestic liabilities	213 478	300 541
Other liabilities	356 136	586 129

# Note 26. Deposits Government Petroleum Fund krone account

The Government Petroleum Fund's krone account in Norges Bank is composed of deposits and returns earned from the time the Fund was established in 1996 to end-2004.

								Figures	in billions	of NOK
In billions of NOK	1996	1997	1998	1999	2000	2001	2002	2003	2004	TOTAL
Krone account 01.01	0.0	47.5	113.3	167.6	222.3	386.1	613.3	608.5	844.6	0.0
Total krone deposits	47.5	60.9	32.8	24.5	150.0	251.5	125.8	104.5	139.0	936.5
Increase in value, return	0.05	4.9	21.5	30.1	13.8	-24.3	-130.5	131.6	31.9	79.0
Krone account 31.12	47.6	113.3	167.6	222.3	386.1	613.3	608.5	844.6	1 015.5	1 015.5

# Note 27. Adjustment Fund

	Figures in thousands of NOK
Adjustment Fund at 31.12.2003	41 923 578
Annual transfer to the Adjustment Fund	4 172 604
Adjustment Fund at 31.12.2004	46 096 182

# Note 28. Other capital

In accordance with a letter from the Ministry of Finance, an item "Other capital", which includes the former revaluation reserve, may be used. In addition to containing the non-written down components of capitalised fixed assets expensed in 1994, the effect of changes in the valuation principle for gold in 1999 is added to "Other capital".

The sale of gold in international reserves and changes in the revaluation reserve are included in "Other capital".

Changes in "Other capital" in 2004:

	Figures in thousands of NOK
Other capital at 31.12.2003	4 289 611
Write-down of previously revalued assets in 2004 (see Note 17)	- 71 501
Reversal of previous revaluation in connection with the sale of buildings	- 19 728
Capitalisation of previous revaluations of gold in 2004	- 2 992 788
Other capital at 31.12.2004	1 205 594

# Note 29. Obligations

	Figures in the	Figures in thousands of NOK	
	2004	2003	
International reserves			
Forward exchange contracts sold	17 688 186	18 092 993	
Futures sold	19 960 752	9 206 911	
Equity swaps sold	450 817	19 362	
Interest rate swaps sold	44 920 530	25 684 511	
Obligations sold international reserves	83 020 285	53 003 778	
Forward exchange contracts purchased	17 770 558	20 517 529	
Futures purchased	25 653 602	9 273 867	
Obligations re equity purchases	0	0	
Equity swaps purchased	394 709	19 383	
Interest rate swaps purchased	44 111 735	25 674 265	
Obligations purchased international reserves	87 930 604	55 485 044	
THE CONTRACT OF THE PARTY OF TH			
The Government Petroleum Fund			
Forward exchange contracts sold	16 837 972	25 395 459	
Futures sold	118 994 375	35 942 356	
Equity swaps sold	8 115 796	13 340	
Interest rate swaps sold	390 663 205	175 568 502	
Obligations sold, Government Petroleum Fund	534 611 348	236 919 657	
Forward exchange contracts purchased	16 837 972	25 395 459	
Futures purchased	114 744 350	47 628 021	
	114 /44 330	47 628 021	
Obligations re equity purchases	· ·	ŭ.	
Equity swaps purchased	9 489 246	13 526	
Interest rate swaps purchased	385 089 073	175 545 354	
Obligations purchased, Government Petroleum Fund	526 160 641	248 582 360	

Norges Bank uses forward exchange transactions, listed futures contracts, interest rate swaps, equity swaps and options as part of its management of interest rate and exchange rate risk for the foreign exchange reserves.

#### Forward exchange contracts

Forward exchange transactions are agreements for the purchase or sale of foreign exchange at an agreed future time at a predetermined rate.

#### Financial futures

Listed futures contracts are agreements to purchase or sell a standard quantity of a financial instrument, the value of an equity index or foreign currency, at a future date at a price set at the time of closing the contract. The market value of these securities was NOK 1 645.0m at 31 December 2004. Collateral in the form of securities was pledged for the changes in the daily market value settlement.

#### Interest rate swaps

A swap is an agreement between two parties to exchange payments at a number of given future times in accordance with a set of rules specified in the agreement. An interest rate swap is an agreement in which the payment obligations of both parties are determined either by interest rates which are fixed or by movements in a specific reference rate, multiplied by a notional principal. Net market value is calculated by discounting the future cash flows in the interest rate swaps.

#### Equity swaps

An equity swap is an unlisted agreement between two counterparties to exchange payment flows on the basis of 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. Collateral is required in the form of bank deposits.

# Note 30. Rights

	Figures in the	Figures in thousands of NOK	
	2004	2003	
International reserves			
Futures options sold	340 729	646 077	
Rights sold, international reserves	340 729	646 077	
Futures options purchased	597 699	647 222	
Rights purchased, international reserves	597 699	647 222	
The Government Petroleum Fund			
Futures options sold	2 231 822	4 323 667	
Rights sold, Government Petroleum Fund	2 231 822	4 323 667	
Futures options purchased	3 992 457	4 331 315	
Rights purchased, Government Petroleum Fund	3 992 457	4 331 315	

## Options:

An option is an agreement to buy or sell a right to buy or sell a standard quantity of a financial instrument on a future date at a price set at the time of closing the contract. Options may be listed or unlisted.

### To the Supervisory Council of Norges Bank

# Auditors' report for 2004

We have audited the annual financial statements of Norges Bank for 2004, which show a profit of NOK 1 088 587 thousand. We have also audited the information in the Executive Board's report concerning the financial statements and the proposal for the allocation of the profit. The financial statements comprise the profit and loss account, balance sheet and notes to the accounts. The financial statements and the Executive Board's report are the responsibility of the central bank's Executive Board. Our responsibility is to express an opinion on the financial statements and other information, in accordance with the requirements of the Norwegian Act on Auditing and Auditors.

We have conducted our audit in accordance with the Norwegian Act on Auditing and Auditors, instructions issued by the Supervisory Council and good auditing practice in Norway. Good auditing practice requires that we plan and perform the audit so as to obtain reasonable assurance that 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, assessing the accounting principles applied and significant estimates made by management, and evaluating the overall financial statement presentation. To the extent required by good auditing practice and our auditing instructions our audit also includes a review of Norges Bank's accounting and internal control systems. We believe that our audit provides a reasonable basis for our opinion.

The central bank's accounting principles are based on the Norwegian Accounting Act and good accounting practice in Norway, and take into account the special considerations that apply to a central bank. A more detailed presentation of these principles may be found in the notes to the accounts.

#### In our opinion

- the financial statements have been presented in accordance with laws and regulations, and present the financial position of the Bank as of 31 December 2004 and the results of its operations for the financial year in accordance with the accounting principles outlined in the previous paragraph.
- the management has fulfilled its duty of producing a proper and clearly set out registration and documentation of accounting information in accordance with the law and good accounting practice in Norway
- the information in the Executive Board's report concerning the financial statements and the Executive Board's proposal for the allocation of the profit are consistent with the financial statements, and comply with the Norges Bank Act and guidelines adopted in the Council of State.

Oslo, 10 February 2005

Svenn Erik Forsstrøm State Authorised Public Accountant (Norway)

Note: This translation from the Norwegian has been prepared for information purposes only.

# **Resolution of the Supervisory Council concerning the financial statements for 2004**

In accordance with the prevailing guidelines for the allocation and application of Norges Bank's profit or loss, originally established by the Council of State on 7 February 1986 and most recently amended by Royal Decree of 6 December 2002, the Supervisory Council adopted the following resolutions:

- 1 The Supervisory Council has examined the Executive Board's annual report for 2004 and Norges Bank's financial statements for 2004, approved 2 February 2005, and the Auditors' report dated 10 February 2005.
- 2 The Supervisory Council adopts the financial statements presented as Norges Bank's financial statements for 2004 and approves the following allocations:
  - 2.1 In accordance with a statement from the Ministry of Finance, the net sum of NOK 3 084.0m is to be transferred from 'Other capital'. This amount includes a reversal of the write-up of holdings and the write-down of previously written-up assets. The amount is to be transferred to profit/loss for the year.
  - 2.2 In accordance with point 1 of the guidelines, the surplus for the year after other allocations, NOK 4 172.6m, is to be allocated to the Adjustment Fund.
- 3 The Supervisory Council forwards Norges Bank's financial statements for 2004 and the Executive Board's annual report for 2004, the auditors' report and the Supervisory Council's statement concerning its supervision of Norges Bank in 2004 to the Ministry of Finance for submission to the King and communication to the Storting.

# The Supervisory Council's statement concerning its supervision of Norges Bank

Pursuant to Section 5, third paragraph of the Act relating to Norges Bank and the Monetary System (Norges Bank Act), the Supervisory Council adopted the following resolution at its meeting on 17 February 2005. With reference to Section 30, second paragraph of the Norges Bank Act, this resolution is sent to the Ministry of Finance for submission to the King and communication to the Storting.

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 instructions for Central Bank Audit. The Supervisory Council adopts the Bank's annual accounts and, on the recommendation of the Executive Board, approves the budget. It supervises companies owned wholly or partially by Norges Bank. In accordance with the Norges Bank Act, the Executive Board has executive and advisory authority in Norges Bank. The Board is in charge of the Bank's operations and manages its funds. The Executive Board has the overriding responsibility for internal control in the Bank.

The Supervisory Council supervises the Executive Board's exercise of its responsibility for management and control. This supervision does not include the Executive Board's exercise of its discretionary authority pursuant to the Act. In 2004, the Supervisory Council supervised the Bank in accordance with the Norges Bank 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 accounts
- audit plan and budget for Central Bank Audit
- audit reports and matters submitted by Central Bank Audit
- matters taken up by the Supervisory Council itself

In 2004, the Supervisory Council has 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 to the Ministry pursuant to Section 30, second paragraph of the Norges Bank Act.

Oslo, 17 February 2005

for Norges Bank's Supervisory Council

Mary Kvidal Chairman of the Supervisory Council Solveig Nordvist
Deputy Chariman of the Supervisory Council





# Chapter 1. Monetary policy

#### Flexible inflation targeting

Monetary policy in Norway is oriented towards low and stable inflation. The operational objective of 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 objective provides an anchor for economic agents' expectations concerning future inflation. With confidence in the inflation target, monetary policy can contribute to stabilising developments in output and employment.

Norges Bank operates a flexible inflation targeting regime, so that weight is given to both variability in inflation and variability in output and employment.

Monetary policy influences the economy with long

and variable lags. Norges Bank sets the interest rate with a view to stabilising inflation at the target within a reasonable time horizon, normally 1–3 years. The more precise horizon will depend on disturbances to which the economy is exposed and how they affect the path for inflation and the real economy ahead.

Norges Bank places emphasis on predictability. In an environment where market participants understand the central bank's response pattern, the reaction of market rates to new information about economic developments has a stabilising effect.

Interest rate setting must be viewed in the context of Norges Bank's assessment of the current economic situation, inflation expectations and future developments in interest rates, inflation, output and employment. There is considerable uncertainty attached to

### 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 deals with decisions concerning changes to the exchange rate regime for the krone. Pursuant to Sections 19 and 20, Norges Bank stipulates the conditions for the 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 its opinion on the mandate in its submission of 27 March 2001 to the Ministry of Finance. The submission stated the following:

"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 can 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."

these developments. In some situations, it may be appropriate to hedge against particularly unfavourable developments. In a situation where confidence in the inflation target is in jeopardy, it will be appropriate to place considerable emphasis on achieving the inflation target quickly.

Decisions concerning interest rates and other important changes in the use of instruments will normally be taken at the Executive Board's monetary policy meeting every sixth week. The basis for the Executive Board's decisions and their assessments are made public through a press release and a press conference. In the press release, a thorough account is given of the main features of developments in the economy that are important to the interest rate decision and to the assessments underlying the decision. In 2004, the alternatives considered by the Executive Board were also made public. Interest rate decisions are taken on the basis of a monetary policy strategy drawn up by the Executive Board every four months. As from the July 2004 Inflation Report (IR 2/04), the Executive Board's monetary policy strategy and the assessments on which it is based have been published at the beginning of the relevant strategy period.1 The statement concerning the time horizon for monetary policy was also adjusted, in line with the conduct of flexible inflation targeting.

The conduct of monetary policy requires a reliable supply of information concerning economic developments. Of particular importance is a clear picture of the state of the economy at the time the interest rate is set. In 2004, 1300 firms and public enterprises in Norges Bank's regional network were interviewed about output and price developments and plans for investment and employment. In addition to other official statistics, the regional network reports form an important part of the decision-making basis and are published in connection with the *Inflation Report* (see box in the section on performance in 2004).

Norges Bank sets the interest rate with a view to stabilising inflation at the target in 1-3 years. The economic outlook will always be uncertain. Professional judgment must therefore be exercised in interest rate setting. As a guide in the exercise of this judgment, Norges Bank utilises both analytical tools and economic models that describe relationships in the economy. The models combine and include empirical and theoretical knowledge on the functioning of the Norwegian economy, and can contribute to a consistent analysis of the interaction between different economic variables. Norges Bank began work in autumn 2003 to develop a new model system for analysis and projection (see box on p. 39).

## Monetary policy instruments

The interest rate on banks' overnight deposits in Norges Bank – the sight deposit rate – is the most important monetary policy instrument. Experience shows that the sight deposit rate has a fairly pronounced impact on the shortest money market rates, i.e. overnight and 1-week rates. Market interest rates for loans with longer maturities are influenced by the sight deposit rate and by market expectations concerning developments in the sight deposit rate. Market expectations concerning the sight deposit rate reflect participants' perception of the central bank's response pattern in monetary policy and economic developments. Market rates have an effect on the exchange rate, securities prices, house prices and credit and investment demand. Changes in Norges Bank's key interest rate may also shape expectations concerning future inflation and economic developments. The interest rate operates through all these channels to influence total demand, output, prices and wages.

Norges Bank is in a position to intervene in the foreign exchange market at short notice, but will not normally use interventions to influence the krone. Exchange market intervention, whether it be purchases or sales of foreign exchange, is not an appropriate instrument for influencing the krone over a longer period. However, interventions may be appropriate if the krone deviates substantially from the level that the Bank judges to be reasonable in relation to fundamentals, and if exchange rate developments weaken the prospect of achieving the inflation target. Interventions may also be appropriate in response to pronounced short-term fluctuations in the krone when liquidity in the foreign exchange market falls to a very low level. Norges Bank does not wish to act in a way that may give rise to a game situation that may amplify pressures in the foreign exchange market. Foreign exchange intervention rather than a change in the interest rate may give ambiguous signals to foreign exchange operators and a game situation may arise. The Bank will provide an account of any interventions and the background for them. Norges Bank did not intervene to influence the krone in 2004.

<sup>1</sup> In the period 5 March 2003 – 1 July 2004, the Executive Board's assessments and monetary policy strategy for the period to the next Inflation Report was published as an annex to the Inflation Report and on Norges Bank's website at the end of the strategy period.

## Transparency with regard to the basis for decisions

According to Section 3 of the Norges Bank Act, Norges Bank shall inform the public about the monetary, credit and foreign exchange situation and about the assessments on which monetary policy decisions are based. According to Section 2 of the Regulation on Monetary Policy, Norges Bank shall regularly publish the assessments that form the basis for the implementation of monetary policy.

A press release containing the interest rate decision and a detailed account of the reasons for the decision is published shortly after the monetary policy meetings (on the same day at 2 pm). The interest rate decision is published at a pre-announced time. Forty-five minutes after the interest rate decision has been published, a press conference is held where the central bank governor or deputy governor provides a more detailed explanation of the Executive Board's decision and the reasons for the decision. The press conference is webcast.

In addition, most of the background data for the Executive Board's monetary policy meetings are published at the same time as the interest rate decision (see table below).

#### Information for monetary policy meetings and time of announcement

Information	Announcement	
Norges Bank's <i>Inflation Report</i> , with the Executive Board's monetary policy assessments and strategy, is published three times a year and is the reference document for the interest rate decisions made over the following four months.	2 pm on the same day as the monetary policy meeting	
Press release with an account of the assessments underlying the interest ate decision	2 pm on the same day as the monetary policy meeting	
Charts presented at the monetary policy meeting by the central bank governor/deputy governor <sup>1</sup>	2 pm on the same day as the monetary policy meeting	
Report from the regional network <sup>2</sup>	2 pm on the day after the monetary policy meeting	

Charts containing confidential information, such as forecasts from the OECD and the IMF which are not published, wage growth estimates for various groups based on confidential information from employers or employee organisations, data from specific enterprises or new, preliminary analyses from Norges Bank are not published.
The report is not published in its entirety since it contains confidential information about individual enterprises.

Two changes in the procedure for publication of the background data were introduced in 2004:

- As from *Inflation Report* 2/04 (published 1 July 2004), the Executive Board's assessments and monetary policy strategy are published at the beginning of the strategy period. In the period 5 March 2003 to 1 July 2004, this was published at the end of the strategy period as an annex to the *Inflation Report*.
- A number of charts about the international and Norwegian economies are sent to the members of the Executive Board prior to the monetary policy meeting. The charts were published in the period
   December 2002 to 27 May 2004. Due to limited interest, the charts are no longer published.

In order to ensure that the analyses and the basis for decisions are in keeping with international standards, Norges Bank maintains close contact with other central banks and the international academic community. Economists from other central banks and academic institutions in Norway and abroad are regularly invited to Norges Bank to evaluate the quality of the Bank's monetary policy analyses.

Norges Bank's performance and the use of instruments in 2004 are assessed below. The Bank's performance in 2004 is the result of the use of instruments in 2004 and in previous years. The use of instruments in 2004 will particularly have an impact on performance in the years ahead.

## Work on macroeconomic models

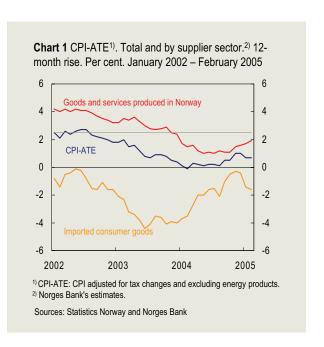
Norges Bank began work in autumn 2003 to develop a new analytical and projection model. A pilot model was developed in 2004.<sup>1</sup>

Norges Bank is now working on a somewhat larger model, NEMO (Norwegian Economy MOdel). NEMO belongs to a class of macroeconomic models that are often referred to as DSGE models (Dynamic Stochastic General Equilibrium). A prominent feature of this type of model is that the behaviour of different economic agents is modelled explicitly. Households maximise utility and choose the optimal distribution between work and leisure and between consumption and saving. Firms maximise profit. The authorities have defined specific economic policy objectives. Expectations play an explicit role. The properties of the model are a combination of elements from both neoclassical and Keynesian models. Its long-term properties may be characterised as classical: Monetary policy can only influence nominal variables, while production is determined by technology, preferences and the supply of factor inputs. In the short term, the model has Keynesian features: production is determined by demand. Monetary policy can influence production and employment because it takes time to change prices and wages. NEMO will be quantified so that it reflects Norges Bank's empirical and theoretical knowledge concerning central mechanisms in the economy.<sup>2</sup>

## Performance in 2004

#### Inflation, output and employment

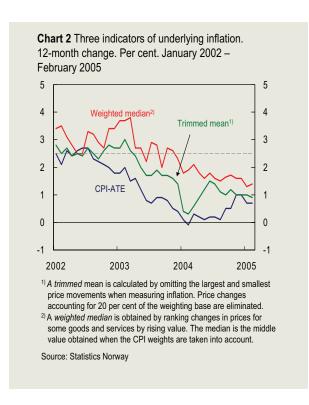
Consumer price inflation fell markedly from summer 2003 and continued to fall up to spring 2004. Consumer price inflation adjusted for taxes and excluding energy products (CPI-ATE) was 0.3% in 2004. Inflation was very low in the first half of 2004, but picked up through the autumn and reached 1.0% in November and December and 0.7% in January and February 2005. The rise in prices for domestically produced goods and services picked up to about 11/2% at the end of 2004. Prices for imported consumer goods varied to a greater extent. At the end of the year, these prices were about 1/2% lower than at end-2003 (see Chart 1). After adjusting the CPI-ATE for the introduction of maximum rates for day-care places, which has a one-off effect on inflation, and the direct effects of interest rates on house rents, underlying inflation was about 3/4% in 2004.2 Alternative measures of underlying inflation also show that inflation was low in 2004 (see Chart 2). Generally, the indicators show an underlying annual rise in consumer prices in the order of  $\frac{1}{2}-\frac{1}{2}\%$ .



<sup>1</sup> See Norges Bank Staff memo no. 3, 2004. http://www.norges-bank.no.

<sup>&</sup>lt;sup>2</sup> See speech by Deputy Governor Jarle Bergo at the Foreign Exchange Seminar of the Association of Norwegian Economists at Sanderstølen on 21 January 2005. http://www.norges-bank.no

<sup>&</sup>lt;sup>2</sup> According to the Regulation on Monetary Policy, the direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances shall not, in general, be taken into account.



After a moderate slowdown in the first half of 2003, growth in the Norwegian economy picked up markedly in 2004. Monetary policy easing through 2003 and into 2004 contributed to a sharp rise in private consumption and housing investment. Activity has picked up considerably in service industries and the construction sector. Conditions for manufacturing improved as a result of high petroleum investment, the global economic recovery and a weaker krone. Profitability has improved for mainland enterprises. Investment is increasing in a number of sectors. Export growth has picked up markedly.

Employment developments were nonetheless moderate in 2004. Reports from Norges Bank's regional network showed that many firms were reluctant to increase their work force due to high cost levels and increased competition.

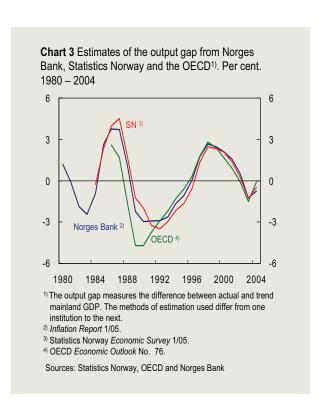
Potential growth in the Norwegian economy seems to have risen more than normal in 2004. This is related to increased competition and a sharp decrease in sickness absence. With these developments, it is likely that growth in the Norwegian economy may be somewhat stronger in the short term without the supply of labour or production capital restraining growth. Strong growth in 2004 implies, however, that capacity utilisation has increased and has now probably reached its historically normal level. It is likely that growth will remain high in 2005.

The output gap is an overall measure of capacity

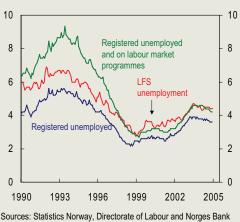
utilisation in the economy. The output gap measures the difference between the actual level of output in the economy and the output level that is consistent with stable inflation over time. The output gap, as estimated by Norges Bank, was negative but closing in 2004. The earlier period of slow growth was nonetheless fairly short compared with previous downturns in the Norwegian economy. Although there is substantial uncertainty regarding calculation of the output gap, other institutions' output gap calculations present a similar picture of the cyclical situation.

The Norwegian economy seems therefore to have experienced a soft landing after the previous upturn culminated in 2002. Monetary policy tightening in 2002 contributed to substantially lower cost inflation in the private and public sectors over the past two years. Monetary policy easing through 2003 and at the beginning of 2004, and low interest rates in 2004 contributed to bringing capacity utilisation closer to a normal level.

After several years of high wage growth, unemployment rose from 2001. Developments were reversed in 2004, and unemployment edged down through the year. Measured by the number of registered unemployed and by the LFS, unemployment has not been higher than the average for the 1990s. The number of persons in labour market programmes has been lower than the average for the 1990s.



**Chart 4** Unemployment as a percentage of the labour force. January 1990 – February 2005



**Chart 5** Experts' expectations of consumer price inflation 2 and 5 years ahead. Per cent. Quarterly figures. 2002 Q2 – 2005 Q1



#### **Inflation expectations**

The operational objective of monetary policy is annual consumer price inflation of approximately 2.5% over time. For monetary policy to contribute to stabilising developments in output and employment, economic agents must be confident that the inflation target will be reached.

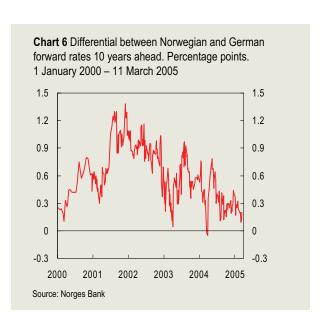
Confidence in the inflation target cannot be measured directly. If economic agents are confident that the inflation target will be reached, they will expect inflation to reach the target over time. Inflation expectations in Norway therefore provide an indication of whether there is confidence that the inflation target will be reached.

TNS Gallup has been commissioned by Norges Bank to carry out quarterly surveys on inflation expectations.<sup>3</sup> The fourth quarter 2004 survey showed that average expected inflation five years ahead among a selection of economists in the financial industry and academia, and the social partners was 2.4%. None of the groups in the survey expected inflation 5 years ahead to fall below 2.4% or exceed 2.6%. Average inflation expectations remained stable through the year (see Chart 5). Expected inflation two years ahead has been somewhat lower. This is probably because inflation has been low for a period.

Another measure of inflation expectations is different institutions' forecasts for consumer price inflation in Norway. Twice a year, in October and April, Consensus Forecasts Inc. provides an overview of various institutions' forecasts for inflation 5 and 10 years ahead. The

overview in October 2004 showed that inflation expectations were low. At both the 5-year and 10-year horizon, inflation was projected at 2.2%. This was 0.2% lower than in October 2003.

The forward interest rate differential between Norway and Germany may also provide an indication of inflation expectations in Norway. However, it must be taken into account that Norway's inflation target is higher than the ECB's target. Even with confidence in the inflation target, it must be expected that forward rates in Norway will be somewhat higher than in



The difference between the nominal interest rate and the interest rate on an inflation-linked bond, where the lender is guaranteed a real return, can in some countries be used as a measure of inflation expectations. Inflation-linked bonds do not however, exist in Norway

Germany. The forward rate differential may also reflect premia for differences in liquidity in the Norwegian and German markets. In the short term, disturbances related to market conditions might also affect the figures. The level of the differential should therefore be assessed over a period of time. In the euro area, long-term inflation expectations through 2004 have remained stable at just below 2%.4 The forward rate differential averaged 0.5 percentage point in 2003. After fluctuating in the first half of 2004, the differential fell to a more stable level around 0.3 percentage point in the second half of the year. This may indicate that expectations of future inflation in Norway did not change substantially through 2004.

Overall, these indicators would suggest that there is confidence in the inflation target in the long term. Inflation in the short term, however, is expected to be below 2.5%.

Exchange rate expectations are influenced by growth in public expenditure and developments in terms of trade, although stable inflation expectations can also have a stabilising effect on exchange rate expectations.

#### Variability in inflation and output

Developments in inflation, adjusted for some temporary factors, provide a basis for assessing monetary policy performance. The operational objective of monetary policy is a rise in consumer prices of 21/2% over time, and not an inflation rate of this magnitude at all times. The precision in attaining the inflation target that can

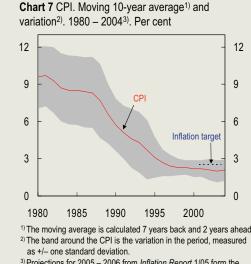
reasonably be expected from monetary policy must also be taken into account.

Consumer price inflation may and will frequently deviate from the target, partly as a result of unforeseen disturbances and partly as a result of monetary policy assessments. The level of consumer price inflation over a short period does not therefore provide an adequate basis for assessing whether long-term monetary policy objectives have been achieved.

Chart 7 shows developments in average inflation over a period of 10 years. Average inflation fell through the 1980s and 1990s and has been relatively stable since the end of the 1990s. In the ten years to 2004, average underlying inflation was 2.2%. The inflation target was introduced in 2001. Previously, Norges Bank emphasised that the inflation rate should not deviate substantially from the rate among our trading partners as a precondition for a stable krone exchange rate.

The band around average inflation shows inflation variability over a period of 10 years. Variability has increased somewhat in recent years as a result of low inflation in 2003 and 2004, although it has been considerably less pronounced than variability in the period prior to 1994.

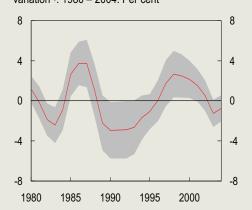
Chart 8 shows developments and variability in the output gap over a period of 10 years. Variability in the gap is illustrated by the band around the output gap estimate. Variability has been decreasing since the early 1990s.



1) The moving average is calculated 7 years back and 2 years ahead

Sources: Statistics Norway and Norges Bank

Chart 8 Estimates of the output gap<sup>1)</sup>, level and variation2). 1980 - 2004. Per cent



<sup>1)</sup> The output gap measures the difference between actual and trend mainland GDP

Sources: Statistics Norway and Norges Bank

<sup>3)</sup> Projections for 2005 - 2006 from Inflation Report 1/05 form the basis for 2004 in this estimate

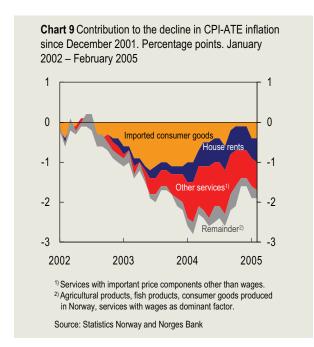
<sup>2)</sup> The band shows the variation in the output gap measured by +/- one standard deviation. The variation is estimated as average standard deviation in a 10-year period, 7 years back and 2 years ahead.

<sup>&</sup>lt;sup>4</sup> See the ECB Monthly Bulletin for November 2004

# Reasons for the deviations from the inflation target in 2004

While inflation was primarily pushed down in 2003 by the fall in prices for imported consumer goods, the more subdued rise in house rents and the fall in prices for services with important price components other than wages were the main factors in 2004<sup>5</sup> (see Chart 9):

- The fall in prices for imported consumer goods also pushed inflation down in 2004, but decelerated through 2004. The depreciation of the krone in 2003 contributed to a smaller fall in prices for clothing and footwear than previously, and the decline in prices for audiovisual equipment moderated. Car prices rose in 2004, while they fell in 2003.
- Prices for services with important price components other than wages are being pushed down in particular by a fall in air fares and prices for telecommunications. This must be seen in the context of intensified competition in these markets, driving up productivity and reducing operating margins. Lower day care rates have also had an impact.
- House rents account for a large portion of the CPI-ATE. The rise in house rents was considerably slower in 2004 compared with previous years. The slow rise in house rents is partly related to the fall in interest rates through 2003. Through their impact on house rents, the interest rate reductions probably pushed down overall consumer price inflation by about 1/4 percentage point in 2004.
- The rise in food prices was very subdued in 2004. This should be viewed in the light of increased



competition in the grocery trade, partly as a result of new entrants. A sharper rise in wholesale food prices compared with consumer prices may indicate that margins in the grocery trade have been reduced somewhat. Stronger competition in retail trade has also resulted in increased cooperation between operators in the industry and foreign suppliers. This may have led to a slower rise in prices and efficiency improvements among Norwegian suppliers.

Norges Bank's submission to the Ministry of Finance of 27 March 2001 includes the following statement:

"If there are significant deviations between actual price inflation and the target, the Bank will provide a thorough assessment in its annual report. Particular emphasis will be placed on any deviations outside the interval of +/- 1 percentage point."

Monetary policy cannot fine-tune economic developments, but it can avoid the largest effects when the economy is exposed to disturbances. Experience indicates that inflation expectations remain stable even if inflation varies somewhat as long as the interest rate is used actively to moderate the variations in inflation. Given Norway's highly open economy, we may have to expect somewhat wider fluctuations in inflation than some other countries.

Low inflation in 2004 is the result of both monetary policy assessments and unexpected disturbances that could not be predicted and that can only be counteracted by monetary policy over time.

Because changes in the economy take time to feed through, monetary policy functions with a lag. Inflation and the real economy in 2004 were also influenced by the monetary policy conducted in preceding years.

In Norges Bank's *Annual Report* for 2003, monetary policy in 2002 and 2003 is explained:

"From summer 2001 to spring 2002, core inflation remained close to the target of 2½%. The level of activity in the Norwegian economy was high. The costpush shock in 2002 resulting from negotiated wage increases was expected to push up inflation in the longer term. The appropriate monetary policy response to this kind of disturbance is to tighten monetary policy. It was expected that this would temporarily curb inflation in 2003 via a stronger krone. In 2002, Norges Bank's Executive Board therefore struck a balance between the consideration of stable inflation developments and the consideration of stabilising developments in output and employment." (Pp. 6-7 in Norges Bank's Annual Report for 2003.)

The projections in 2002 also implied, however, that inflation would remain below target through most of 2004.

<sup>&</sup>lt;sup>5</sup> See Lilleås, Per Espen: "Evaluation of Norges Bank's projections for 2004", *Economic Bulletin* 1/05

Towards the end of 2002, new information emerged indicating that developments in the real economy might be weaker than projected and inflation might be lower. The key rate was therefore reduced in December 2002.

In spring and summer 2003, the economic situation and outlook deteriorated. Key rates, in the US and the euro area among others, were reduced further. The impact of a strong krone, trade shifts and increased domestic competition pushed down inflation and inflation projections. It appeared that wage growth would be more moderate than assumed earlier, exerting further downward pressure on inflation. The key rate was reduced through the year. It was nonetheless clear, however, that inflation would remain considerably below target for a period. Norges Bank's *Annual Report* for 2003 stated the following:

"Monetary policy easing has been implemented with a view to bringing inflation up towards the target within the two-year horizon. The underlying rise in prices will nevertheless be lower than the inflation target for a period. The period in 2002 and early in 2003 when the krone was strong will continue to contribute to a low rise in prices for imported goods and services.

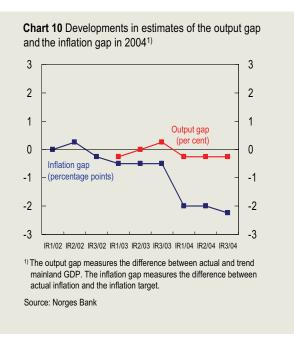
International inflation is still likely to remain low." (p. 38)

Monetary policy assessments in 2003 thereby implied

that Norges Bank expected inflation to remain below target in 2004. There was thus a possibility that inflation could fall even lower than projected, and be more than one percentage point below target. Price developments are highly uncertain in the short term. The Executive Board gave particular weight to conditions that might indicate that inflation would remain low and substantially below target. The interest rate reductions in December 2003 and January 2004 must be viewed in this context. In the Strategy Document for the period November 2003 to March 2004<sup>6</sup>, the Executive Board states the following: "Wide deviations from the projections in the coming months may suggest that the interest rate should be set outside the interval. After a fairly long period of low inflation, it is appropriate to be particularly vigilant in monetary policy if inflation does not increase as expected."

In early 2004, it became clear that the economy was being exposed to considerable unexpected disturbances. Inflation had fallen to an unexpectedly low level, and Norges Bank's regional network reported that strong competition and customer power gave enterprises limited scope for price adjustments. In *Inflation Report* 1/04, projections for capacity utilisation and inflation in 2004 were revised downwards (see Chart 10).





<sup>6</sup> See Inflation Report 1/04, p. 64

## The regional network in 2004

In autumn 2002, Norges Bank established a regional network of enterprises, organisations and local authorities throughout Norway. In five rounds of talks in 2004, representatives from Norges Bank have engaged in discussions with business and community leaders on economic developments in their enterprises and industries. Each of the five rounds has comprised roughly 280 visits. The selection of contacts numbered approximately 1300, representing the production side of the economy, both in terms of industry and geographic area. Six regional research institutions are responsible for the network in their respective regions and have conducted the contact meetings on behalf of Norges Bank. The research institutions are the Centre of Innovation and Entrepreneurship Ltd. in Bodø, the Centre for Economic Research at the Norwegian University of Science and Technology, Møre Research, Rogaland Research, Agder Research and the Eastern Norway Research Institute. In addition, Norges Bank covers a region consisting of four counties in Eastern Norway. Norges Bank also cooperated with Asplan Viak in 2004 to cover this region.

Some of the main impressions from the network in 2004 are:

- Positive developments in demand and output were recorded for most sectors in all regions through 2004. Sound growth in general is expected to continue in the first half of 2005.
- Demand for exports showed solid growth in 2004. The processing and metals industries in particular experienced strong growth. Most sectors of the technological industry also reported solid growth. The ship-building industry, however, experienced a sluggish period with few orders in the first half of the year, but output and new orders both picked up in the course of the autumn.
- Demand for domestically manufactured goods increased through the year. The strongest growth has been reported by suppliers to the construction sector and producers of durable consumer goods.
- In regions with a strong focus on petroleum-related industries, demand from the petroleum sector has been rising through 2004 in line with higher oil prices and higher onshore and offshore petroleum investment.
- The construction sector has shown solid and rising growth through the year. Residential construction has contributed most to growth in this sector, although growth in other construction activity has also picked up in 2004, primarily in the public sector and retail trade. The level of activity was still low in office construction, but picked up somewhat towards the end of 2004.
- Growth in demand in retail trade was solid throughout 2004, with particularly strong growth in sales of consumer durables such as motorised vehicles, furniture, building materials and electrical goods. Growth has also been high in other services to both households and the corporate sector.
- At the beginning of 2004, only retail trade reported investment growth for the coming year in the private sector. In the course of 2004, however, the other industries in the private sector adjusted their investment plans upwards. At end-2004, plans for moderate investment growth applied throughout the private sector.
- Employment did not appear to rise in pace with the increase in demand and activity at the beginning of the year. Employment rose somewhat only in retail trade and the construction sector. In the course of 2004, employment in the service sector also showed moderate growth. In manufacturing and the public sector, employment was virtually unchanged throughout 2004.
- Wage growth was also projected to decline somewhat from 2003 to 2004 for most enterprises in the public sector. Selling prices were reported to be largely unchanged or rising moderately through 2004. In contrast to 2003, no industries reported a fall in prices on average in 2004.
- Profitability improved in all industries in 2004, primarily reflecting cost-cutting through 2003 and rising volumes through 2004.

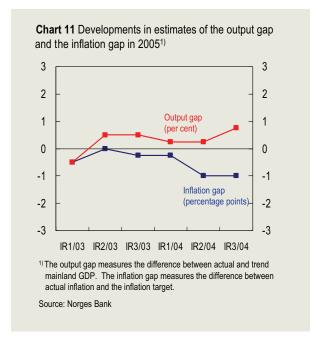
In 2004, the network was also used to examine a number of current issues. For example, we conducted a price-setting survey, looked at enterprises' possibilities for price adjustments and enquired about driving forces behind price developments in the various industries.

The main reasons why inflation was substantially lower than expected at end-2003 are as follows:

- Competition increased in a number of industries.
   Stronger competition in retail trade, air travel and other services resulted in a substantial fall in prices for some goods and services in these industries.
- The pass-through from the exchange rate came later than expected. The depreciation of the krone through 2003 pushed up inflation in 2004 less than expected.
- External price impulses were weaker than expected.
   This was particularly related to changes in trading patterns, low international inflation and high productivity growth, and strong competition in some internationally traded consumer goods.
- Wage growth was lower than projected. Low wage growth may be related to the very low level of inflation at the beginning of the year.

The disturbances also seem to have affected other Nordic countries. Inflation in Sweden, Denmark and Finland was unexpectedly low in 2004, and it appears that low inflation is also related in these countries to low import prices and increased competition.

From the beginning of 2004, minor changes were made in the projections. The projections for inflation, output and employment in *Inflation Report* 1/04 appear to have been accurate in relation to actual developments in 2004. The accuracy of our inflation projections may primarily be due to improved estimates regarding external price impulses to Norway and a pass-through from the krone exchange rate that has been in line with our calculations. It also appears to have been correct to assume that increased competition would contribute to subduing the rise in prices for domestically produced goods and services through 2004. Nor did it seem that the Norwegian economy would be exposed to new unexpected disturbances.



## Monetary policy in 2004

## Monetary policy decisions and the basis for decisions

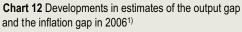
The basis for the interest rate decisions taken in 2004 has been discussed in press releases and at press conferences following the monetary policy meetings. Moreover, the inflation reports published in 2004 provide a broad account of the conduct of monetary policy through the year. As from *Inflation Report* 2/04, the report also includes the Executive Board's monetary policy assessments and the strategy for the coming four months.

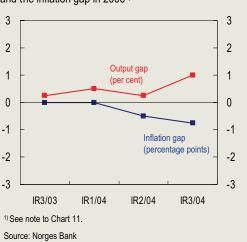
Projections for inflation in the period 2005-2006 were revised downwards somewhat in the July and November *Inflation Report*. The inflation projections were changed partly because the krone exchange rate

Table 1. Decomposition of the gap between actual and projected inflation in *Inflation Report* 3/03 and *Inflation Report* 1/04. Percentage points.

	IR 3/03	IR 1/04
Gap between actual and projected rise in the CPI-ATE	- 1 <sup>3</sup> / <sub>4</sub>	- 1/4
Decomposition of the gap:		
Estimated contribution from the exchange rate	- 1/4	0
Lower external price impulses	- <sup>1</sup> / <sub>4</sub> - <b>0</b>	0
Lower wage growth	- 1/4	0
Stronger competition	- <sup>3</sup> / <sub>4</sub>	0
Unknown/other conditions <sup>1</sup>	- (1/2 - 1/4)	- (1/2 - 1/4)

Other conditions that may explain the gap are the introduction of maximum day-care rates and the direct impact of the cut in interest rates on rents. These factors contribute 0.3-0.4 percentage points to the gap between actual and projected price inflation. These factors are temporary disturbances that Norges Bank does not take into account when setting the interest rate.





appreciated through the spring and summer. Expectations that the interest rate had reached its lowest level, high oil prices and expectations that oil prices would remain high had underpinned the krone exchange rate. In the November *Inflation Report*, the output gap was projected to be higher in the years ahead. In its monetary policy strategy from November, the Executive Board emphasised that uncertainty concerning the effects of previous monetary policy easing and the unusually low interest rate implied that caution should be exercised with regard to further interest rate reductions. On the other hand, given the prospect of continued low inflation ahead, wide deviations from projected economic developments would be required before the interest rate should be increased.

The monetary policy meetings in 2004 are presented below.

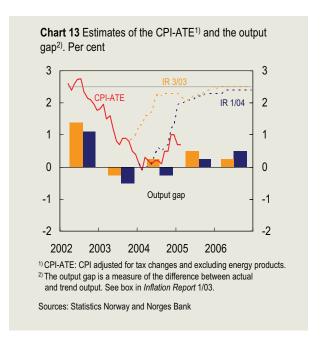
## Norges Bank's interest rate decisions in 2004

- **28 January** The sight deposit rate was reduced by 0.25 percentage point to 2.00%. According to Norges Bank's assessment, with a sight deposit rate of 2%, the probability that inflation two years ahead would be lower than 2½% was greater than the probability that it would be higher.
- 11 March The sight deposit rate was reduced by 0.25 percentage point to 1.75%. According to Norges Bank's assessment, with a sight deposit rate of 1.75%, the probability that inflation two years ahead would be lower than 2½% was greater than the probability that it would be higher. As an alternative, the Executive Board considered leaving the interest rate unchanged and the possibility of keeping the interest rate low for a longer period.
- 21 April The sight deposit rate was kept unchanged at 1.75%. According to Norges Bank's assessment, with a sight deposit rate of 1.75%, the probability that inflation two years ahead would be lower than 2½% was greater than the probability that it would be higher. The Executive Board considered two main alternatives: reducing the interest rate by 0.25 percentage point or keeping the interest rate unchanged at that time and awaiting additional information before any further reduction of the interest rate.
- **26 May** The sight deposit rate was kept unchanged at 1.75%. According to Norges Bank's assessment, with a sight deposit rate of 1.75%, the probability that inflation two years ahead would be lower than  $2^{1}/2$ % was greater than the probability that it would be higher. The Executive Board considered two main alternatives: reducing the interest rate by 0.25 percentage point or keeping the interest rate unchanged.
- **1 July** The sight deposit rate was kept unchanged at 1.75%. The Executive Board did not see any clear alternatives to leaving the interest rate unchanged.
- **11 August** The sight deposit rate was kept unchanged at 1.75%. The Executive Board did not see any clear alternatives to leaving the interest rate unchanged.
- **22 September** The sight deposit rate was kept unchanged at 1.75%. The Executive Board stated that low price inflation in recent months pointed, in isolation, to lower interest rates, but there were also signs that growth in the Norwegian economy might be somewhat higher than projected.
- **3 November** The sight deposit rate was kept unchanged at 1.75%. The Executive Board did not see any clear alternatives to leaving the interest rate unchanged.
- **15 December** The sight deposit rate was kept unchanged at 1.75%. The Executive Board did not see any clear alternatives to leaving the interest rate unchanged.

The monetary policy meeting on 28 January 2004 Monetary policy was eased considerably through 2003. According to the analyses in *Inflation Report* 3/03, which was published in October 2003, a high activity level in the Norwegian economy, in conjunction with a further fall in the krone exchange rate, would contribute to a pick-up in inflation from spring 2004 and bring inflation back to target from autumn 2005. The analyses were based on the assumption that the interest rate would move in line with forward interest rates in the money market and that the exchange rate would depreciate somewhat. This implied that short-term money market rates would hover around 3% in the first half of 2004 and then rise gradually to 4½% towards the end of 2005.

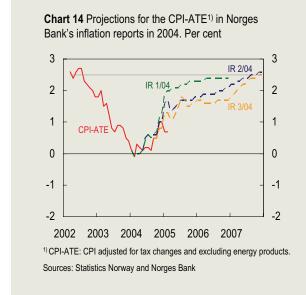
On the basis of the analyses in the report, the Executive Board deemed that a sight deposit rate in the interval 2-3% would be appropriate at the beginning of March 2004. The Executive Board stated that after a fairly long period of low inflation it would be appropriate to be particularly vigilant in monetary policy if inflation did not increase as projected.

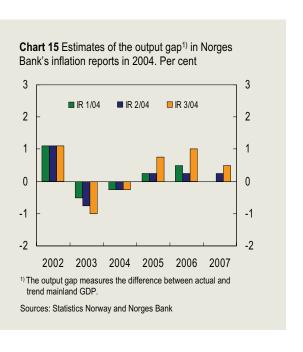
In November and December 2003, inflation was markedly lower than expected. At the monetary policy meeting on January 28, the Executive Board reduced the key rate by 0.25 percentage point to 2%. Norges Bank judged that the most probable scenario was that inflation would remain below the inflation target over the coming two years. With the interest rate cut in January, the key rate was in the lower end of the interest rate interval set out in the Executive Board's monetary policy strategy.



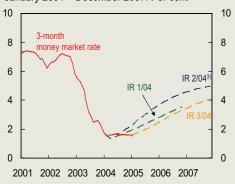
The monetary policy meeting on 11 March Inflation fell further in January and February. The low rise in prices was primarily attributed to intensified competition in some markets. The economy could thus grow at a faster pace for a period ahead without inflation rising at the same pace as earlier.

In the March *Inflation Report*, projections were markedly revised compared with the projections in the October 2003 *Inflation Report* (see Chart 13). The inflation projection for 2004 was revised down by 1½ percentage points to ½%, and there were prospects that





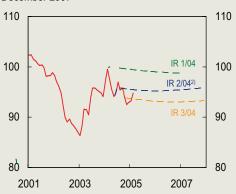
**Chart 16** Assumptions for the money market rate<sup>1)</sup>. Forward interest rate<sup>2)</sup>. Monthly figures. January 2001 – December 2007. Per cent



- 1) The money market rate is normally about 1/4 percentage point higher than the sight deposit rate.
- <sup>2)</sup> The assumption for the money market rate is calculated on the basis of interest rates in the money and interest rate swap market on the specified date. The interest rate path has been adjusted for the fact that credit risk increases with time to maturity.
- <sup>3)</sup> There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

Chart 17 Krone exchange rate (I-44)¹). Forward exchange rate. Monthly figures. January 2001 – December 2007



- 1) A rising curve denotes a weaker krone exchange rate.
- 2) There is some deviation from the assumption published in IR 2/04 because of a change in the estimation method.

Source: Norges Bank

the inflation target would not be reached until spring 2006. GDP growth seemed to be picking up so that the output gap would turn marginally positive from 2005. The projections were based on the technical assumption that short-term money market rates would move in line with financial market expectations. This implied a fall in the key rate towards 11/2% in the period to summer 2004, followed by a gradual increase.

The monetary policy strategy adopted by the Executive Board on 11 March was based on an overall assessment that inflation could be expected to remain around zero up to end-June and would first show a gradual rise from summer 2004. Developments in preceding months entailed a considerable risk of a fall in prices, as measured by the CPI-ATE on a twelvemonth basis. The Executive Board deemed that a sight deposit rate in the interval 1<sup>1</sup>/<sub>4</sub> - 2<sup>1</sup>/<sub>2</sub>% would be appropriate at end-June 2004. According to the Executive Board's assessment, this would provide a reasonable balance between the objective of bringing inflation back to target and the objective of stability in the real economy. The risk of a persistent, large negative deviation from the inflation target still seemed to dominate.

Against this background, the Executive Board reduced the key rate by 0.25 percentage point to 1.75% on 11 March. At the same time, the Board stated that "with the sight deposit rate now at 1.75%, the probability that inflation two years ahead will be lower than 2½% is greater than the probability that it will be higher". The Executive Board considered the alternative of leaving the key rate unchanged and keeping it low

for a longer period. The Executive Board concluded that it would not be appropriate, given the fall in inflation in the previous months, to break markedly with money and exchange market expectations of an interest rate cut. The Executive Board emphasised that international interest rate developments could have a considerable impact on the krone and hence on interest rates in Norway.

The monetary policy meeting on 21 April In March, the twelve-month rise in the CPI-ATE was 0.3%, which was somewhat higher than projected in *Inflation Report* 1/04. Preliminary statistics from Statistics Norway showed that GDP growth was in line with Norges Bank's projections. Since the previous monetary policy meeting, the krone had appreciated by about 3½%.

At the monetary policy meeting on 21 April, the Executive Board considered reducing the key rate by 0.25 percentage point, or keeping the interest rate unchanged, awaiting additional information before undertaking any further cuts. Low price impulses both in Norway and abroad, combined with the appreciation of the krone since the previous monetary policy meeting, might suggest a further easing of monetary policy. But themes in the foreign exchange market shift, and Norges Bank does not have instruments to fine-tune the exchange rate.

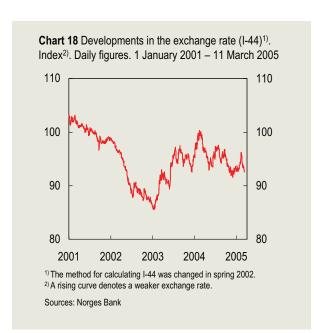
However, several factors suggested that additional information was needed before any further reduction in the key rate should be undertaken. New information

since the previous monetary policy meeting confirmed that activity in both the domestic and international economy was picking up. Inflation had stabilised and was slightly higher in March than the projections in *Inflation Report* 1/04.

The Executive Board concluded that it was appropriate to leave the key rate unchanged at the meeting on 21 April. At the same time, the Board reiterated that "with the sight deposit rate now at 1.75%, the probability that inflation two years ahead will be lower than 2½" is greater than the probability that it will be higher". The Executive Board pointed out that interest rate developments abroad might also have a considerable impact on the krone and hence on interest rates in Norway.

The monetary policy meeting on 26 May
From spring, the projections for economic developments and inflation were gradually confirmed. Inflation stopped falling and growth in demand and output picked up as expected. Our analyses described developments in 2004 fairly accurately, providing an increasingly secure basis for interest rate setting. The krone appreciated somewhat further up to the monetary policy meeting on 26 May. In April, inflation was in line with the projections in *Inflation Report* 1/04.

Some factors suggested a reduction in the key rate. Developments in the exchange rate would contribute to pushing down inflation over the next few years. Overall inflationary impulses to the Norwegian economy were considered to be subdued. Other factors suggested that the interest rate should not be reduced. Short-term interest rates were already low in Norway,



and monetary policy influences the economy with long and variable lags. There were signs that demand and output had picked up at a faster pace than projected in the March *Inflation Report*. Inflation had stabilised and was broadly in line with projections in March and April. The Executive Board pointed out that international interest rate developments might have a pronounced impact on the krone. The domestic inflation outlook implied that Norway should not be a front-runner when interest rates in other countries are adjusted upwards.

The Executive Board considered two main alternatives: either reducing the interest rate by 0.25 percentage point or leaving the interest rate unchanged. The Executive Board concluded that it was appropriate to leave the interest rate unchanged. The Executive Board also stated that "with the sight deposit rate now at 1.75%, the probability that inflation two years ahead will be lower than 2½% is greater than the probability that it will be higher".

The monetary policy meeting on 1 July
In Inflation Report 2/04, which was published on
1 July, the inflation projections were again revised
downwards (see Chart 14). It appeared that inflation
would not reach target until three years ahead in summer
2007. One reason for the downward revision of the
inflation projection was that the krone exchange rate,
which was assumed to follow the forward exchange
rate, was 3-4% stronger during the projection period
than in the previous report (see Chart 17). The projections were also based on a gradual increase in the key
rate to around 5% in the period to end-2007, in line
with forward interest rates.

In its monetary policy assessments, the Executive Board pointed out that monetary policy should be geared towards bringing up inflation somewhat faster than projected. A more expansionary monetary policy stance than implied by forward interest rates and the forward exchange rate might contribute to this. This could be achieved either by reducing the interest rate further or by keeping the interest rate unchanged for a longer period than implied by forward interest rates.

The Executive Board was of the view that the monetary policy easing undertaken in the period December 2002-March 2004 was generating a fairly strong impetus to the Norwegian economy. The Executive Board pointed out that there was considerable uncertainty as to the level of future growth in the Norwegian economy and the inflationary impulses stemming from growth in demand. Moreover, with very high oil prices, the effect of a given interest rate reduction on the krone might be smaller than normal.

Rather than reducing the interest rate further, it was the view of the Executive Board that the key rate should be left unchanged for a longer period than implied by forward interest rates at that time. This might contribute to bringing inflation back to target faster than projected in *Inflation Report* 2/04. The output gap over the coming two years might then be somewhat higher than estimated. The Executive Board deemed that such an interest rate path would provide a better balance between the objective of reaching the inflation target and the objective of stable growth in output and employment than a further interest rate reduction. The Executive Board judged that a sight deposit rate in the interval 1<sup>1</sup>/<sub>4</sub>-2<sup>1</sup>/<sub>4</sub>% would be appropriate at the beginning of November 2004.

The Executive Board reiterated that the uncertainty of the effects of previous monetary policy easing and an unusually low interest rate level warranted caution with regard to further interest rate cuts. The Executive Board also pointed out that with the prospect of low inflation ahead, wide deviations from projected developments would be required before the interest rate would be increased.

The interest rate was thus left unchanged at the monetary policy meeting on 1 July. The Executive Board did not see any clear alternatives to keeping the interest rate unchanged. The Executive Board was of the view that the prospect of continued low inflation in Norway implied that Norway should not be a frontrunner when interest rates in other countries are increased.

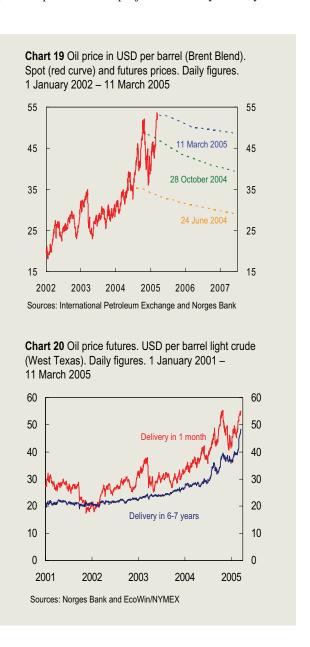
The monetary policy meeting on 11 August
In June and July, inflation was somewhat lower than projected in the *Inflation Report*. The Executive Board attributed this partly to temporary factors. Developments in the real economy had been broadly in line with expectations. However, oil prices had risen during the summer and now constituted a new risk factor. In the oil market, oil prices were expected to remain high for a fairly long period ahead, and even oil futures prices six to seven years ahead had reached close to USD 35 per barrel.

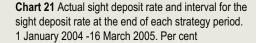
The Executive Board pointed out that the effects of oil prices on the Norwegian economy are complex, but that the increase in foreign exchange revenues does not have a direct effect on the balance in the foreign exchange market.

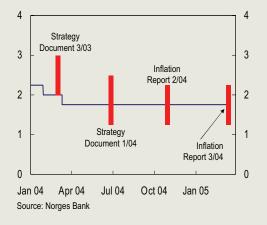
At the monetary policy meeting on 11 August, the interest rate was left unchanged and the Executive Board did not see any clear alternatives to this. The Executive Board pointed out that the aim of monetary policy is to achive higher inflation while it is also important to avoid imbalances in the real economy. New information since the previous monetary policy meeting did not imply any substantial changes in the monetary policy assessments. The Executive Board

was of the view that the prospect of continued low inflation in Norway implied that Norway should not be a front-runner when interest rates in other countries are increased. The Executive Board maintained its assessment that the inflation outlook might suggest that the interest rate be left unchanged for a longer period than implied by the calculations in the previous *Inflation Report*.

The monetary policy meeting on 22 September New information since the previous monetary policy meeting indicated that growth in the Norwegian economy might be somewhat stronger than projected in Inflation Report 2/04. However, inflation had not picked up in line with projections. The year-on-year







rise in consumer prices adjusted for tax changes and excluding energy products (CPI-ATE) was 0.1% in August 2004. Markedly lower-than-projected inflation might, if this reflected structural adjustments in the goods and services markets, indicate lower inflation for a period ahead. According to the Executive Board's assessment, this suggested in isolation an easing of monetary policy.

However, the Executive Board pointed out that in the conduct of monetary policy weight must also be given to avoiding imbalances in the real economy and that there were signs that growth in the Norwegian economy might be somewhat stronger than projected. The Executive Board concluded that it was appropriate to leave the interest rate unchanged. The Executive Board was of the view that the prospect of continued low inflation in Norway implied that Norway should lag behind other countries in setting interest rates at a more normal level.

The monetary policy meeting on 3 November
In summer 2004, inflation had been lower than projected in *Inflation Report* 2/04. In September, inflation picked up, in line with the projections in the report, to a year-on-year rate of 0.5%. In *Inflation Report* 3/04, which was published on 3 November, the assessment of the estimate for the output gap in 2005-2007 was higher than in the previous report, while the inflation projections were revised down somewhat. As in the previous report, inflation was projected to reach the inflation target at the end of the projection period, which was now at the end of 2007.

The projections were based on an unchanged sight

deposit rate, in line with forward interest rates, in the period to summer 2005, followed by a gradual increase. The exchange rate was assumed to remain fairly stable over the next three years in line with the forward exchange rate. However, the krone was somewhat stronger than at the time of the publication of the previous report.

The Executive Board considered an alternative monetary policy where the sight deposit rate was reduced to zero in the near term and then increased rapidly to a higher level than the forward interest rate. The effect of a lower interest rate on the krone exchange rate was considered to be limited, as market participants would expect a more marked interest rate increase to follow. In this scenario, inflation was a quarter percentage point higher than in the baseline scenario through 2006, while the impact on overall production would be more pronounced. In its monetary policy strategy, the Executive Board assumed that the effects of previous monetary policy easing and the unusually low interest rate warranted caution with regard to further interest rate cuts. With the prospect of low inflation ahead, wide deviations from projected developments would be required before the interest rate should be increased. A sight deposit rate in the interval 11/4-21/4% in mid-March 2005 provided a reasonable balance between the objective of reaching the inflation target and the objective of stability in the real economy. The Executive Board's strategy interval for the sight deposit rate was the same as for the previous four-month period.

In line with the monetary policy strategy presented, the sight deposit rate was left unchanged at 1.75% at the monetary policy meeting on 3 November. The Executive Board did not see any clear alternatives to leaving the interest rate unchanged. The Executive Board pointed out that the prospect of continued low inflation in Norway also suggested that Norway should lag behind other countries in setting interest rates at a more normal level.

The monetary policy meeting on 15 December

The Executive Board's assessment was that on the whole the outlook for inflation and the real economy in Norway was broadly in line with the projections in *Inflation Report* 3/04. Inflation had picked up somewhat in line with projections and was 1.0% in the year to November, as measured by the CPI-ATE. The Executive Board decided to leave the key rate unchanged at 1.75%, and the Board did not see any clear alternatives to this. The Executive Board pointed out that the prospect of continued low inflation in Norway suggested that Norway should lag behind other countries in setting interest rates at a more normal level.

#### Was monetary policy in 2004 predictable?

The change in market rates following the Executive Board's monetary policy meetings is an indicator of predictability in interest-rate setting. Substantial changes in market rates may indicate that the decision was unexpected.

Norges Bank reduced its key rate twice in 2004. The

interest rate reduction of 0.25 percentage point on 28 January was expected by both market makers and by the majority of macroeconomists in Norwegian financial institutions. Money market rates therefore showed little change after the meeting. Following the interest rate reduction of 0.25 percentage point on 11 March, money market rates edged up. This may be an indica-

#### Interest rate developments in Norway and other countries

In the press release following the monetary policy meeting on 11 March 2004, the Executive Board stated the following: The exchange rate has now reverted to the level prevailing before inflation started to decelerate. With the recent interest rate reductions, the Norwegian key interest rate is as low as, or lower than, the interest rate among trading partners. If interest rates continue to fall in other countries, the krone may appreciate. This will reduce the possibility of reaching the inflation target. (...) When inflation increases from a very low level, this will provide a basis for gradually moving towards a more normal short-term interest rate level in Norway. This may counter excessive credit growth and excessive pressures on domestic resources in the medium term. Interest rate developments in other countries may also have a considerable impact on the krone and hence on Norwegian interest rates.

At subsequent monetary policy meetings, the Executive Board made various references to the importance of interest rate setting in other countries for interest rate setting in Norway.

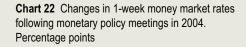
- Press releases 11 March and 21 April:
- Interest rate developments in other countries may also have a considerable impact on the krone and hence on Norwegian interest rates.
- Press release 26 May:
  - Interest rate developments abroad may have a considerable influence on movements in the krone exchange rate. The inflation outlook in Norway implies that Norway will not be the frontrunner when other countries increase interest rates.
- Press releases 1 July and 11 August:
- The prospect of continued low inflation in Norway also implies that Norway should not be the frontrunner when interest rates are increased in other countries.
- Press releases 22 September, 3 November, 15 December and 2 February 2005:
  - The prospect of continued low inflation in Norway implies that we should lag behind other countries in setting interest rates at a more normal level.

Many countries have increased their key rates during this cyclical upturn, also in several steps. With the prospect of low inflation, Norway has lagged behind other countries in adjusting interest rates to a more normal level.

#### Global interest rate increases in this business cycle

	First interest rate increase	Key rate at	Key rate	Change since
		lowest level	22 March 2005	lowest level
		Per cent	Per cent	Percentage
				points
Iceland	06.05.2004	5.30	8.75	3.45
New Zealand	29.01.2004	5.00	6.75	1.75
US	30.06.2004	1.00	2.75	1.75
UK	06.11.2003	3.50	4.75	1.25
Australia	08.05.2002	4.25	5.50	1.25
Canada	08.09.2004	2.00	2.50	0.50
Switzerland	17.06.2004	0.00-0.75	0.25-1.25	0.50
Euro area		2.00	2.00	0.00
Sweden		2.00	2.00	0.00
Denmark		2.15	2.15	0.00
Japan		Close to zero	Close to zero	0.00

<sup>&</sup>lt;sup>7</sup> Such an indicator was used in the report "How Do Central Banks Write" by Fracasso, Genberg and Wyplosz, CEPR 2003.



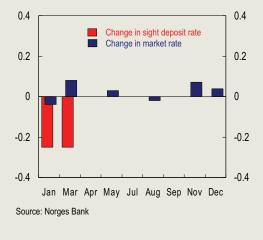
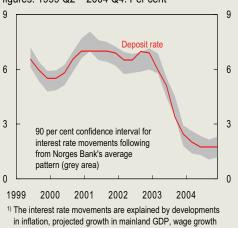


Chart 23 The sight deposit rate and interest rate movements that follow from Norges Bank's average pattern for the setting of interest rates. 1) Quarterly figures. 1999 Q2 - 2004 Q4. Per cent



and 3-month interest rates among trading partners.

Source: Norges Bank

tion that some market participants probably expected a larger interest rate reduction. After the remaining interest rate meetings in 2004, the key rate was kept unchanged, which on the whole was expected by most market participants.

Market interest rates and the krone exchange rate are also affected by Norges Bank's communication of the interest rate decisions and monetary policy assessments in the Inflation Report. As from Inflation Report 2/04, available on 1 July, Norges Bank published its monetary policy strategy for the following four months at the beginning of this period. This should contribute to making monetary policy more predictable. Norges Bank also included a statement concerning to what extent the forward rate curve in the projection period provided a good balance between the objective of achieving the inflation target and the objective of stable growth in output and employment.

The projections in Inflation Report 2/04 were based on a gradual increase in the key rate in line with forward rates to around 5 per cent in the period to end-2007. In its monetary policy strategy, the Executive Board indicated that the key rate should be kept unchanged for a longer period than indicated by forward rates at that time. Following this, money market rates with a somewhat longer maturity fell. In Inflation Report 3/04, it was the Executive Board's assessment that forward interest rates provided a reasonable balance between the different objectives.

#### Norges Bank's response pattern

Analysts and observers will seek to form a picture of the central bank's response to new information about the economy. To understand the response pattern in monetary policy, observers may estimate the relationship between the interest rate and developments in macroeconomic variables. Such a relationship can be regarded as the "average response pattern" in interestrate setting.8

In its actual interest-rate setting, Norges Bank gives weight to a number of indicators that influence developments in inflation and output. An estimated equation does not capture all the relevant conditions. In particular, it does not capture specific assessments made at the various interest rate meetings. An estimated equation for interest-rate setting will thus be a considerable simplification and will only provide an indication of how interest rates on average have reacted to selected variables. Estimation results will also depend on the data period and the econometric method used. Norges Bank has estimated a simple equation in order to capture Norges Bank's average response pattern from 1999 to 2004 Q4.9

Chart 23 shows the interest rate path ensuing from this average pattern, and the actual path of the key rate. The estimated equation includes developments in inflation, wage growth, Norges Bank's projections for GDP growth in mainland Norway and money market rates abroad. The equation also indicates that the interest

<sup>&</sup>lt;sup>8</sup> There is an extensive body of literature comprising studies of various central banks' response patterns. See for example "Material for assessing monetary policy 2001-2003" in Inflation Report 1/04, Sveriges Riksbank, www.riksbank.com, Gerdesmeier, D. and B. Roffia (2003) "Empirical estimates of reaction functions for the euro area", ECB Working Paper no. 206, Nelson, E. (2000) "UK monetary policy 1972-97: A guide using Taylor rules", Working Paper 120, Bank of England, and Kuttner, K. N. (2004) "The role of policy rules in inflation targeting", Federal Reserve Bank of St. Louis, vol. 86, no. 4, pp. 89-111.

<sup>9</sup> See Bernhardsen T. and G. Bårdsen: "Sammenhengen mellom styringsrenten og makroøkonomiske variable: Noen enkle ligninger for Norge" (the relationship between the key rate and macroeocnomic variables: some simple equations for Norway), Norges Bank Staff Memo nr. 2/04. (Norwegian only). See http://www.norges-bank.no.

Chart 24 The sight deposit rate, the Taylor rule and the Orphanides rule. Quarterly figures. 1999 Q1 - 2004 Q4. Per cent

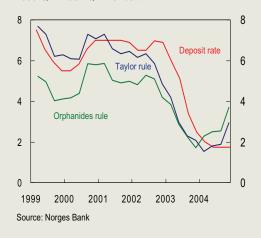
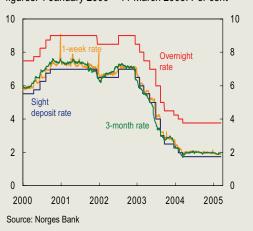


Chart 25: Norges Bank's interest rates and shortterm market rates. Nominal market rates. Daily figures. 1 January 2000 – 11 March 2005. Per cent



rate in the previous period is important. The chart indicates that interest-rate setting through 2004 was in line with the Bank's response pattern in the period from 1999.

Interest rate setting may also be assessed in the light of simple monetary policy rules. These rules may provide a rough indication of whether the current interest rate is adapted to the current economic situation. The rules must be interpreted with caution and provide only approximate indications of the appropriate interest rate level.

A common feature of many simple interest rate rules is that the interest rate is set with a view to keeping inflation around a specific target over time and at the same time contributing to stabilising output. Interest rate calculations based on some simple rules are shown in Chart 24.

The Taylor rule, which places emphasis on the output gap and inflation, indicates that monetary policy in 2004 was well adapted to the economic situation. The Orphanides rule places emphasis on developments in GDP growth and inflation. According to this rule, monetary policy was a little too expansionary and should have been tightened through the year. This was because growth in Norway was high in 2004. The Taylor rule and the Orphanides rule do not take into account that inflation is influenced by the difference between international and Norwegian interest rates and the exchange rate. The rules therefore have some limitations as a reference for a small, open economy. A higher interest rate in 2004 would have increased the likelihood of an appreciation of the krone and thereby persistently low inflation.

The rules confirm that the expansionary monetary policy conducted through 2004 was appropriate. This is because inflation was low. The rules also indicate that the interest rate should gradually increase when it is certain that inflation is moving up towards the target.

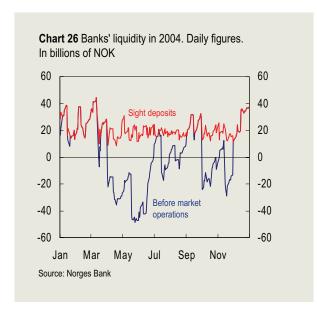
## Conduct of monetary policy in the market

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 every day, deposited as sight deposits with Norges Bank. Short-term money market rates will therefore normally be slightly higher than the sight deposit rate, which is Norges Bank's key rate.

Liquidity policy instruments are fixed rate loans (F-loans), fixed rate deposits (F-deposits) and currency swaps. <sup>10</sup> F-loans are Norges Bank's primary liquidity supplying instrument. Currency swaps were not used in liquidity management in 2004. 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. In 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.

<sup>10</sup> See Kran, Lars-Christian and Grete Øwre (2001): "Norges Bank's system for managing interest rates", Economic Bulletin no. 1/01.

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 monetary policy instruments. The banking system's structural liquidity is influenced by government payments, government loan trans-



actions, 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.

If structural liquidity is not regarded as adequate to keep short-term money market rates slightly higher than the sight deposit rate, Norges Bank offers to supply banks with liquidity through F-loans. The maturity of an F-loan will depend on the variations in banks' estimated liquidity requirements in the first few days. F-loans are auctioned to the banks through an internet-based system. The interest rate on an F-loan is normally set through an American auction, and is usually slightly higher than the sight deposit rate.

In 2004, 44 F-loan auctions were held. The loans varied from NOK 4 to 69 billion. Loan maturities varied from 2 to 8 days.

Banks' structural liquidity fell considerably through the first half of 2004. The sale of government shares in Telenor and Statoil contributed to this. Chart 26 shows that it was necessary to supply liquidity via F-loans through most of the year. The resumption of Norges Bank's purchases of foreign exchange for the Government Petroleum Fund in the second half of the year contributed to increasing banks' liquidity. At the end of the year, some large government bonds matured, resulting in very ample liquidity.

## Chapter 2. Financial stability

# Responsibility for the stability of the financial system

Norges Bank's mandate and responsibility in relation to the stability of the financial system are defined in Section 1 of the Norges Bank Act, which states that the Bank shall: "(...) promote an efficient payment system domestically as well as vis-à-vis other countries and monitor developments in the money, credit and foreign exchange markets" and in Section 3: "The Bank shall inform the ministry 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."

The Payment Systems Act, which entered into force in 2000, assigns to Norges Bank the responsibility for authorising banks' clearing and settlement systems (the interbank systems).

The financial system consists of financial institutions, financial instruments, financial markets and payment systems. Financial stability implies that the financial system is robust to disturbances in the economy and can channel capital, execute payments and redistribute risk in a satisfactory manner. Responsibility for financial stability is divided between Norges Bank, Kredittilsynet (the Norwegian Financial Supervisory Authority) and the Ministry of Finance. The Ministry of Finance focuses in particular on the regulatory framework, Kredittilsynet supervises the financial sector, while Norges Bank has the responsibility for fostering efficient and robust payment systems and financial markets. If problems should arise in the financial system, all three institutions will be involved. Cooperation on several levels has been established between Norges Bank and Kredittilsynet. The management of the two institutions hold quarterly meetings to discuss the economic situation and developments in financial institutions. Norges Bank is represented by an observer on the board of Kredittilsynet. Norges Bank has regular meetings with the Ministry of Finance to discuss issues relating to financial stability. In addition, Norges Bank writes a submission to the Ministry every six months presenting Norges Bank's assessment of the financial stability outlook, based on the main conclusions in the semiannual Financial Stability report.

The objective of monetary policy is low and stable inflation, and Norges Bank sets the interest rate with a view to stabilising inflation at close to 2.5% within a reasonable time horizon, normally 1-3 years. Monetary policy influences the outlook for financial stability, since the interest rate influences developments in household and enterprise debt accumulation and prices for important assets such as housing and equities. Stability



in the financial sector is a necessary precondition for low and stable inflation. A sharp rise in asset prices and debt accumulation may pose a risk to economic stability. Hence, Norges Bank assesses whether, and to what extent, financial stability considerations should influence the formulation of monetary policy.

Norges Bank's work on financial stability consists of three parts:

- Norges Bank's preventive tasks are primarily aimed at limiting risk associated with clearing and settlement systems in order to prevent liquidity and solvency problems from spreading among financial market participants. In addition, the Bank advises Kredittilsynet and the Ministry of Finance on issues associated with the regulation of financial markets with a view to contributing to an appropriate balance between the objectives of efficiency and financial soundness.
- Norges Bank's surveillance is aimed at revealing developments that may lead to deteriorating earnings and increased losses in the financial sector and the build-up of financial imbalances that may pose a threat to financial stability.
- Norges Bank's responsibility in contingency situations means that the Bank must be able to handle and resolve financial crises if the stability of the financial system is threatened.

## Financial markets and financial institutions

#### Surveillance

Norges Bank monitors developments in financial markets and financial institutions in order to identify trends that may weaken the stability of the financial system. Surveillance is focused in particular on:

- banks' earnings and financial strength, i.e. how well equipped banks are to deal with any losses,
- banks' exposure to various types of risk, including developments in factors that influence the debtservicing capacity of borrowers,
- whether problems that arise in one part of the financial system are amplified and/or spread to other parts of the system.

Banks' risk of loan losses, credit risk, is at the centre of financial stability work. Corporate and household debt and interest burdens are important indicators. Experience indicates that banks incur larger losses on loans to enterprises than on loans to households. It is nevertheless important to monitor households' financial position because changes in household behaviour have consequences for the financial position of enterprises. Similarly, developments in earnings and employment in the enterprise sector will have an impact on households.

Norges Bank's new macroeconomic model can be linked up to a model with key relationships for monitoring of financial stability. The latter model contains relationships for household debt and house prices, and will be expanded to incorporate relationships for debt accumulation and banks' losses. This model is used to assess developments in financial stability using the projections that form the basis for monetary policy decisions.

Norges Bank has developed a credit risk model (SEBRA) which is used to estimate the bankruptcy probability of individual enterprises. In this model, bankruptcy probability depends on the enterprise's earnings, liquidity, financial strength, industry, size and age. Norges Bank uses accounts data from all Norwegian limited companies in this work.

Norges Bank also monitors banks' liquidity and market risk. A bank is liquid if it is able to honour its commitments as they fall due. Banks take short-term deposits and provide long-term loans. This makes them vulnerable at times when funding is tighter. Customer deposits, bonds and short-term money market financing are important sources of funding. Liquidity risk analysis is of central importance as banks can incur substantial losses as a result of liquidity shortages, for example if assets have to be realised at low prices in illiquid markets. Market risk is the risk of losses as a result of changes in market prices such as interest rates,

exchange rates and equity prices. Market risk is relatively low in Norwegian banks because they have a relatively small share of holdings of equities and fixed income instruments. Insurance companies have larger holdings of securities, and are therefore more exposed to market risk than banks.

Financial markets in various countries have become more closely integrated. As a result, turbulence spreads more rapidly across countries. In recent years, cross-border banking groups, also in the Nordic countries, have contributed to linking the financial markets of different countries. This facilitates risk diversification, but may also be a channel of contagion. In the Nordic countries, central banks and the supervisory authorities are continuing their collaboration on supervision and handling of crises in banks with activities in several countries. The Nordic central banks are seeking to expand their collaboration on the basis of the agreement on the management of financial crises that was signed in 2003.

Norges Bank regularly analyses the functioning of financial markets and adaptation among financial institutions. The analyses are presented in articles in the journal Penger og Kreditt (in English translation in the Economic Bulletin) and in boxes in the Financial Stability reports. In 2004 articles were published on transfer of credit risk, management of financial crises in cross-border banks, and Norges Bank's role in the event of liquidity crises in the financial sector. Analyses were also conducted of the mechanisms driving house prices, household debt growth and long-term benchmark rates in the Norwegian bond market. In addition, credit risk is analysed on a regular basis. In 2004 a comparison was made between the predictions of Norges Bank's accounts-based SEBRA model and Moody's KMV's market-based Private Firm model. The SEBRA model is also used by Kredittilsynet in its monitoring of the loan portfolio of individual institutions. The regular analyses of financial stability are also underpinned by long-term competence-building thanks to Norges Bank's research activities (see section on research activities in Chapter 4).

The Financial Stability report is published semiannually. The report contains an overall assessment of the outlook for financial stability with special emphasis on banks and their ability to cope with major disturbances to the economy. The main conclusions of the report are summarised in a submission to the Ministry of Finance. The report is also intended to foster dialogue with the financial industry, and to increase awareness of and fuel debate on the importance of financial stability. In the report, Norges Bank highlights developments in debt, asset prices and the debt-servicing capacity of borrowers. Credit, liquidity and market risk are also discussed in each report. Other types of risk, such as counterparty risk, settlement risk and operational risk, are examined periodically. Developments in mortgage companies, finance companies and life insurance companies are also assessed. Many of these institutions are linked to banks through financial conglomerates.

The discussion of the various types of risk culminates in a qualitative assessment of risk. The designations low, relatively low, moderate, relatively high and high risk are used. An assessment is also provided of changes in risk since the previous report. In our overall assessment of the financial stability outlook, a discretionary assessment of the different types of risk is made. In the light of the structure of banks' exposures, particular emphasis is placed on credit risk. The risk assessment may be different for the short and for the long term. For example, there may be situations where credit risk is low in the short term because of low interest rates and/or favourable economic developments. However, the same factors may lead to debt accumulation and rising asset prices, which may increase risk in the long term.

## Financial market structure, financial market regulation and contingency planning

In 1999, the IMF and the World Bank implemented a programme to assess and promote financial stability in various countries - the "Financial Sector Assessment Program" (FSAP). In an FSAP review, the IMF assesses compliance with international standards of various parts of a country's financial system. FSAPs have been conducted in a total of 71 countries. Experience shows that an assessment provides the authorities with practical recommendations for making the financial system more robust and efficient. The IMF carried out the first part of an FSAP review in Norway in autumn 2004. A review was made of compliance with the general principles for supervision of banking and insurance. At the same time, facts were gathered on a broad range of themes in the area of financial stability. The next visit will take place in early 2005, when a review will be made of the main principles for payment systems. The IMF will draw up a report based on these reviews which will be available in the summer of 2005. The Ministry of Finance, Kredittilsynet and Norges Bank cooperate in conducting FSAP reviews in Norway.

In June 2004, the Basel Committee on Banking Supervision adopted the new capital adequacy rules for banks (Basel II). A month later, the EU Commission submitted its proposal for changes in the Capital Adequacy Directive for Banks, which is now being debated at political level in the EU. In Norway, the directives will be incorporated in Norwegian law as part of Norway's EEA obligations with effect from the

beginning of 2007. The new capital adequacy rules place greater emphasis on banks' risk management systems and capital allocation, and imply that the minimum capital adequacy requirement will be more consistent with actual risk in banks.

In 2004, Norges Bank and Kredittilsynet acquired observer status in the Committee of European Banking Supervisors (CEBS). The main responsibilities of the CEBS are to advise the EU Commission on banking-related matters, contribute to consistent implementation of EU directives in member countries, and promote cooperation on supervision so that supervisory practice, among other things, becomes as consistent as possible.

On 30 September, Norges Bank submitted a consultative statement to the Ministry of Finance on Kredittilsynet's proposed regulations on membership of the Norwegian Banks' Guarantee Fund for branches in Norway of foreign credit institutions registered in another EEA member state. Norwegian banks are obliged to be members of the Norwegian Banks' Guarantee Fund. Branches in Norway of foreign credit institutions are already members of their home countries' guarantee schemes. The Guarantee Schemes Act gives such branches the right to membership of the Norwegian Banks' Guarantee Fund. The Norwegian guarentee scheme provides for substantially higher guarantee amounts than other European schemes. This may make membership of the Norwegian Banks' Guarantee Fund attractive, particularly for banks experiencing a clear deterioration in their financial situation. Norges Bank has argued that the current guarantee scheme should be reviewed. In its consultative statement, Norges Bank points out that problems associated with the supplementary cover arrangement are a further argument for reviewing the current guarantee scheme.

On 14 May, Norges Bank submitted a consultative statement to the Ministry of Finance on the Pension Commission's proposal to modernise the national insurance scheme. The focus of the statement was on the pension system's financial sustainability, its consequences for monetary policy, the organisation of the management of pension funds, the Norwegian securities market and financial stability.

The authorities must be prepared for the possibility of a financial crisis. Norges Bank's instrument in a financial crisis is a supply of extraordinary liquidity to an individual bank, or to the banking system as a whole. In 2004, Norges Bank's Executive Board drew up principles for the supply of extraordinary liquidity. A necessary prerequisite for such an extraordinary supply of liquidity is that the functioning of the financial system itself is threatened. A more detailed account of the principles for supplying extraordinary liquidity is provided in a separate box.

## Norges Bank's role in the event of liquidity crises in the financial sector

Financial crises may give rise to substantial real economic costs. The authorities therefore attempt to prevent financial crises from arising. In Norway, the Ministry of Finance has the ultimate responsibility for financial stability. Kredittilsynet (the Financial Supervisory Authority) is responsible for supervising institutions, and has broad powers to intervene in the event of crises or potential crises. Norges Bank can supply extraordinary liquidity to the individual bank or banking system when demand for liquidity cannot be accommodated by other sources. Norges Bank shall not provide solvency support.

In March 2004, the Executive Board of Norges Bank discussed the role of the Bank in connection with liquidity crises in the financial sector, and particularly the criteria for providing loans on special conditions (S-loans) to individual banks. It was established that extraordinary provision of liquidity should be restricted to situations where financial stability may be threatened if such support is not provided. The Executive Board distinguished between two main types of liquidity problems:

- 1) Acute liquidity problems due to the operational failure of payment systems or a failure in markets for funding: Norges Bank may approve other types of collateral, or depart from the requirement regarding provision of collateral for intraday loans (in order to ensure the execution of payment settlements) and for fixed-rate loans (monetary policy instrument). The purpose of such measures will be to contribute to financial stability, including the efficiency of and confidence in the payment system, and/or to avoid an undesirable increase in short money-market rates. Extraordinary intraday loans or fixed-rate loans should be reserved for situations where it is clear that liquidity problems are of a short-term nature and not due to more fundamental problems.
- 2) Liquidity problems due to more fundamental problems in a bank: Such problems may be due to inadequate risk management and/or negative profitability and capital adequacy which lead to a loss of market confidence. Pursuant to the Guarantee Schemes Act, Kredittilsynet can request the implementation of measures focused on the causes of liquidity problems. The Norwegian Banks' Guarantee Fund can provide support to boost the financial strength and liquidity of a bank undergoing a crisis. Norges Bank may provide S-loans to improve liquidity. A bank that does not have a financial basis for continuing operations may be placed under public administration. The Executive Board has approved the following principles and guidelines for the provision of S-loans:
- S-loans should be restricted to situations where financial stability may be threatened if such support is not provided.
- In most cases, a decision concerning the provision of an S-loan will be a matter of special importance that must first be submitted to the Ministry of Finance. Norges Bank will request that Kredittilsynet make an assessment of the causes of the liquidity problems, the liquidity and solvency situation of the banks in crisis and measures that may solve the liquidity problems.
- Before an S-loan is provided to banks that have, or are at risk of facing, a weak capital adequacy position, a plan should be elaborated to recapitalise the bank.
- S-loans should be provided against full provision of collateral or guarantees.
- The interest rate on the S-loan should be set at a higher rate than the general market rate.

## Financial stability in 2004

## Outlook for financial stability somewhat improved in 2004

The solid results presented by Norwegian banks in 2004 strengthened their financial position. Loans to households as a share of total lending have increased sharply in recent years. This has increased the exposure of banks to developments in the household sector. Thanks to low interest rates, households' interest burden is low despite high debt growth. The risk of higher losses on loans to households is therefore considered to be relatively low in the short term. As a result of sound developments in the enterprise sector, the credit risk associated with loans to enterprises is assessed as relatively low, and somewhat lower than at the beginning of the year. The market risk and liquidity risk facing banks is also assessed as relatively low. Overall, this implies a favourable outlook for banks. The financial stability outlook at the end of 2004 is therefore assessed as satisfactory in the short term, with some improvement compared with the situation at the beginning of the year. However, the persistently high level of household debt accumulation represents an element of uncertainty as to economic developments a few years ahead.

## Low loan losses and improved bank earnings

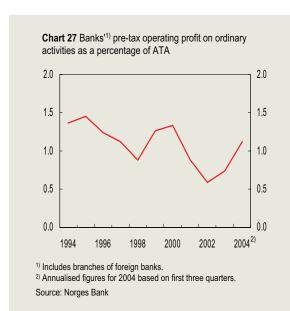
Banks' results in 2004 were stronger than they have been for several years. The improvement was largely due to a sharp fall in recorded loan losses. Lower loan losses reflect low interest rates and solid economic growth. Higher commission income and improved costefficiency also made a positive contribution to banks' performance. On the other hand, the fall in interest rates in 2003 and the first part of 2004 led to a reduction in banks' net interest income.

#### Improved financial strength globally

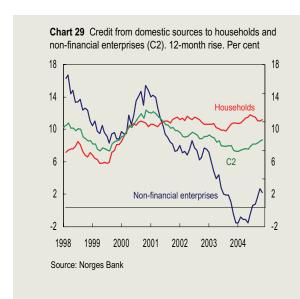
Financial strength improved globally in 2004. Growth in the world economy was high. Households and enterprises are benefiting from higher income and low interest rates. The international banking industry achieved solid results and was able to strengthen its financial position.

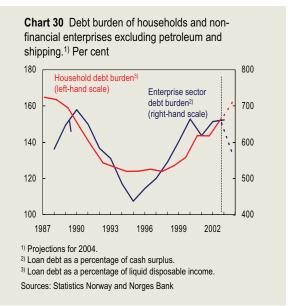
Securities income contributed to the banking industry's solid performance. Equity prices in the US, Europe and Japan rose by between 9 and 10% during 2004. Prices in the Norwegian equity market, measured by the OBX index, rose by as much as 31% in 2004. The upswing was broad-based, and enterprises across a wide range of industries experienced substantial price gains. High oil prices, solid corporate earnings and a very low interest rate level were important contributing factors.

At end-2004, 10-year bond yields in the US were at the same level as at the beginning of the year, while in Germany and Norway they were about half a percentage point lower than at the beginning of the year. Lower long-term interest rates may indicate that there are prospects of weaker growth.









#### Continued high growth in household debt

Norwegian household debt is still growing rapidly, and more rapidly than household income. Twelve-month growth hovered around 11% through 2004, and was slightly higher at the end of the year than at the beginning. The high rate of household debt accumulation led to a sharp rise in the household debt burden (gross debt in relation to liquid disposable income) in 2004. The value of household assets also increased sharply over the past year. Household financial assets and housing wealth now exceed household debt by 35% and 50%, respectively.

Assets and debt are unequally distributed among different groups of households. The debt of low- and medium-income households (Deciles 1-6) has increased most in relation to income in the past 10-15 years. These households have relatively high financial reserves, however. There are considerable differences between employees, self-employed and pensioners. The group comprising employees, which accounts for about 60% of households, has lower financial reserves and a higher debt burden than households as a whole. This applies to all income groups, but particularly employees with low and middle income (Decile 1-6). This is because a large number of pensioners and some self-employed with considerable assets in relation to debt are included in these income groups.

House prices rose markedly in 2004. This led to a rise in housing construction, which in isolation should contribute to dampening the rise in house prices. House prices have a major impact on household gross debt and wealth. Household debt is generally secured

by mortgage, making banks vulnerable in the event of a sharp fall in house prices. Norges Bank has estimated a model of house prices. Interest rates, housing construction, unemployment and household income are the most important explanatory factors behind house prices. The analysis indicates that house prices react quickly and sharply to changes in interest rates. Thus, a considerable portion of house price inflation since May 2003 may be explained by the fall in interest rates in the last two years.

An effect of low interest rates is that households have a low interest burden despite high debt growth. The risk of higher losses on loans to households is therefore considered to be relatively low in the short term. However, high debt growth and historically high debt burdens make households vulnerable to economic disturbances.

## Improved corporate profitability

Lower wage growth, strong productivity growth in a number of industries, low interest rates and rising demand have improved the profitability of Norwegian enterprises. Improved corporate profitability resulted in a marked decline in bankruptcy figures in 2004.

The accounts figures of limited companies showed higher profitability in 2003 than in 2002, even though profitability in some industries weakened, for example in fish farming. Although dividend payments were high also in 2003, higher earnings and low debt growth contributed to a rise in the equity ratio for the enterprise sector as a whole from 2002 to 2003.

<sup>11</sup> The model is described in the article "What drives house prices?" by Dag Henning Jacobsen and Bjørn E. Naug, published in Economic Bulletin 1/05

Norges Bank has used the SEBRA model to estimate the probability of an enterprise going bankrupt within three years on the basis of accounts data for 2003. At end-2003, bankruptcy probabilities were a little lower than one year earlier. Bankruptcy probabilities fell most for the enterprises with the highest risk exposure.

Enterprise debt growth was negative at the beginning of the year, but increased investment contributed to a rise through the autumn. At end-December 2004, 12-month growth in corporate domestic debt was 3.7%. Sound profitability and low investment activity compared with the cash flow from operating activities have reduced enterprises' debt burden (debt in relation to cash surplus). The low interest rate level is pushing down the interest burden. Calculations indicate that both debt and interest burdens will decline substantially from 2003 to 2004, and then increase again in 2006 and 2007. On balance, the credit risk associated with loans to enterprises is assessed as relatively low, and somewhat lower at end-2004 than one year previously.

## Payment systems and means of payment

#### Norges Bank's tasks and responsibilities

Section 1 of the Norges Bank Act states that the Bank shall: "...promote an efficient payment system domestically as well as vis-à-vis other countries...". The Payment Systems Act also charges Norges Bank with a special responsibility for authorising and supervising systems for clearing and settlement of interbank payment transactions. Thus, Norges Bank has both general oversight responsibility for the payment system as a whole, as stipulated in the Norges Bank Act, and responsibility for authorising those parts of the payment system that carry out interbank clearing and settlement.

Central banks have increased their focus on payment systems, both because of the central role these systems play in the financial infrastructure, and because they are a channel for monetary policy instruments. Norges Bank works to promote more efficient and robust payment systems by:



- settling interbank claims and debts via the banks' accounts with Norges Bank.
- monitoring financial infrastructure through authorising and overseeing interbank systems pursuant to the Payment Systems Act, including monitoring banks' risk in connection with participation in clearing and settlement systems.
- publishing annual reports which identify developments in the use of payment instruments in Norway and compare the efficiency and security of the Norwegian payment system with developments in other countries
- preparing the ground for connectivity with international payment arrangements
- contributing to robust contingency solutions for dealing with any problems when they arise.

#### Norges Bank's settlement system

Interbank claims and liabilities arise as a result of banks' financial transactions, payment services and customers' positions in cash settlement of trading in equities, bonds and derivatives. Final settlement of these positions is made through entries in the banks' accounts in Norges Bank. Settlement in central bank money takes place without credit or liquidity risk. To contribute to the efficiency of these settlements, banks can take up loans in Norges Bank against collateral in the form of securities. A settlement system that functions smoothly is important for promoting financial stability. At the same time, the settlement system provides the central bank with an effective channel for transmitting interest rate signals in monetary policy.

Since 1 July 2001, banks have paid for Norges Bank's settlement services. The price structure consists of three parts: a connection fee for new participants, annual fees for participation in the various parts of the settlement system and a unit price for transactions that are sent to Norges Bank for settlement. Prices are normally adjusted on 1 January each year, and announced by means of a circular from Norges Bank. Since 2001, prices have been increased gradually each year, and the aim is to reach a price level in 2006 that fully reflects the costs incurred by Norges Bank in producing settlement services.

Norges Bank is responsible for managing government liquidity, and does so through the central government's consolidated account system, which forms an integral part of Norges Bank's settlement system. The central government's liquid assets are placed in the accounts in Norges Bank at the end of the day. The actual payment services for the central government were supplied by DnB NOR Bank and Nordea Bank Norge in 2004.

In May 2004 a revised agreement regarding the central government consolidated account arrangement was signed by Norges Bank and the Ministry of Finance, and in November 2004 a revised agreement concerning government debt and liquidity management was signed. Like the banks, the central government, represented by the Ministry of Finance, pays Norges Bank for the services Norges Bank performs for the government, including services from Norges Bank's settlement system. As from 2006, the prices for these services should also fully reflect Norges Bank's costs in producing them.

In June 2003 Norges Bank signed an agreement with ErgoIntegration AS concerning the operation and administration of IT systems associated with Norges Bank's settlement system. The agreement runs for three years from 1 September 2003, with an option for Norges Bank to extend the agreement by a further three years. In March 2004, the bulk of the IT systems were transferred for operation on the hardware of ErgoIntegration AS. Following a trial period, which expired on 1 September 2004, the provisions of the agreement concerning the operation and administration of the IT systems have fully regulated the relationship between Norges Bank, as customer, and ErgoIntegration AS, as supplier.

One of the reasons for outsourcing has been to reduce the vulnerability of operating and administrating the IT systems for Norges Bank's settlement system by linking them to a larger IT environment. Since the outsourcing, IT operations have been of essentially the same quality as in recent years with operations in Norges Bank.

In August 2004, Norges Bank prepared for the procurement of new system solutions for the settlement system. The reason for this was that the tasks handled by Norges Bank's settlement system have changed since the existing systems solutions were developed, and these systems are nearing the end of their technological life. The work of renewing the settlement system will be based on the following principles: The new system must be a standard system, communication with other systems must take place by means of a very limited number of standardised, internationally recognised interfaces, and it must be possible to link the system to existing and future international settlement systems without an overly extensive adaptation of the systems.

The procurement of new systems will take place through tendering from potential suppliers in accordance with the Public Procurement Act. The work on formulating specifications for the procurement will proceed until spring 2005. Negotiations will then be

conducted with potential suppliers. The aim is that new systems solutions should be in operation in 2007 at the latest.

In the work on upgrading the settlement system, Norges Bank has been in close contact with external users of the systems in question, including the banking industry and the Ministry of Finance. Norges Bank is also in contact with other central banks that have procured, or are in the process of procuring new settlement systems, including Sveriges Riksbank.

#### Risk in payment systems

Participating in payment systems can expose banks to credit and liquidity risk. Measures to reduce the risk of solvency and liquidity problems spreading among banks participating in the payment system form a central part of Norges Bank's work to make its settlement system more efficient and secure. Credit risk arises primarily if banks credit customers before they receive settlement for a payment transaction themselves. In recent years, banks have switched to crediting customer accounts after they have received settlement, and there is therefore little credit risk in the Norwegian system. Liquidity risk is linked to a shortage of liquidity if settlement is not executed as expected. In 2004, liquidity for carrying out settlements has generally been adequate, and the overall level of liquidity risk has been low.

There may also be other types of risk, such as legal risk, operational risk and foreign exchange settlement risk, in a payment system. Legal risk arises in the event of uncertainties in connection with rights and commitments of participants in the system, for example in connection with a participant's insolvency. Since the entry into force of the Payment Systems Act and the adjustments made to satisfy the authorisation requirements, Norges Bank regards the legal risk associated with the Norwegian payment system as very limited. Operational risk can arise as a result of deficient procedures, malfunctions in IT systems and telecommunications systems, breaches of rules, fraud, fire, etc. Such incidents may entail costs for participants and cause disruptions in the financial infrastructure. It is the responsibility of the individual system operators to ensure that routines, back-up solutions, expertise and contingency plans are in place to deal effectively with operational risk. Norges Bank continuously assesses the need for measures in relation to systems that do not place sufficient emphasis on operational risk, and works closely with the Financial Supervisory Authority to this end.

Foreign exchange settlement risk may arise if foreign exchange transactions are carried out at different times in different settlement systems, for example in different countries. There is a risk that one of the participants may deliver the sold currency without receiving quid quo pro, for example because the other party is not able to deliver at the agreed time or at all. If one party does not fulfil its commitment, the counterparty can at worst incur a loss equivalent to the principal sum involved in the transaction. In recent years, central banks have endeavoured to reduce the risk associated with banks' participation in international foreign exchange transactions. The establishment of an international multi-currency settlement system (CLS), with inclusion of NOK and the participation of Norwegian banks, has substantially reduced the credit risk associated with such transactions.

The Act relating to the Provision of Financial Collateral was adopted on 26 March 2004 and entered into force on 1 July 2004. The Act is based on EU Directive 2002/47/EC and regulates bankruptcy and collateral issues. Among other things, the Act provides for immediate realisation of collateral in the event of bankruptcy. Norges Bank lends substantial amounts against collateral to banks that participate in Norges Bank's settlement system (NBO). Uncertainty regarding the time of collateral realisation has been a source of risk in connection with these loans. This is because the value of the collateral may change from the time when a bank is placed in receivership until the time of realisation. It is therefore of great importance to Norges Bank that the Act provides for immediate realisation of collateral. At present, banks' access to loans is based on the nominal value of the collateral (securities) they pledge. However, the right to realise collateral immediately implies that it is advisable to base the amounts banks can lend on the market value of their collateral. A switch to market value presupposes both a change in Norges Bank's rules and further development of Norges Bank's systems. Work on both has commenced, and the switch to market value will probably take place in the last quarter of 2005. The switch to market value and adjustment of the regulations will reduce Norges Bank's risk in connection with banks' loans.

## Authorisation and supervision of interbank systems

Act no. 95 of 17 December 1999 relating to Payment Systems, etc. entered into force on 14 April 2000. The objective of the Act is to ensure that interbank systems are designed with a view to promoting financial stability. The Act has divided the responsibility for payment systems between Norges Bank and Kredittilsynet: Norges Bank is responsible for authorising and supervising systems for clearing and settlement of interbank payment transactions, while systems for payment services, for example payment cards and electronic giros, report to Kredittilsynet. A separate document describes



routines for cooperation, reporting and notification between Norges Bank and Kredittilsynet in this area.

The decision as to whether an interbank system should be subject to authorisation will be based primarily on an assessment of system aspects which are important to risk as a result of liquidity and solvency problems. Norges Bank may grant exemptions from the authorisation requirement for systems whose operations are so limited in scope that they are assumed to have no significant effect on financial stability. The Norwegian Interbank Clearing System (NICS), Den norske Bank and Union Bank of Norway were granted authorisation in 2001 and were subject to supervision. The authorised operators shall report any significant changes in ownership, organisation or operations, as well as participation, turnover and exposures in the interbank system and the results of annual tests of contingency plans. When these exercises are conducted, it must be tested in particular whether downtime in connection with operational disruptions is within the agreed limits.

Authorisation work in 2004 has been continued along the same lines as in previous years. Systems stability is followed up by means of the reports on operations submitted by the authorised operators. In addition, there has been regular contact and regular supervisory meetings have been held with the authorised operators. Den norske Bank and Gjensidige NOR Sparebank merged in January 2004. DnB NOR plans to coordinate the two systems, but for the present the respective interbank systems are being operated as two independent systems, each with its own authorisation.

In 2004, Norges Bank expanded the reporting requirements applying to the authorised operators. These requirements are:

- A test programme shall be prepared for contingency plans covering all important elements of the interbank system. The testing and follow-up shall be described in the test report.
- An annual risk and vulnerability analysis shall be prepared. It shall contain an identification and assessment of sources of operational risk. Control measures shall be established for the sources of risk. These measures shall be documented.
- There shall also be procedures for making changes, which ensure that all changes concerning the interbank system are approved by the responsible authority before the changes are applied. This shall be documented, and an auditor shall certify compliance with the procedures for handling changes and nonconformities.

## Norwegian infrastructure and international recommendations

In 2004, a joint-project group comprising Kredittilsynet, the Norwegian Central Securities Depository and Norges Bank considered whether the Norwegian securities settlement system complies with recommendations from central banks and supervisory authorities in the G-10 countries. The conclusion of the project group was that the system is broadly in line with the recommendations. In order to fulfil the recommendation regarding oversight and supervision, it was



necessary to draw up an official document that deals with the division of responsibility and roles between Kredittilsynet and Norges Bank with respect to securities settlement. This is published on the institutions' websites. The main points of the document are:

- Kredittilsynet shall supervise and may approve securities settlement systems pursuant to Section 4-1 of the Payment Systems Act (concerning legal protection and security rules for settlement agreements in bankruptcy situations);
- Norges Bank regularly assesses the importance of securities settlements for financial stability, is a settlement bank and accepts a number of securities which are settled in the securities settlement as collateral for loans.

Norges Bank and Kredittilsynet have regular meetings, exchange information on events and engage in consultation before making important decisions of significance for securities settlement systems.

# Developments in the use of various means of payment and payment instruments

Over a number of years, there has been a trend in Norway towards increased use of electronic payment services and reduced use of paper-based services. Electronic payment instruments are more cost-effective than paper-based instruments. Increased use of electronic instruments therefore reduces the costs of the payment system for the overall economy.

Norges Bank publishes the *Annual Report on Payment Systems* each year. The report is an important part of Norges Bank's oversight of the payment system.

The report provides an annual update of developments and prices in the payment system. The principle operators in the Norwegian payment system supply the data on which the report is based. Because of the large quantity of statistics that has to be gathered and processed, the report is not published until April or May each year. The information below therefore comes from the annual report for 2003.

At the end of 2003, the number of agreements concerning giro transactions over the internet had exceeded 2.5 million, a 32% increase compared with end-2002. The number of giro payments over the Internet rose by 18% in 2003, reaching 96 million. Mail giros are still a popular service. The number of transactions fell by 16% to 52 million, however, and use of this service has been halved in the last four years. A total of 38 million giros were paid at the counter at bank branches in 2003, 7 million less than in 2002. Norwegians have many payment cards, and there is hardly any country in the world that can report more frequent use of these cards. 702 million card transactions in connection with goods purchases and cash withdrawals were registered in Norway in 2003, an increase of 12% on the previous year. On average, payment cards were used for 130 purchases of goods per inhabitant in 2003 for a total value of NOK 270 billion. At the end of 2003, there were more than 90 000 payment terminals in Norway.

Banks' average prices for electronic payment services have generally remained unchanged from 2003 to 2004, while prices for paper-based payment services have increased. Prices largely reflect what it costs to produce these services, thus providing customers with an incentive to choose the most cost-effective services.

This is important for achieving an efficient payment system in Norway. Loyalty schemes and free services may disturb price signals.

#### **International payments**

Many challenges remain before cross-border payment transactions can be completed as quickly and costeffectively as domestic transactions. Transfer time is long and costs are high. In recent years, the need for efficient cross-border payments has received increased attention, particularly in connection with the work towards an integrated market for payment services in Europe. Efficient cross-border payment systems are considered to be important for realising the advantages of the internal market and the development of such systems is a natural consequence of the establishment of EMU and the introduction of euro banknotes and coins. Legislation in Europe is being further developed to improve conditions for cross-border payment services and the European banking industry is working on measures to improve efficiency.

In November 2003, the EU Regulation on Cross-Border Payments in euros was incorporated in the annex to the EEA Agreement. In 2004, it was decided to incorporate the regulation directly in the Act relating to Financial Agreements. The regulation was implemented in Norwegian law with effect from 1 January 2005. To make it possible for Norwegian and European banks to comply with the requirement of equal fees for euro payments to and from Norway without overly high costs, Norwegians banks requested a link with the pan-European clearing system, STEP 2, which was developed to execute cross-border euro payments at the

lowest possible cost. STEP 2 is operated by the Euro Banking Association, which is owned by a number of European banks. In November 2004 it was decided that Norwegian banks can take part in STEP 2.

## Contingency planning in the financial sector

Norges Bank's work on contingency plans for the financial sector falls within its responsibility for promoting an efficient payment system, contributing to financial stability and monitoring the Civil Defence and Emergency Planning System in the financial sector. This applies internally to the Bank's own systems, including Norges Bank's settlement system, and externally to the infrastructure of the financial sector and the discharging of Norges Bank's responsibilities under the Bank Guarantee Act.

Each financial sector participant has an independent responsibility to reduce the operational risk in its own activities. This responsibility includes developing stable operating solutions, sound back-up and contingency plans and a robust financial infrastructure.

The Contingency Committee for Financial Infrastruc-ture was established in October 2000 to help optimise the coordination of contingency work among financial sector participants. The following institutions and operators are represented on the committee: Kredittilsynet, the Norwegian Financial Services Association, the Norwegian Association of Savings Banks, the Banks' Payment and Central Clearing House (Bankenes Betalingssentral AS), EDB Business Partner ASA and Verdipapirsentralen ASA (the Norwegian Central Securities Depository). The Ministry of Finance participates in the committee as an observer.

## Collection of articles on the banking crisis

The most recent Norwegian banking crisis ended just over ten years ago. Although a considerable amount has been written about this period, it may be useful to consider the crisis with the benefit of hindsight. Nor has any complete but reasonably brief account of the crisis been written in English. This is the background for the publication of "The Norwegian Banking Crisis", Norges Bank's *Occasional Papers* no. 33, edited by Thorvald G. Moe, Jon A. Solheim and Bent Vale. The publication contains six chapters and two appendices written by various authors:

- Bent Vale provides an overview of the unfolding of the crisis, and discusses key aspects concerning the cause, scope, solution and costs of the crisis.
- Erling Steigum discusses the macroeconomic causes of the crisis, focusing on the deregulation of financial markets and economic policy prior to the crisis.
- Knut Sandal compares the solutions to and the fiscal costs of the banking crises in Norway, Sweden and Finland in the 1990s.
- Christoph Schwierz discusses methods for estimating the real economic costs of banking crises, and presents cost estimates for the Nordic banking crises.
- Karsten R. Gerdrup compares the causes of the most recent Norwegian banking crisis with the causes of the crises in 1899-1905 and 1920-28.
- Hans Petter Wilse provides an overview of the solutions to the banking crisis and the handling of government ownership in the largest commercial banks.



The committee also has contacts with a number of other operators, including DnB Nor Bank, Nordea Bank Norge, the Norwegian Post and Telecommunication Authority and the Norwegian Water Resources and Energy Directorate.

Norges Bank chairs the committee and provides a secretariat. The Committee's primary tasks are i) to establish and coordinate measures to prevent and resolve crises that may result in major disruptions in the financial infrastructure and ii) to coordinate contingency work in the financial sector, including the Civil Defence and Emergency Planning System.

In 2004 the Contingency Committee for Financial Infrastructure discussed matters relating to the operating stability and vulnerability of the financial infrastructure and reviewed non-conformity incidents and the testing of back-up solutions. The Committee has conducted a general contingency exercise on handling a situation with a serious disruption in telecommunications. At the initiative of the Committee, an appraisal is being conducted to determine which operators and functions in the financial infrastructure should have high priority access to electricity supply and telecommunications in an emergency situation. The Committee has also been presented with relevant problems as to vulnerability in the area of data communications.

## Banknotes and coins

#### Norges Bank's responsibility

Under the Norges Bank Act, Norges Bank is given responsibility of issuing notes and coins. This involves responsibility for the properties of notes and coins, such as denominations and design, and for ensuring that a sufficient quantity is produced to cover needs. The responsibility of issuer also involves ensuring that cash is made available. Banks order cash from Norges Bank and deliver surplus cash to Norges Bank. The banks are responsible for supplying cash to the public.

#### Notes and coins in circulation

Following an increase in the value of cash in circulation through the 1990s, there was a slight decline from 2000 and up to 2003. This trend was interrupted in 2004, when the value of cash in circulation increased by NOK 2.1bn. In 2004, the value of notes and coin in circulation came to NOK 43.7bn.

The average value of notes in circulation amounted to NOK 39.4bn in 2004, just over 5% higher than the previous year. 1000-krone notes accounted for 60% of notes in circulation in 2004, an increase on the previous year after several years of decline. 500-, 200- and 50-krone notes are still showing an increase, due to the use of 500- and 200-krone notes in ATMs, and an increased need for change.

The annual average for the value of coins in circulation was NOK 4.3bn in 2004, which was 4% higher than in 2003. The three-year decline in the circulation of 10-krone coins levelled off in 2004. The circulation of the other denominations is increasing steadily. The 20-krone coin is increasing its share of coins in circulation at the expense of the 10-krone coin, and now has a share of almost 40%.

## **Commemorative coins**

In 2004, two commemorative coins were issued, a gold and a silver coin in commemoration of the centenary

Table 2. Norges Bank's cash-handling costs (In millions of NOK)

	2002	2003	2004
Total costs for production of notes NB Printing Works *	49.3	45.0	48.7
Costs for purchase of coins	42.3	38.1	26.4
Total production costs	91.6	83.1	75.1
Costs of central administration and transport *	15.4	15.3	17.6
Purchase of external depot and processing services	50.9	51.5	49.1
Total distribution costs	66.3	66.8	66.7
Total costs for production and distribution of notes and coins	157.9	149.9	141.8

<sup>\*</sup> The figures in the table do not include rent and the share of central service charges

of the dissolution of union between Norway and Sweden. The coins are the second pair in a series of six coins commemorating the dissolution of the union. The first pair was issued in 2003 and the last pair will be issued in 2005. Norges Bank also issued a 20-krone circulation coin with special features on the occasion of the 150th anniversary of Norwegian Railways.

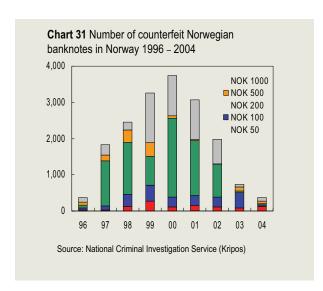
#### **Counterfeit money**

From the mid-1990s, the number of counterfeit notes confiscated increased annually to a peak of 3736 in 2000. This is attributable to the spread of colour copying machines, scanners and printers. In 2004, the upgrade of the low denomination of Series VII was completed with the issue of an upgraded 50-krone note. The number of counterfeit notes has fallen since the upgrading, and the level is now 90% lower than in 2000 (see Chart 31). This indicates that the metallic elements in the upgraded notes have been effective. In addition to the figures for 2004 in Chart 31, 146 counterfeit 1000-krone notes were seized in France.

#### Organisation of cash handling

Only Norges Bank can issue notes and coins, i.e. act as debtor for the notes and coins issued. The other tasks associated with the production and distribution of notes and coins may be performed by others, but Norges Bank must ensure that they are performed, and that their performance is in line with central bank requirements.

A limited company was established on 1 July 2001 to handle cash – Norsk Kontantservice AS (NOKAS). Norges Bank's former regional branches and cash-handling activities were incorporated into this company.



Today, Norges Bank owns 33.5% of the company, while the remainder is owned by private banks. The company performs services associated with cash for Norges Bank and private banks. Norges Bank buys services associated with central bank responsibilities, and services associated with the management of central bank depots. In 2004, there were central bank depots at NOKAS departments in Bergen, Bodø, Kristiansand, Larvik, Lillehammer, Oslo, Stavanger, Tromsø and Trondheim. In addition, Norges Bank had depots in Hammerfest and Vardø, which were managed on behalf of the Bank by Sparebanken Nord-Norge.

Norges Bank assessed its role in the supply of cash in 2004 with a view to optimising the division of responsibility among the various participants, and achieving a clearer distinction between different types of services. To achieve this, changes were made in the conditions for banks' deposits and withdrawal of cash with effect from 1 January 2005. In addition, the depot structure and alternative depot models were examined. Cooperation was initiated with banks in Finnmark with a view to finding alternative solutions for the supply of cash in the county. The central bank depot in Vardø was closed with effect from 1 January 2005, and the depot in Hammerfest will be closed in the first quarter of 2005. A proposal for further changes in the depot structure was sent to the banking associations for comment in December 2004.

## **Expenses**

The costs associated with Norges Bank's role as issuer consist of production costs for new notes and coins and the costs of distribution to banks. The costs of maintaining the necessary quality involve the destruction of damaged, worn and invalid notes and coins. Distribution involves transport to Norges Bank's depots, storage and providing services in connection with delivery to and receipt from banks.

Table 2 shows developments in Norges Bank's cash handling costs from 2002 to 2004. Production costs will vary from year to year, due in part to fluctuations in production volumes and variations in the denominations produced. Replacements in note and coin series may lead to substantial variations in volumes. The more sophisticated security features in the newest note series have also increased the unit costs of these notes in relation to earlier series.

## **Chapter 3. Investment management**

At the end of 2004, Norges Bank managed assets worth NOK 1 243bn in international capital markets. The bulk of this was the Government Petroleum Fund, 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's international reserves comprise foreign exchange reserves and claims on the International Monetary Fund (IMF). The foreign exchange reserves account for more than 95% of total international reserves. Guidelines for management and performance reports for the foreign exchange reserves and various funds managed by the Bank are published on Norges Bank's website.

#### Foreign exchange reserves

The market value of the foreign exchange reserves, after deductions for borrowing in foreign currency, was NOK 211.4bn at the end of 2004. The foreign exchange reserves shall be available for interventions in the foreign exchange market in connection with the implementation of monetary policy or in the interest of 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 foreign exchange purchases for subsequent transfer to the Petroleum Fund.

The money market portfolio is invested in short-term money market instruments, primarily secured lending to approved international banks. The portfolio is to be used for current transactions in the foreign exchange reserves and may vary in size from NOK 2bn to NOK 7bn.<sup>12</sup> The money market portfolio amounted to NOK 6.2bn at the end of 2004.

The investment portfolio accounts for the largest portion of foreign exchange reserves, and at end-2004 amounted to NOK 185.2bn. In 2004, NOK 35.4bn in new capital was transferred to the portfolio from the buffer portfolio (see discussion below). In addition, revenues from the sale of Norges Bank's gold reserves were also transferred to the investment portfolio (see discussion below). The portfolio has a wide geographic spread and the duration (interest rate risk) on the fixed income portion is the same as the duration in the bond markets in question. The management objective is a high return in the long term, but the portfolio may also be used for monetary policy purposes or in the interest of financial stability if this is considered necessary.

The main strategy for both the money market portfolio and the investment 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 sub-markets or currencies. The benchmark portfolio provides the basis for managing and monitoring risk exposure and for evaluating the actual return achieved in reserves management.

The return on the money market portfolio in 2004 was 1.79% measured in terms of the benchmark currency basket. Measured in NOK the return was -3.75%. The difference is due to the appreciation of the Norwegian krone against the benchmark currency basket in 2004. The portfolio outperformed the benchmark by 0.15%.

In 2002, the Executive Board decided to increase the equity portion in the investment portfolio and to invest in securities from other borrowing sectors in addition to government bonds. This change has been implemented gradually and was completed in November 2004. The equity portion of the investment portfolio is now 30%. In 2004, the Executive Board decided to include inflation-linked bonds in the fixed income portfolio and to include emerging markets in the equity portfolio. These changes were also implemented during the year.

Holdings in any one company are limited to 3% of the share capital. In December, the Executive Board approved joint guidelines for the exercise of ownership rights for equities in the foreign exchange reserves and in the Petroleum Fund.

Norges Bank's own portfolio managers manage approximately 86% of the equity portfolio and 92% of the fixed income portfolio in the investment portfolio. The remainder is managed by external managers.

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. If the risk limit is fully utilised, the actual difference between the returns on the benchmark and the actual portfolio is expected to be between -1.5 and +1.5 percentage points in two out of three years on average.

The return on the investment portfolio for 2004 was 7.75% measured in terms of the currency basket that corresponds to the composition of the benchmark portfolio. Measured in NOK, the return was 2.60%. The difference is due to the appreciation of the Norwegian krone in relation to the benchmark portfolio's currency basket. After adjusting the benchmark return, mainly

<sup>12</sup> On 5 January 2004, the Governor of Norges Bank granted an exemption from the upper limit when the income from the sale of Norges Bank's gold reserves was temporarily placed in the money market portfolio.

for tax on dividends, the portfolio outperformed the benchmark by 0.08 percentage point.

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. At times, Norges Bank has also purchased foreign currency directly in the market in order to cover the amount that is to be allocated to the Government Petroleum Fund. Norges Bank's foreign exchange purchases in the market were terminated on 21 May 2003 and resumed on 1 July 2004. In both 2002 and 2003, the inflow of foreign currency to the buffer portfolio has been larger than the transfers to the Petroleum Fund, and the buffer portfolio became larger than necessary. From 2004, the system for foreign exchange payments from the SDFI to Norges Bank has been changed to ensure that the supply of foreign exchange to the buffer portfolio is in accordance with the buildup of the Petroleum Fund. The new system reduces the need for having a large buffer portfolio, as was the case at the beginning of 2004.

Norges Bank has decided therefore to reduce the size of the buffer portfolio. In 2004, the portfolio has been reduced gradually by transferring capital to the investment portfolio. The management of the buffer portfolio has also been simplified. In the Revised National Budget for 2004, the Ministry of Finance has concurred with Norges Bank that costs and market risk related to the purchase of securities for the Petroleum Fund should be borne by the Petroleum Fund and not Norges Bank. Therefore, only cash transfers are now made to the Petroleum Fund. As a result, the buffer portfolio is only invested in money market instruments. At the end of 2004, the size of the portfolio was NOK 21.6bn. The return on the buffer portfolio, measured in NOK, was -6.40% in 2004.

## The Government Petroleum Fund

Norges Bank is responsible for the operational management of the Government Petroleum Fund 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 2004, the market value of the Petroleum Fund's foreign exchange portfolio was NOK 1 016.4bn, before deduction of Norges Bank's management fees. In 2004, the Ministry of Finance transferred a total of NOK 138.2bn to the Petroleum Fund, with a deduction for management fees to Norges Bank for 2003. As a general rule, the transfers are made at the end of each month.

The Ministry of Finance has established a strategic

benchmark portfolio of equities and fixed income instruments. The benchmark portfolio is composed of equity indices for 27 countries and of fixed income indices in the currencies of 21 countries. This reflects the delegating authority's investment strategy for the Petroleum Fund. 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 defined limits for the actual portfolio's deviation from the benchmark portfolio.

The regulation was changed in 2004. Effective January 2004, the Petroleum Fund's country list was expanded to include more emerging markets. The Ministry of Finance decided that South Africa should be included and Turkey should be removed from the benchmark portfolio for equities from 1 February 2004. Turkey is still part of the Fund's investment universe. In November 2004, the Ministry of Finance approved new ethical guidelines for the Petroleum Fund's investments. The guidelines were based on the recommendations from the government-appointed Graver Committee submitted in June 2003 and the subsequent discussion in the Revised National Budget for 2004. The ethical standards for the Petroleum Fund shall be promoted using the following three mechanisms: exercise of ownership rights, negative screening and the exclusion of companies. Norges Bank is responsible for the exercise of ownership rights in accordance with the guidelines from the Ministry of Finance. The Executive Board has approved Norges Bank's principles for corporate governance.

The Environmental Fund was established in 2001 as a separate equity portfolio in the Petroleum Fund. When the new ethical guidelines were adopted, the Ministry of Finance decided that the Environmental Fund's investments should be transferred to the Petroleum Fund's general equity portfolio.

In 2004, the return on the Government Petroleum Fund was 8.94% 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 on the Petroleum Fund was 3.93%. Measured in terms of the Fund's currency basket, the return on the Petroleum Fund's equity portfolio was 13.00% while the return on the fixed income portfolio was 6.10%. Until it was discontinued on 1 December 2004, the separate Environmental Fund generated a return of 8.70% measured in terms of the benchmark portfolio's currency basket.

Measured over the eight calendar years since capital was first transferred to the Petroleum Fund's international portfolio, the annual nominal return has been 5.8%

measured in terms of the Fund's basket of currencies. The net real return after deductions for management costs has been 4.0% annually.

The actual return in 2004 was 0.53 percentage point higher than the return on the benchmark. The excess return on the fixed income portfolio was 0.35 percentage point and the excess return on the equity portfolio was 0.78 percentage point.

Norges Bank's wealth generation through management may be calculated by comparing the actual return with the return that could have been achieved by simply replicating the benchmark portfolio. Both costs and returns have been higher than would have been the case with passive management. In 2004, net wealth generation calculated in this way was 0.49 percentage point, or NOK 4.5bn. Over the last seven years, total wealth generation has been NOK 12.7bn.

A more detailed presentation of the management of the Government Petroleum Fund in 2004 is available in the *Government Petroleum Fund Annual Report*.

#### **Government Petroleum Insurance Fund**

The market value of the Government Petroleum Insurance Fund at the end of 2004 was NOK 13.5bn. The Fund is owned by the Ministry of Petroleum and Energy and its purpose is to provide support for the government's role as self-insurer of holdings in petroleum activities. The Fund is managed by Norges Bank. In 2004, the return was 5.64% measured in terms of the currency basket corresponding to the composition of the Fund's benchmark portfolio. Measured in NOK, the return was -0.07%. This was 0.20 percentage point higher than the return on the benchmark portfolio.

### Gold and claims on the IMF

International reserves have also included Norges Bank's gold reserves and claims on the International Monetary Fund (IMF).

At the beginning of 2004, Norges Bank's total gold reserves amounted to just under 37 tons, of which 33.5 tons comprised gold bars deposited in the Bank of England, half of which were on loan to other financial institutions. In addition, Norges Bank had a collection of gold coins of historical value and seven gold bars used for exhibitions.

In 2003, the Executive Board decided to sell the gold bars. Excluded from the sale were the seven gold bars that have been used for exhibition purposes and a large number of gold coins that were transported to England at the outbreak of war in Norway in 1940. The reason for the sale was that the gold amounted to only a little more than 1% of Norges Bank's international reserves. Therefore, the gold made little contribution to spreading the risk in the reserves. In addition, the historic return

on gold has been relatively low.

The sale of gold was completed in the first quarter of 2004. A total of 1 075 046.298 ounces of gold were sold.<sup>13</sup> The average price was USD 416.18 per ounce. Revenues from the sale of gold totalled USD 447.4m, which is equivalent to approximately NOK 3.1bn. The average price achieved by Norges Bank was approximately USD 8 higher than the average of the official prices quoted in London in the first quarter of 2004 or USD 408.41 per ounce.

The income from the sale of gold was transferred to the money market portfolio temporarily until the amount was transferred to the investment portfolio at the end of May 2004. The remainder of the gold reserves will no longer be part of Norges Bank's international reserves

Claims on the IMF comprise SDR accounts (Special Drawing Rights), reserve positions in the IMF and loans to the IMF (Poverty Reduction and Growth Facility- PRGF). Norges Bank's aim is to keep the SDR reserves at between SDR 200m and SDR 300m. At end-2004, holdings amounted to SDR 232m, equivalent to NOK 2 181m. Reserves in the IMF amounted to NOK 5 250m. Norges Bank's share of the IMF Poverty Reduction and Growth Facility (PRGF) accounted for almost SDR 57m, equivalent to NOK 535m.

#### Research

In addition to managing the portfolios, Norges Bank also conducts studies and research in the area of investment management. The purpose of the research work is to provide the Executive Board with a sound basis for decision-making when setting the framework conditions for management of the foreign exchange reserves. Thorough analyses are also an important precondition for providing sound advice to the Ministry of Finance and the Ministry of Petroleum and Energy concerning investment strategies and management regimes for the Government Petroleum Fund and the Government Petroleum Insurance Fund. The relationship between the Ministry of Finance and Norges Bank in the advisory work connected to the choice of strategy for the Petroleum Fund has been regulated in a separate agreement effective from 30 June 2004. The agreement specifies, inter alia, how costs for advisory work are to be distributed between the two institutions. Norges Bank's academic research connected with investment management is described in Chapter 4.

<sup>13</sup> A troy ounce is equal to 31.1034807 grams of fine gold.

# Chapter 4. Research and international cooperation

## Research

Research at Norges Bank provides part of the basis for the Bank's decisions. Research is carried out in the fields of monetary policy, financial stability and investment management. 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 and investment management focuses on credit markets, the behaviour of financial institutions, portfolio management and the functioning of equity markets. Research activities at Norges Bank are presented on the Bank's website. 14

It is the Bank's aim that research shall reflect Norwegian economic conditions, have a firm basis in the international and Norwegian research community and maintain the standard required for publication in international or national journals where researchers' articles are reviewed by their peers in the field. Employees of Norges Bank published 11 articles in peer-refereed journals in 2004. In the past three years, Norges Bank employees have published 11 articles on average per year in peer-refereed journals and books. Most of these have been printed in the Bank's series of Reprints. (See box on papers in external publications.)

# Papers in external publications in 2004

Akram, Farooq: Oil prices and exchange rates – Norwegian evidence, *Econometric Journal*, vol. 7, pp. 476–504.

Bjønnes, Geir H., Dagfinn Rime and Haakon O.Aa. Solheim: The role of foreign speculators during speculative attacks: the case of 1998. In *Recent developments on exchange rates*, edited by Sandrine Lardic and Valérie Mignon, Palgrave.

Bårdsen, Gunnar, Eilev S. Jansen and Ragnar Nymoen: Econometric evaluation of the New Keynesian Phillips curve. *Oxford Bulletin of Economics and Statistics*, 66 (supplement), pp. 671–686.

Bårdsen, Gunnar, Stan Hurn and Kenneth Lindsay: Linearizations and equilibrium correction models, *Studies in Nonlinear Dynamics and Econometrics*, 8(4), article 5.

Bårdsen, Gunnar, Ralf Becker and Stan Hurn: How informative is the term structure of future inflation? An investigation of the impact of monetary policy in the UK. In *Advances in Economics and Econometrics: Theory and Empirical Evidence*, edited by R. Becker and S. Hurn. Cheltenham, Edward Elgar.

Driscoll, John and Steinar Holden: Fairness and inflation persistence, *Journal of European Economic Association* 2, (2–3), Papers and Proceedings, pp. 240–251.

Holden, Steinar: The costs of price stability – downward nominal wage rigidity in Europe. *Economica* 71, pp. 183–208.

Humphrey, David B. and Bent Vale. 2004. Scale economies, bank mergers, and electronic payments: a spline function approach. *Journal of Banking and Finance*, 28, pp. 1671–1696.

Lindquist, Kjersti-Gro. 2004. Banks' buffer capital: how important is risk? *Journal of International Money and Finance* 23, pp. 493–513.

Røisland, Øistein: Capital income taxation, equilibrium determinacy, and the Taylor principle. *Economics Letters*, 81(2), pp. 147–283.

Torvik, Ragnar and Øistein Røisland: Exchange rate versus inflation targeting: A theory of output fluctuations in traded and non-traded sectors. *Journal of International Trade and Economic Development*, Vol. 13, issue 3, pp. 265–285.

A number of research papers have been presented at conferences and seminars in Norway and abroad, and Norges Bank's researchers have commented on other research papers at these conferences. In 2004, Norges Bank participated in organising conferences hosted by the Basel Committee, the ECB and other central banks. The Bank's researchers have contributed to student guidance, teaching, assessment of PhD candidates, book reviews and as referees for national and international journals and publishers.

In 2004, altogether 13 researchers from various schools of economics in Norway and abroad worked at Norges Bank on part-time, temporary contracts. These researchers work with the Bank's regular staff and enhance the research environment at Norges Bank. Norges Bank also finances a professorship in macroeconomics with particular emphasis on monetary policy issues at the Institute of Economics at the University of Oslo.

As a member of the international research community, Norges Bank has extensive contact with researchers at universities and other central banks. This is important to maintaining a high professional standard of research and ensuring the best possible basis for the Bank's decisions. As a result, researchers visit Norges Bank to present their research findings and take part in seminars arranged by the Bank where the Bank's staff present their own papers.

Publication of articles is often a lengthy process, and the list of publications includes articles on research carried out several years ago. Ongoing current research activity is documented in the Bank's *Working Papers*  series. In 2004, 22 papers were published in this series and are available on Norges Bank's website.

# Book project "The Econometrics of Macroeconomic Modelling"

Empirical research in connection with operative model work at Norges Bank has been given high priority over the past 15 years. New econometric tools have been introduced for the analysis of Norwegian time series for macroeconomic variables, with particular emphasis on wage and price formation. The main results of this research programme are presented in The Econometrics of Macroeconomic Modelling, by Bårdsen, Eitrheim, Jansen and Nymoen, published by Oxford University Press in 2005. The first section of the book describes, interprets and evaluates developments in theory and empiricism over the past 40 years. The second part of the book discusses examples of how a small, aggregated macroeconometric model can be used for economic projections and to carry out and evaluate simulations using different types of interest rate setting rules. The final part discusses factors that can explain forecast errors and in particular how structural changes in the economy can give rise to errors in economic projections. The econometric research programme on which the book is based has a wide range of applications in the Bank's ongoing work within its core areas of price stability and financial stability. The insight gained through this research programme is useful in the development of Norges Bank's new macroeconomic models.

## Researchers who visited Norges Bank in 2004

- · Philip Davis, Brunel University
- Claudia Buch, University of Tübingen
- Forrest Capie, Cass Business School
- Loran Chollete, Norwegian School of Economics and Business Administration (NHH)
- Robert A. Eisenbeis, Federal Reserve Bank of Atlanta
- Hamid Farugee, IMF
- · Andrew Filardo, BIS
- Ippei Fujiwara, Bank of Japan
- Thorvaldur Gylfason, University of Iceland
- · Hashmat Khan, Bank of England
- Moshe Kim, University of Haifa
- Olle Krantz, Umeå University

- Douglas Laxton, IMF
- Jesper Lindé, Sveriges Riksbank
- Michael Moore, Queens University, Belfast
- Dirk Muir, IMF
- Paolo Pesenti, Federal Reserve Bank of New York
- Richard Rosen, Federal Reserve Bank of Chicago
- Kasper Roszbach, Sveriges Riksbank
- Pierre Siklos, Wilfred Laurier University
- Lars Svensson, Princeton University
- Bent E. Sørensen, University of Houston
- Mattias Villani, Sveriges Riksbank
- Paolo Vitale, University in Pescara
- Anders Vredin, Sveriges Riksbank

#### The functioning of equity markets

As part of the work to expand our knowledge base in investment management, a research programme has been conducted in recent years on the microstructure of equity markets. Two of the projects in the research programme analyse costs in a crossing network. An interesting finding here is that equities that are not available in a crossing network appear to achieve a significantly higher subsequent return. This suggests that adverse selections in crossing networks involve costs. Other subjects analysed in this programme are the effects on equity prices when a company announces that it will buy back its own shares, the relationship between trading volume and volatility in equity markets and the relationship between corporate ownership structures and pricing in the equity market. This work is documented in two PhD dissertations, to be published in the series Doctoral Dissertations.

A number of researchers at Norges Bank also worked on documentation and the preparation of data in 2004.

### **Historical monetary statistics**

In 2004, a major project to document Norwegian economic history was completed at Norges Bank. In cooperation with Professors Ola H. Grytten and Jan Tore Klovland at the Norwegian School of Economics and Business Administration in Bergen, researchers at Norges Bank extracted data on consumer prices in Norway dating from 1516 (see Chart 32) and on developments in GDP, house prices, exchange rates, interest rates, credit and money supply dating from 1819. Documentation of the project has been published in *Norges Bank's Occasional Papers* No. 35, "Historical Monetary Statistics for Norway 1819–2003". The data

are available on Norges Bank's website. <sup>15</sup> Information about forthcoming revisions and additions to the database will also be made available on our website. An international seminar was held at Norges Bank on 11 June 2004 in connection with the publication of "Historical Monetary Statistics".

#### Real time data

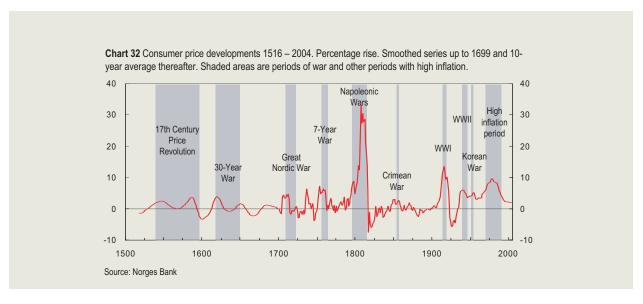
A number of macroeconomic variables that form part of the basis for monetary policy decisions are subsequently revised. Substantial revisions are not uncommon. Mainland GDP is one of the variables that is subject to extensive revision over time. Norges Bank has established a database containing quarterly vintages of macroeconomic data that go back to the first quarter of 1993. These data describe the economic situation as it appeared at various times. Regular revisions of current national accounts figures and the more extensive changes made in connection with the main revision in 1995 and the revision of figures in 2003 are included in the database. The real time database provides a basis for analysis of the information that was available at the time monetary policy decisions were taken during this period.

# **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 with international organisations.

#### Other central banks

Norges Bank collaborates extensively with the other Nordic central banks. The annual meeting of the



<sup>15</sup> http://www.norges-bank.no/stat/historiske\_data/en/hms/

Nordic central bank governors was hosted by Sveriges Riksbank in Öland, Sweden. Themes discussed at the meeting included the organisation of information technology and outsourcing of activities. Staff from various departments of the central banks meet regularly to discuss issues relating to economic analysis, monetary policy, financial stability, payment systems, legal matters concerning central banks, personnel policy, etc.

Norges Bank has regular contact with the ECB and a number of central banks in EU countries. Staff from Norges Bank have been seconded to the ECB in Frankfurt and the Bank of England. This arrangement provides an opportunity for staff to work at these institutions, normally for periods of 12 months.

#### **International organisations**

Norway's small, open economy is heavily influenced by international conditions. Norges Bank therefore places considerable emphasis on taking part in and maintaining 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 for central banks, the BIS is a research body and serves as a discussion forum for member banks. In recent years, the BIS has increasingly focused on financial stability. The Governor of Norges Bank regularly attends meetings at the BIS in order to discuss international central banking issues.

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 serve as secretariat for IMF work in Norway. In consultation with the Ministry of Finance, the Bank formulates Norwegian standpoints on issues to be decided by the IMF Executive Board. The Norwegian standpoints are then discussed with the other countries in the constituency in order to reach a unified view.

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

The highest decision-making body in 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 the alternate. The Board of Governors has delegated its decision-making powers on issues relating to the day-to-day operation of the Fund to a 24-member Executive Board. The five Nordic and three Baltic countries comprise one constituency with a joint representative on the board. Jon A. Solheim from Norway is the current board representative, sitting for a twoyear period starting 10 January 2004. The Nordic and Baltic countries also have a joint representative on the International Monetary and Financial Committee (IMFC), which is an advisory body for the Executive Board. The Committee meets twice a year.

The Norwegian Minister of Finance is the constituency's representative in the period 2004-2005. The country with a representative on the IMF Executive Board is also responsible for coordinating the Nordic and Baltic countries' stance on issues discussed by the Board. Thus, Norway has this responsibility in the period 2004-2005.

IMF activity is particularly focused on monitoring economic developments in member countries, with particular emphasis on macroeconomic conditions and financial stability. The primary emphasis is on bilateral surveillance through the Article IV consultations, which take place annually for most countries. The Norwegian authorities have indicated to the IMF that they would not object to intervals of two years between Article IV consultations with Norway, provided there were no special circumstances indicating that annual consultations were necessary.

The most recent Article IV consultation with Norway was conducted 7-15 March 2005. The IMF delegation's preliminary conclusions were published on 15 March.

In cooperation with the World Bank, the IMF established the "Financial Sector Assessment Program" (FSAP) in 1999 to assist countries in identifying and improving structural weaknesses in their financial sector. In an FSAP review, the IMF assesses compliance with internationally recommended standards for various parts of the financial sector. An FSAP for Norway is in progress, with a final report scheduled for June 2005. The IMF will look in particular at Norway's compliance with recommendations on banking supervision, insurance supervision and the payments system. Measures to prevent money laundering and financing of terrorist activities will also be reviewed, but this will take place under the auspices of the Financial Action Task Force on Money Laundering (FATF).

The IMF has a special lending facility for combating poverty and promoting growth – the Poverty Reduction and Growth Facility (PRGF). The PRGF is not financed by the IMF's ordinary resources, but by funding from member countries. This funding is either capital that is used for loans, or subsidies that allow the IMF to lend capital at a very low rate of interest.

In two loan agreements (1988 and 1994), Norges Bank has made loan commitments totalling SDR 150m (equivalent to about NOK 1.4bn according to the exchange rate on 31 December 2004) to the PRGF.

In addition, the Ministry of Foreign Affairs has allocated a total of about NOK 390m over the development assistance budget since 1988 to subsidise interest payments. Loan agreements between the IMF and Norges Bank are formulated so that funds are paid back to Norges Bank in pace with borrowers' repayment of their loans to the IMF. The amount outstanding at the end of December 2004 was SDR 57m. Norges Bank receives interest on these loans based on short-term market rates.





# Appendix A. Tables

Table 1. Norges Bank's balance sheet at 31.12.2003 and each month of 2004, by sector. In millions of NOK

	2003-12	2004-01	2004-02	2004-03	2004-04
ASSETS					
FOREIGN ASSETS	250 975	263 087	287 787	275 024	276 557
International reserves	250 941	263 052	287 749	274 947	275 752
Other assets	33	35	38	77	804
INVESTMENTS FOR THE GOVERNMENT PETROLEUM FUND	844 587	905 626	928 081	914 345	895 183
DOMESTIC ASSETS AND OTHER FIXED ASSETS	39 195	29 593	29 199	28 754	80 911
Securities	23 281	23 226	23 508	23 444	23 262
Lending	12 552	537	529	515	54 492
Other assets	1 901	4 378	3 708	3 346	1 712
Fixed assets	1 461	1 453	1 455	1 448	1 445
Gold	0	0	0	0	0
EXPENSES	0	55 854	73 126	53 182	27 044
TOTAL ACCITO	4 404 750	1.054.100	4 240 402	4 074 004	1 270 004
TOTAL ASSETS	1 134 756	1 254 160	1 318 193	1 271 304	1 279 694
LIABILITIES AND CAPITAL					
FOREIGN LIABILITIES	51 963	54 569	74 637	68 315	74 202
Deposits	256	607	606	585	576
Borrowing	49 776	51 970	72 044	65 680	71 674
Other liabilities	267	242	240	336	275
Equivalent of special drawing rights, IMF	1 664	1 750	1 747	1 714	1 676
DEPOSITS GOVERNMENT PETROLEUM FUND KRONE ACCOUNT	Г 844 587	905 626	928 081	914 345	895 183
DOMESTIC LIABILITIES	191 993	180 595	182 411	180 907	234 967
Notes and coins in circulation	46 249	42 801	42 224	41 872	42 057
Treasury deposits	108 586	104 860	102 734	101 810	156 070
Other deposits	28 343	16 151	28 932	28 030	27 559
Borrowing	8 229	15 456	5 810	7 429	7 195
Other liabilities	586	1 328	2 712	1 767	2 086
CAPITAL	46 213	46 213	46 213	46 213	46 213
VALUATION CHANGES	0	62 941	78 256	47 081	9 404
INCOME	0	4 217	8 595	14 444	19 725
TOTAL LIABILITIES AND CAPITAL	1 134 756	1 254 160	1 318 193	1 271 304	1 279 694
	1 10 1 700	1 201 100	7 0 10 100	1271001	1 270 001
Obligations					
Derivatives and forward contracts sold, international reserves	53 004	60 037	61 937	85 427	77 721
Derivatives and forward contracts purchased, international reserv	ves 55 485	59 296	59 227	78 818	71 985
Derivatives and forward contracts sold, Government					
Petroleum Fund	236 920	252 809	268 323	356 744	307 092
Derivatives and forward contracts purchased,					
Government Petroleum Fund	248 582	251 607	256 230	338 612	296 602
Allocated, not yet paid for shares in the BIS	275	275	275	275	275
Pinhte					
Rights Options cold international recorner	646	2.002	2.440	0.454	4 550
Options sold, international reserves	646	3 603	3 449	2 454	4 558
Options purchased, international reserves	647	3 483	4 270	3 577	4 176
Options sold, Government Petroleum Fund	4 324	24 072	23 044	16 565	30 716
Options purchased, Government Petroleum Fund	4 331	23 298	28 542	24 465	27 913

2004-05	2004-06	2004-07	2004-08	2004-09	2004-10	2004-11	2004-12
249 929	278 900	292 177	275 567	262 432	252 022	268 568	268 399
249 892	278 865	291 893	275 528	262 394	251 919	268 524	268 360
37	35	283	39	38	103	44	39
892 475	942 016	953 981	971 708	987 562	984 467	997 912	1 015 471
032 4/3	342 010	333 301	3/1/00	367 302	304 407	337 312	1 015 471
86 093	40 553	39 754	33 928	30 004	53 177	26 609	3 995
23 382	22 492	22 626	22 822	22 839	22 953	23 109	0
59 498	15 508	14 488	8 497	492	27 490	506	494
1 775	1 119	1 209	914	4 986	1 056	1 317	1 814
1 439	1 434	1 432	1 407	1 399	1 391	1 389	1 395
0	0	0	287	287	287	287	291
16 513	55 632	61 446	64 479	62 012	39 436	42 378	0
1 245 010	1 317 100	1 347 358	1 345 682	1 342 010	1 329 102	1 335 466	1 287 865
1 243 010	1 317 100	1 347 330	1 343 002	1 342 010	1 323 102	1 333 400	1 207 003
53 602	72 809	74 022	58 183	63 775	57 647	64 604	51 167
566	586	1 019	1 055	1 101	1 014	1 257	309
51 096	70 205	70 925	55 125	60 656	54 607	61 428	48 993
288	311	369	304	362	418	349	289
1 652	1 707	1 710	1 700	1 657	1 608	1 571	1 575
892 475	942 016	953 981	971 708	987 562	984 467	997 912	1 015 471
226 001	102.262	204.070	107 247	176 522	201 647	100 200	172 O2E
236 901	193 363	204 078	197 347	176 532	201 647	186 208	173 925
43 162	43 704	43 735	43 191	43 103	43 232	43 902	47 595
172 810 11 961	125 396 16 327	124 776	116 108 18 434	99 686 29 573	135 531 18 076	125 114 11 373	88 816 37 158
8 229	4 009	16 324 4 217	4 661	3 772	4 234	5 089	
739	3 927			398	575	731	0 356
755	3 321	15 026	14 953	330	5/5	731	330
46 213	46 213	46 213	43 483	43 483	43 483	43 483	47 302
-9 295	31 892	27 025	27 544	17 758	-15 926	-19 776	0
25 115	30 807	42 038	47 416	52 900	57 785	63 035	0
23 113	30 007	42 030	47 410	32 300	37 703	03 033	v
1 245 010	1 317 100	1 347 358	1 345 682	1 342 010	1 329 102	1 335 466	1 287 865
	=						
114 962	111 712	114 276	96 400	84 079	100 082	96 381	83 020
109 807	105 385	114 659	100 589	97 500	104 436	104 207	87 931
551 139	525 164	504 782	483 176	486 045	438 583	502 930	534 611
551 155	525 104	304 762	403 170	400 040	430 303	502 930	334 011
553 548	511 711	503 429	495 561	514 635	445 943	525 038	526 161
275	275	275	275	275	275	275	258
213	270	270	275	270	275	270	200
5 083	5 336	3 400	2 744	2 391	2 327	1 293	341
6 355	4 896	4 151	3 801	2 391	2 484	1 638	598
33 001	35 644	22 755	18 362	16 003	15 579	29 618	2 232
46 515	36 879	31 896	29 545	20 088	16 616	10 914	3 992

Table 2. Norges Bank's profit and loss account at 31 December. 2002-2004. In thousands of NOK

	2004	2003	2002
Interest income and dividends	8 479 006	7 987 299	8 326 820
Gains/losses on financial instruments	5 711 102	4 182 922	-2 557 912
Valuation changes on foreign exchange	-10 042 663	12 336 634	-24 315 794
Return on international reserves	4 147 444	24 506 855	-18 546 886
Share dividend, BIS	18 328	17 057	15 221
Interest expenses other foreign financial instruments	-1 082 010	-1 194 372	-1 167 200
Net domestic financial instruments	951 834	1 496 823	738 473
Interest expenses domestic deposits	-2 282 615	-3 180 538	-4 267 358
Net other financial activities	-2 394 464	-2 861 030	-4 680 864
Return on investments for Government Petroleum Fund	32 937 408	132 413 815	-130 010 197
Transferred to Government Petroleum Fund's deposit account	-32 937 408	-132 413 815	130 010 197
Operating income	1 092 233	928 204	671 950
Operating expenses	-1 756 626	-1 799 434	-1 533 160
Net operating expenses	-664 393	-871 231	-861 210
Profit/loss for the year	1 088 587	20 774 594	-24 088 960
Transferred from Adjustment Fund	0	0	23 691 494
Transferred from Other Capital	3 084 017	107 109	397 466
Reserves	4 172 604	20 881 704	0
Allocated to Adjustment Fund	-4 172 604	-20 410 606	0
Allocated to Transfer Fund	0	0	0
	0	-471 098	0
Allocated to Other Capital	U	-4/1000	U

Table 3. Norges Bank's loans to and deposits from banks in 2004

Period	D-loans NOK bn <sup>1)</sup>	Fixed-r NOK bn 1)	rate loans Nominal rate 2)	Fixed-ra	te deposits  Nominal rate 2)	Sight deposits NOK bn 1)
January	-	2.7	2.31	-	-	24.5
February	-	-	-	-	-	24.9
March	-	1.9	1.78	-	-	29.4
April	-	40.9	1.79	-	-	16.1
May	-	49.4	1.79	-	-	18.8
June	-	44.7	1.83	-	-	18.9
July	-	15.9	1.85	-	-	18.5
August	-	14.4	1.81	-	-	17.2
September	-	1.6	1.83	-	-	24.3
October	-	31	1.82	-	-	18.2
November	-	24.7	1.78	-	-	17.9
December	-	-	-	-		27.0

<sup>1)</sup> Average of daily observations, in billions of NOK.
2) Average interest rate allotted. Weighted average for all F-loans / F-deposits in the period.

Table 4. Norges Bank's D-loan and sight deposit rates

	Overnight lend	ling (D-loan) rate	Sight of	deposit rate
Period	Nominal	Effective	Nominal	Effective
28.01.99-02.03.99	9.50 %	9.95 %	7.50 %	7.78 %
03.03.99-25.04.99	9.00 %	9.40 %	7.00 %	7.24 %
26.04.99-16.06.99	8.50 %	8.86 %	6.50 %	6.71 %
17.06.99-22.09.99	8.00 %	8.31 %	6.00 %	6.18 %
23.09.99-12.04.00	7.50 %	7.78 %	5.50 %	5.65 %
13.04.00-14.06.00	7.75 %	8.04 %	5.75 %	5.91 %
15.06.00-09.08.00	8.25 %	8.58 %	6.25 %	6.44 %
10.08.00-20.09.00	8.75 %	9.13 %	6.75 %	6.97 %
21.09.00-12.12.01	9.00 %	9.40 %	7.00 %	7.24 %
13.12.01-03.07.02	8.50 %	8.86 %	6.50 %	6.71 %
04.07.02-11.12.02	9.00 %	9.40 %	7.00 %	7.24 %
12.12.02-22.01.03	8.50 %	8.86 %	6.50 %	6.71 %
23.01.03-05.03.03	8.00 %	8.31 %	6.00 %	6.18 %
06.03.03-30.04.03	7.50 %	7.78 %	5.50 %	5.65 %
01.05.03-25.06.03	7.00 %	7.24 %	5.00 %	5.12 %
26.06.03-13.08.03	6.00 %	6.18 %	4.00 %	4.08 %
14.08.03-17.09.03	5.00 %	5.12 %	3.00 %	3.04 %
18.09.03-17.12.03	4.50 %	4.60 %	2.50 %	2.53 %
18.12.03-28.01.04	4.25 %	4.34 %	2.25 %	2.27 %
29.01.04-11.03.04	4.00 %	4.08 %	2.00 %	2.02 %
12.03.04-	3.75 %	3.82 %	1.75 %	1.76 %

Table 5. Denominations of coins in circulation 2000-2004. Annual average and at the end of each month in 2004. In millions of NOK. Figures are based on physical holdings at month- and year-end.

	20-krone	10-krone 2)	5-krone 5)	1-krone 4)	50-øre 3)	10-øre 1)	Total
2000	966.3	1 086.8	486.8	617.2	165.2	129.7	3 452.0
2001	1 124.0	1 110.9	496.8	640.8	174.0	129.5	3 676.0
2002	1 387.0	1 085.0	505.3	666.1	182.4	129.5	3 955.3
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
2004							
January	1 621.8	1 039.9	529.4	703.4	194.9	128.5	4 217.9
February	1 619.9	1 035.7	528.8	704.1	195.2	128.5	4 212.2
March	1 629.4	1 035.6	529.5	706.4	196.0	128.5	4 225.4
April	1 626.9	1 036.2	530.8	707.9	196.5	128.5	4 226.8
May	1 656.6	1 050.5	536.8	713.9	197.4	128.4	4 283.6
June	1 677.6	1 054.5	540.0	718.0	198.1	128.4	4 316.7
July	1 682.4	1 061.1	542.7	720.9	198.9	128.4	4 334.4
August	1 706.1	1 063.1	545.2	725.8	199.8	128.4	4 368.4
September	1 680.7	1 051.7	542.4	726.5	200.4	128.4	4 330.1
October	1 685.5	1 047.6	540.7	726.2	201.0	128.4	4 329.4
November	1 686.1	1 051.0	541.2	728.1	201.6	128.4	4 336.4
December	1 726.9	1 065.0	545.8	734.2	202.6	128.4	4 403.0

<sup>1)</sup> As of 1 March 1993, the 10-øre coin was no longer legal tender, but was redeemed by Norges Bank until 1 March 2003.

<sup>2)</sup> A new 10-krone coin was put into circulation on 15 September 1995. At the same time it was announced that the old 10-krone coin would cease to be legal tender from 15 September 1996, but will be redeemed by Norges Bank until 15 September 2006

<sup>3)</sup> A new 50-øre coin was put into circulation on 16 September 1996. At the same time it was announced that the old 50-øre coin would cease to be legal tender from 16 September 1997, but will be redeemed by Norges Bank until 16 September 2007

<sup>4)</sup> A new 1-krone coin was put into circulation on 15 September 1997. At the same time it was annonunced that the old 1-krone coin would cease to be legaltender from 5 September 1998, but will be redeemed by Norges Bank until 5 September 2008

<sup>5)</sup> A new 5-krone coin was put into circulation on 15 September 1998. On 9 July 1999 it was announced that the old 5-krone coin would cease to be legal tender from 9 July 2000, but will be redeemed by Norges Bank until 9 July 2010.

Table 6. Denominations of notes in circulation 2000-2004. Annual average and at the end of each month of 2004. In millions of NOK. Figures are based on physical holdings at month- and year-end.

	1000-krone <sup>5)</sup>	500-krone 4)	200-krone 3)	100-krone 2)	50-krone <sup>1)</sup>	Total
2000	26 336.4	6 106.5	4 274.7	2 684.4	717.3	40 119.3
2001	24 713.2	6 920.6	4 446.4	2 463.6	727.1	39 270.9
2002	22 598.8	7 626.1	4 572.7	2 270.2	743.5	37 811.3
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
2004						
January	23 775.0	7 893.5	4 494.6	1 940.0	757.6	38 860.7
February	23 273.6	7 809.2	4 507.8	1 938.2	760.6	38 289.4
March	23 059.2	7 739.0	4 471.6	1 940.4	761.1	37 971.4
April	22 955.0	7 883.7	4 639.1	1 964.6	767.3	38 209.6
May	23 021.2	8 342.7	5 073.3	2 066.6	805.0	39 308.8
June	23 376.0	8 408.1	5 009.8	2 114.7	821.6	39 730.2
July	23 277.8	8 531.5	5 027.9	2 112.7	825.1	39 775.0
August	23 142.4	8 384.4	4 955.5	2 056.3	811.0	39 349.6
September	23 195.6	8 319.6	4 845.3	2 004.7	799.1	39 164.3
October	23 362.6	8 340.9	4 776.2	1 970.9	785.3	39 235.9
November	23 958.1	8 514.0	4 784.6	2 004.9	803.7	40 065.3
December	26 263.2	9 163.5	4 922.5	2 029.8	813.1	43 192.1

<sup>1)</sup> An upgraded version of the 50-krone banknote was put into circulation on 1 February 2004.

Table 7. Banknotes destroyed 2000-2004. In millions of notes

	1000-krone <sup>2)</sup>	500-krone 1)	200-krone <sup>3)</sup>	100-krone 4)	50-krone	Total
2000	3.4	15.6	20.4	17.6	13.6	70.6
2001	22.7	13.8	19.6	16.2	12.4	84.8
2002	12.7	5.8	62.6	33.2	11.8	126.2
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

The table shows the total number of banknotes destoyed apart from notes from older series (50- and 100-krone notes from Series III, IV and V, and also 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 issues:

The figures have been influenced by the decision to store notes instead of destroying them in 1998 and 1999 to provide a reserve supply for the millennium. The notes were destroyed in 2000/2001, increasing the figures for these years.

Table 8. Average life of banknotes 2000-2004. In years

	1000-krone	500-krone	200-krone	100-krone	50-krone
2000	7.8	0.8	1.0	1.5	1.1
2001	1.1	1.0	1.1	1.5	1.2
2002	1.8	2.6	0.4	0.7	1.3
2003	5.8	2.7	2.2	0.4	1.1
2004	8.7	2.1	1.9	1.7	1.3

The figures show the volume of notes in circulation compared to the number destroyed in the year of question. For an explanation of the changes in banknote life, see footnote to Table 7.

<sup>2)</sup> An upgraded version of the 100-krone banknote was put into circulation on 25 March 2003.
3) An upgraded version of the 200-krone banknote was put into circulation on 16 April 2002.

<sup>4)</sup> A new 500-krone banknote, Series VII, was put into circulation on 7 June 1999. On 17 April 2000, it was announced that the 500-krone banknote, Series VI, would cease to be legal tender from 17 April 2001 but will be redeemed by Norges Bank until 17 April 2011.

<sup>5)</sup> A new 1000-krone banknote, Series VII, was put in circulation on 19 June 2001. It was also announced that the 1000-kroner banknote, Series VI, would cease to be legal tender from 26 June 2002 but will be redeemed by Norges Bank until 26 June 2012.

<sup>1)</sup> A new 500-krone banknote, Series VII, was put into circulation on 7 June 1999.

<sup>2)</sup> A new 1000-krone banknote, Series VII, was put into circulation on 19 June 2001.

<sup>3)</sup> An upgraded 200-krone banknote was put into circulation on 16 April 2002.

<sup>4)</sup> An upgraded 100-krone banknote was put into circulation on 25 March 2003.

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Table 9. Inflow of banknotes to Norges Bank, 2000-2004. In millions of notes

	1000-krone	500-krone	200-krone	100-krone	50-krone	Total
2000	36.4	96.0	228.8	126.6	29.6	517.4
2001	39.5	99.8	221.0	110.9	30.0	501.3
2002	38.6	107.1	225.7	109.5	31.3	512.3
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

The table shows numbers of banknotes delivered to Norges Bank.

Table 10. Velocity of banknote circulation 2000-2004

	1000-krone	500-krone	200-krone	100-krone	50-krone	Total
2000	1.38	7.86	10.70	4.72	2.06	5.31
2001	1.60	7.21	9.94	4.50	2.07	5.28
2002	1.71	7.02	9.87	4.82	2.11	5.21
2003	1.51	6.69	10.03	4.59	2.09	5.14
2004	1.37	6.33	9.60	4.48	2.09	4.91

The table shows the average number of times notes pass through Norges Bank per year.

Table 11. Inflow of coins to Norges Bank 2000-2004. In millions of coins.

	20-krone	10-krone	5-krone	1-krone	50-øre	Total
2000	86.5	159.7	88.2	383.7	58.3	776.4
2001	94.7	140.0	81.2	339.9	52.6	708.4
2002	149.0	120.1	80.2	348.2	54.5	752.1
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

The table shows the number of coins delivered to Norges Bank.

Table 12. Velocity of coin circulation 2000-2004

	20-krone	10-krone	5-krone	1-krone	50-øre	Total
2000	1.79	1.47	0.91	0.62	0.18	0.65
2001	1.69	1.26	0.82	0.53	0.15	0.56
2002	2.15	1.11	0.79	0.52	0.15	0.57
2003	2.77	1.14	0.82	0.52	0.16	0.61
20041)	3.38	1.12	0.78	0.50	0.16	0.64

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. 2000-2004. In thousands of coins <sup>1)</sup>

	20-krone	10-krone	5-krone	1-krone	50-øre	Total
2000	12 145	1 119	14 408	51 035	20 175	98 882
2001	4 188	9 838	460	50 484	30 140	95 110
2002	20 459	1 125	3 618	21 298	23 958	70 458
2003	30 061	957	827	24 093	19 853	75 790
2004	499	513	503	25 151	14 806	41 472

<sup>1)</sup> The table shows figures for coins produced and delivered to Norges Bank, and cannot be used to indicate the number of coins minted with different years. Coin sets are included.

<sup>1)</sup>The figures are estimated due to changes in terms concerning the entering of coins in Norges Bank's books.

<sup>1)</sup> See footnote Table 11.

Table 14. Banknote production at Norges Bank's Printing Works 1999-2004. (Number of packets of 500 notes)

	1000-krone	500-krone	200-krone	100-krone	50-krone
2000	0	52 400	35 600	44 170	2 600
2001	72 131 <sup>1)</sup>	0	31 814 2)	0	36 075
2002	0	34 776	79 309	20 014 3)	0
2003	0	0	30 304	60 400	50 366 4)
2004	24 700	0	70 380	54 556	1 584

<sup>1)</sup> New series (Series VII)

Table 15. Norges Bank's banknote series 1877-2004. 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 banknotes							
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 and are no longer redeemable in Norges Bank. 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. The 1000-krone note in Series V ceased to be legal tender on 1 August 1991, as did the 500-krone note in Series V on 21 June 1992. 1-krone and 2-krone notes from the period 1917-1918 are no longer legal tender and are not redeemed by the Bank. 1-krone and 2-krone notes from the period 1940-1950 ceased to be legal tender on 13 July 1989.

<sup>2)</sup> Upgraded Series VII, put into circulation 16 April 2002

<sup>3)</sup> Upgraded Series VII, put into circulation 25 March 2003
4) Upgraded Series VII, put into circulation in 2004

# Appendix B

# Norges Bank's management and organisation

# The Bank's governing bodies

The supreme 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. The Board 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 chairman and deputy chairman 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 Exe-cutive Board when administrative manners 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. This committee has decision-making authority in administrative matters (the internal management of Norges Bank). The 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. It 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. The Storting elects the chairman and deputy chairman from among the members of the Council 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 2005

#### **Executive Board**

Governor of Norges Bank Svein Gjedrem, Chairman (reappointed 1 Jan 2005 – 31 Dec 2010)

Deputy Governor Jarle Bergo, Deputy Chairman (reappointed 12 April 2002 – 11 April 2008)

Vivi Lassen (01.01.2002 – 31.12.2005)

Alternate: Kari Broberg (01.01.2004 - 31.12.2005)

Brit K.Rugland (1.1.2004-31.12.2005)

Alternate: Inger Johanne Pettersen

(01.01.2004-31.12.2005)

Øystein Thøgersen (01.01.2004-31.12.2005)

Alternate: Ingunn Myrtveit (01.01.2004-31.12.2005)

Liselott Kilaas (01.01.2004-31.12.2007)

Alternate: Per Christiansen (01.01.2004-31.12.2007)

Asbjørn Rødseth (01.01.2004-31.12.2007)

Alternate: Einar Forsbak (01.01.2004-31.12.2007)

## **Employee representatives**

Sonja Blichfeldt Myhre Jan Erik Martinsen Einar Alnæs (alternate) Nina Fagereng (alternate)

# **Supervisory Council**

Mary Kvidal, 2004-07 (Chairman 2004-05)

Alternate: Anne Strifeldt, 2003-05

Solveig Nordkvist, 2004-07 (Deputy Chairman 2004-05)

Alternate: Liv Stave, 2004-07 Jens Marcussen, 2002-05

Alternate: Liv Røssland, 2003-05 Pål Julius Skogholt, 2002-05

Alternate: Karin Westhrin, 2002-05

Hakon Lunde, 2002-05

Alternate: Dag Sandstå, 2002-05

Siri Frost Sterri, 2002-05

Alternate: Knut Flølo, 2004-05

Oddleif Olavsen, 2002-05

Alternate: Kjellaug Nakkim, 2002-05

Trude Brosvik, 2002-05

Alternate: Steinar Løsnesløkken, 2002-05

Terje Ohnstad, 2004-07

Alternate: Ragnhild Weiseth, 2004-07

Eva Karin Gråberg, 2004-07 Alternate: Jan Elvheim, 2004-07

Tom Thoresen, 2004-07

Alternate: Hans Kolstad, 2004-07

Runbjørg Bremset Hansen, 2004-07

Alternates Constille Dellars General 2004

Alternate: Camilla Bakken Øvald, 2004-07

Hans Petter Kvaal, 2004-07 Alternate: Arent Kragh, 2004-07 Anne Tingelstad Wøien, 2004-07 Alternate: Steinulf Tungesvik, 2004-07

Kåre Harila, 2004-07

Alternate: Liv Sandven, 2004-07

### Audit

Svenn Erik Forsstrøm

State Authorised Public Accountant

# The Bank's organisation

Svein Gjedrem, Governor Jarle Bergo, Deputy Governor

# **Norges Bank Monetary Policy**

Jan F. Qvigstad, Executive Director

Research Department

Øyvind Eitrheim, Director

**Department for Market Operations and Analysis** 

Asbjørn Fidjestøl, Director

**Monetary Policy Department** 

Amund Holmsen, Director

**Statistics Department** 

Audunn Grønn, Director

**Economics Department** 

Anne Berit Christiansen, Director

# Norges Bank Financial Stability

Kristin Gulbrandsen, Executive Director

**Financial Institutions Department** 

Arild J. Lund, Director

**Payment Systems Department** 

Inger-Johanne Sletner, Director

**Interbank Settlements Department** 

Helge Strømme, Director

**Chief Cashier's Department** 

Trond Eklund, Director

**Securities Markets Department** 

Birger Vikøren, Director

# Norges Bank Investment Management

Knut N. Kjær, Executive Director

**Equities - Investments** 

Yngve Slyngstad, Chief Investment Officer

**Equities - Operations** 

Stephen Hirsch, Chief Operating Officer

**Fixed Income - Investments** 

Dag Løtveit, Chief Investment Officer

**Fixed Income - Operations** 

Mark Wingate, Director

Risk, Performance and Accounting

Ilse Bache, Chief Technology Officer

Compliance

Rebecca Selvik, Director

Staff and Legal

Marius Nygaard Haug, Chief of Staff and General

Counsel

IT Infrastructure

Ilse Bache, Chief Technology Officer

# Norges Bank Staff and Group Services

Harald Bøhn, Executive Director

**Staff services** 

Anne-Britt Nilsen, Director

Norges Bank's Printing Works

Jan Erik Johansen, Director

**Property Management Department** 

Marit Kristine Liverud, Director

**Security Department** 

Arne Haugen, Head of Security

**Shared services** 

Kjetil Heltne, Director

# **Corporate Communications**

Poul Henrik Poulsson, Director

Legal Department

Bernt Nyhagen, Executive Director

Governor's Staff -Investment Strategy

Sigbjørn Atle Berg, Director