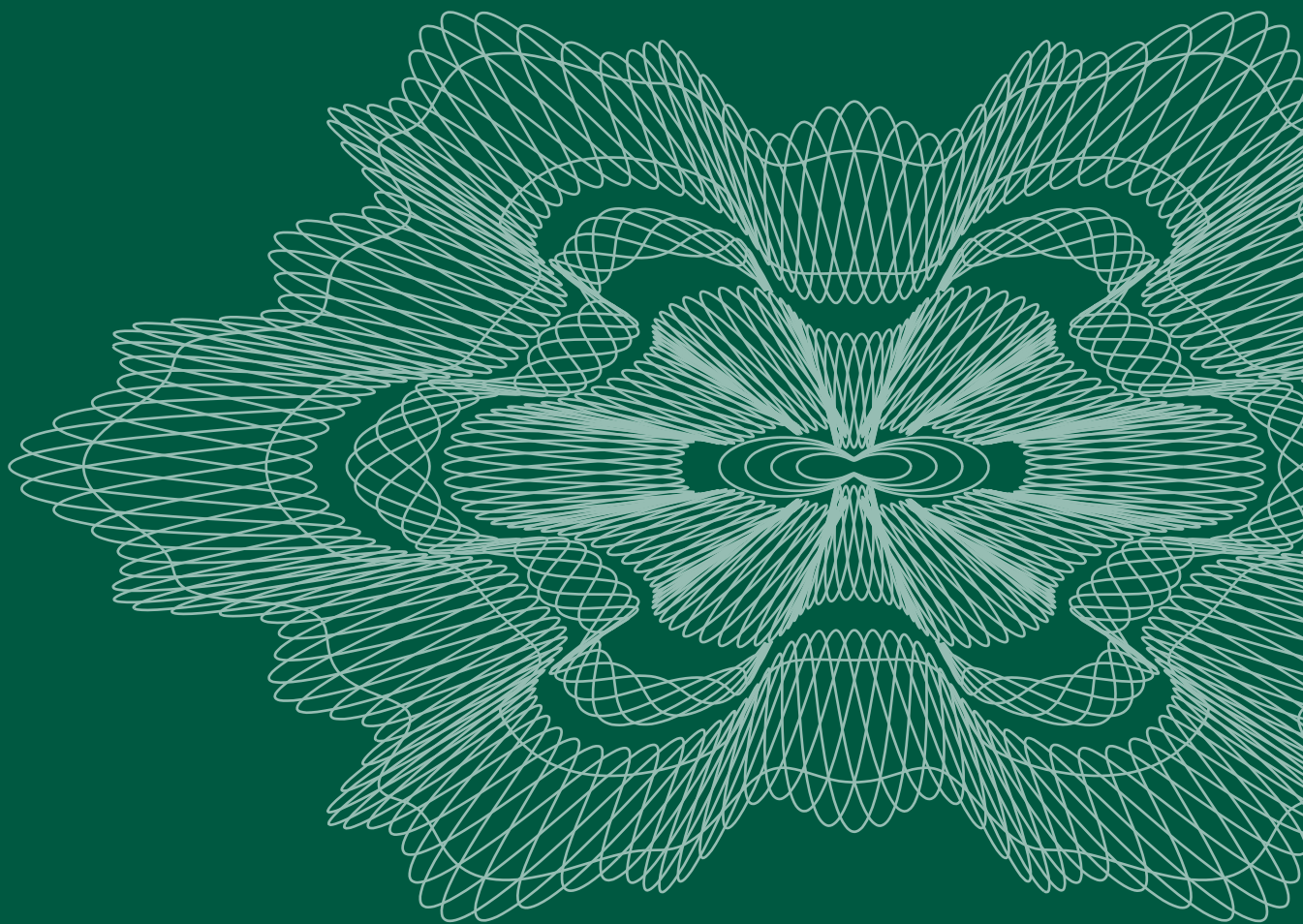




Economic Bulletin

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Financial stability, asset prices and monetary policy

Address by Governor Svein Gjedrem at the Centre for Monetary Economics/Norwegian School of Management on 3 June 2003

Introduction

Developments in equity and bond prices, house prices, credit and debt may have an impact on inflation and are important information for central banks when they set interest rates. Asset prices may also be indicators of future developments in output and demand. Sharp changes in asset prices have often occurred when there are considerable imbalances in the economy. There have been episodes where bubbles have accumulated in the form of sharp increases in asset prices in the equity and housing markets while inflation has been low. Higher asset prices and increased optimism often contribute to high debt growth. Increased access to credit pushes up asset prices further. There is therefore an interaction between developments in debt and asset prices. When the bubbles burst, the result may be an economic downturn and deflation. In this way, developments in asset prices may give rise to an unstable inflation environment. Developments of this kind may also threaten the stability of the financial system, cf. the banking crises in the Nordic countries around 1990. I will discuss whether and how monetary policy should take the build-up of financial imbalances into account. I will also touch upon the driving forces in the foreign exchange market. The krone is affected by mechanisms similar to those found in other asset markets.

Finally, I would like to comment briefly on current economic developments. Internationally, developments are weaker than expected. Interest rate cuts are expected in a number of countries. The fall in international interest rate levels has dampened the effects of our interest rate reductions on inflation. Growth in Norway is likely to be fairly weak now, and with an unchanged interest rate, inflation is likely to remain below target in the period ahead. The easing of monetary policy will therefore continue. Norges Bank's Executive Board will also carefully consider changing the interest rate in larger steps.

Price stability and financial stability

Seeking to foster price stability and financial stability is often considered a natural task of central banks. In Norway, the Government has set an operational objective for monetary policy. This objective is low and stable inflation. Financial stability is often defined as the absence of financial instability¹. Financial instability is characterised by unduly wide fluctuations in prices for assets such as dwellings, commercial property and securities, or failure in the functioning of financial institu-

tions or financial markets. Disturbances occur in the credit supply or the flow of capital. In most cases, this will have consequences for output, employment and inflation. Financial stability therefore fosters price stability.

In Norway, the authorities' work on financial stability is divided between the Ministry of Finance, the Banking, Insurance and Securities Commission and Norges Bank. The Ministry of Finance is responsible for establishing a framework which ensures that Norway has a financial industry that functions smoothly. The Banking, Insurance and Securities Commission is responsible for supervising the financial sector. Norges Bank shall foster robust and efficient payment systems and financial markets, i.e. foster financial stability. This is in accordance with the Norges Bank Act and the Payment Systems Act.

Primarily, we wish to avoid instability in the financial system. A number of instruments are available, including regulation of financial markets, surveillance and shaping the financial infrastructure. Norges Bank's instruments are primarily the interest rate, banks' borrowing facilities, including requirements for collateral that can be accepted to secure such lending, and its supervision of the payment systems. We are also obligated to alert the Ministry of Finance when we assess the situation as giving cause for concern. The Financial Stability reports are an important tool. Norges Bank can also serve as the lender of last resort. This is reserved for very special situations where financial stability may be threatened.

Without financial institutions and financial markets that function smoothly, the effects of interest rate changes on inflation and employment will be unstable and uncertain. Low and stable inflation provides households and enterprises with a clear indication of changes in relative prices. This makes it easier for economic agents to make the right decisions and contributes to price stability in financial and property markets. Low and stable inflation therefore provides the best foundation for financial stability. The two objectives normally underpin each other.

Previous financial crises in Norway

From history, we know about a number of financial crises in Norway. During the time of the silver and gold standard prior to 1914, banking crises occurred relatively frequently and were mainly regional. This is an indi-

¹ See for example Ferguson (2002): "Should Financial Stability Be an Explicit Central Bank Objective?". This article was presented at the IMF conference entitled Challenges to Central Banking from Globalized Financial Systems on 17 September 2002.

cation that banks at that time were small and locally anchored. Therefore, the crises did not spread through the banking system. Many Norwegian banks experienced liquidity and solvency problems in 1857 following the collapse of the US railroad industry, in 1864 in Oppland, in 1886 in Arendal and in Kristiania (now Oslo) in 1899-1905. The Norwegian author Alexander Kielland depicts the local financial bubble in Stavanger in the 1880s in his book *Fortuna*. There was a surge in credit growth and speculation in commercial bills that did not represent actual values. Speculation formed the basis for quick gains and it all ended in bankruptcies and banks that failed.

A dramatic scene from *Fortuna*:

When the clock struck 1, Taraldsen hurried in - the old messenger from Norges Bank; he always trotted with arms flailing.

He stopped at Marcussen's desk and greeted him; an uncertain smile quivering on his old face as he asked:

"It is - hmm - of course an oversight?"

"What!" responded Marcussen drily.

The smile disappeared rather quickly and in breathless surprise Taraldsen asked again: "Aren't your bills of exchange to be redeemed today?"

"No."

"Mr. Marcussen! People say that you are a jocular man; but this - "I'm not joking - damn it!"

Old Taraldsen straightened up; everyone was hunched over their work; only young Rasmus' eyes met his. The boy was white as a sheet; he began to understand. It also started to become clear for old Taraldsen; but immediately afterwards, he became very confused again; because he understood the entire scope of this; he had the entire town's bills of exchange in his head; and of course he had seen a lot of this kind of thing during his long life but all of those were trifles compared to what would happen now.

His voice shook as he almost ceremoniously asked:

"Will Carsten Løvdahl's papers be protested?"

"Yes," replied Marcussen without looking up.

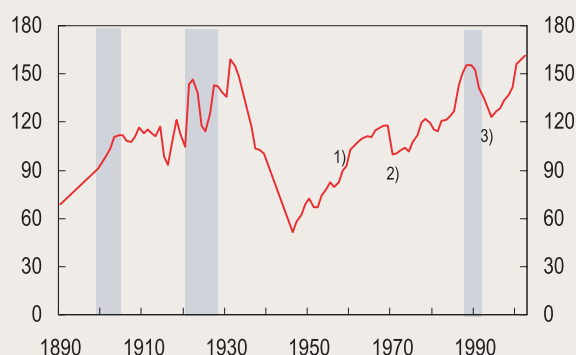
Old Taraldsen trotted out of the offices; but on the steps he met the messenger from Aktiebanken: "Is it true? - Taraldsen!"

"Now the entire town is going to collapse," answered the old man, throwing up his arms in despair."

Kielland's description of a financial crisis and the consequences were realistic. There was speculation then and there is speculation today, but in other kinds of financial instruments than at that time.

The 1899 banking crisis in Kristiania was the most serious of the regional crises. The crisis was particular to Norway, following in the wake of the strong property

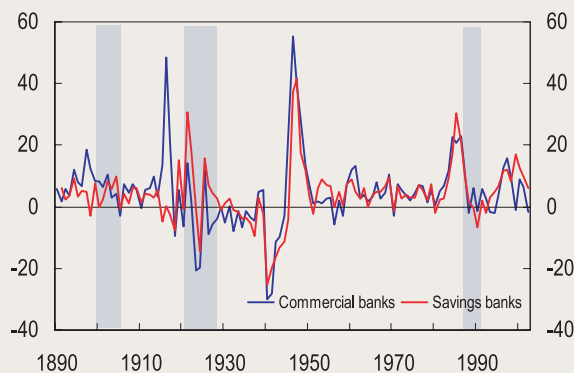
Chart 1 Debt in municipalities, non-financial institutions and households as a percentage of nominal GDP. 1890-2002



1. The increase in 1960 is partly due to a downward revision of GDP in connection with the transition to a new national accounting standard
2. The marked fall in 1970 is due to an upward revision of GDP in connection with the transition to a new national accounting standard.
3. C3 mainland Norway as a percentage of mainland GDP is used as from 1995.

Source : Norges Bank and Gerdrup (2003), see footnote 2

Chart 2 Twelve-month rise in bank lending at year-end deflated by the rise in the consumer price index. Per cent. 1890-2002



Sources: Statistics Norway, Gerdrup (2003) and Norges Bank

boom and the subsequent crash in summer 1899.

The next two banking crises, in 1920-1928 and 1988-1992, were far more severe than the earlier crises².

There were particular reasons for each of the last three crises, but they also have much in common: Asset prices rose quickly prior to the crises. Each cyclical upswing involved price speculation. Property prices and share prices for property companies rose to a very high level in the last half of the 1890s. Share prices, particularly in shipping and whaling, rose dramatically during the First World War, then fell markedly afterwards. In the 1980s, prices for dwellings and commercial property increased rapidly.

Households and enterprises increased their debt more than their nominal income in the periods of expansion before the crises (Chart 1). High debt made them more vulnerable to loss of income or increases in real interest rates. The debt burden increased less in the 1890s and during the First World War due to a strong increase in nominal income. Under the gold standard, however, periods of

² For a more detailed description of the Norwegian crises see Gerdrup (2003): "Three episodes of financial fragility in Norway since the 1890s", a forthcoming article in BIS Working Papers.

growth in nominal income were normally followed by periods with a fall in nominal income. The debt burden thereby increased when the economy declined.

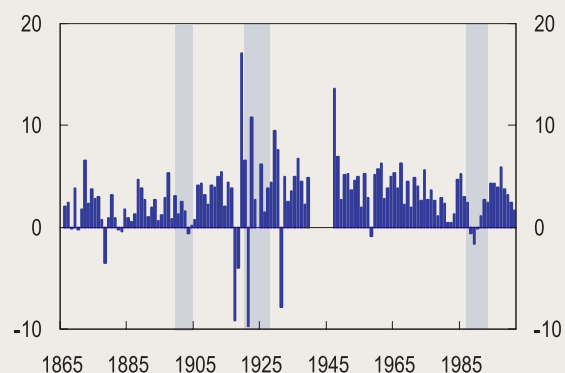
During the three banking crises, many banks pursued an aggressive lending policy. Bank lending (in constant prices) increased sharply prior to the crises and decreased markedly afterwards (Chart 2). Deflation in the 1920s led to a real increase in lending and debt. Favourable financing terms for banks underpinned expansion during all three periods. In the second half of the 1890s and during the First World War, commercial banks expanded sharply by issuing new equity. Savings banks were not as expansive. One reason for this may be that savings banks were subject to a certain degree of supervision and regulation. There was little regulation of commercial banks until the interwar years. In all three crises, the banks that were most expansive were also the most severely affected in the subsequent crises.

In the 1980s, strong lending growth was primarily made possible by foreign funding. When foreign funding dried up, as confidence in the Norwegian economy deteriorated, bank borrowing from Norges Bank increased sharply. In addition, collateral was not required – as it is now – as security for loans from Norges Bank. During the banking crisis that followed, the division of responsibility between the government authorities and Norges Bank was clarified. If solvency support proves to be necessary, the guarantee funds, and as a last resort the government, shall provide such support. The supply of extraordinary liquidity is one of the instruments available to Norges Bank, but it will only be used in special situations when financial stability may be threatened. We must exercise the role of provider of emergency liquidity in close cooperation with the Banking, Insurance and Securities Commission and the Ministry of Finance.

In the 1980s, prices for dwellings and commercial property increased rapidly. A rapid and sharp increase in asset prices provided the basis for higher loans. This created the basis for surging, debt-financed consumption which in turn contributed to higher inflation. House prices began to fall in 1988 and equity prices started to drop in 1990. At that time, enterprises and households had a very high debt burden, and were therefore vulnerable to weaker economic developments. Many wished to reduce their debt as a result of the decline in wealth. Consumption and fixed investment were reduced. The need for financial consolidation added force to the downturn in the Norwegian economy at the end of the 1980s and the beginning of the 1990s. The crises in 1920-1928 and in 1988-1992 were far more severe than the crisis in 1899-1905. They led to a decline in output and employment and this contributed to wide fluctuations in the economy (Chart 3).

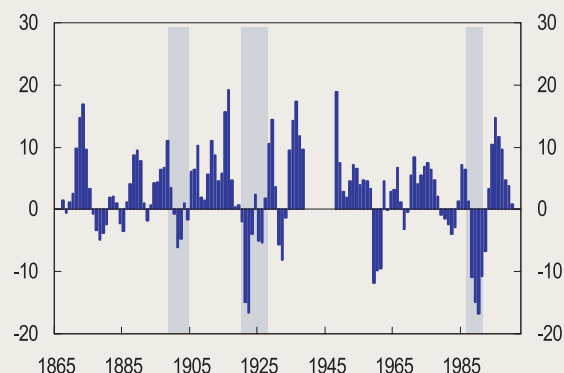
The crisis in 1899-1905 had an impact on fixed investment in particular. Fixed investment declined sharply during the crisis after having risen prior to the crisis

Chart 3 Growth in real GDP¹⁾, Percentage change on previous year, 1865-2001



¹⁾ Private sector, mainland Norway, from 1970
Sources: Statistics Norway and Norges Bank

Chart 4 Fixed investment ¹⁾, Annual percentage change, 3-year moving average 1865-2000



¹⁾ Private sector, mainland Norway, from 1970
Sources: Statistics Norway and Norges Bank

(Chart 4). The same thing happened during the crisis of 1988-1992. Not all periods with a strong upswing end in a downturn. After the deregulation of the 1980s, the upswing was so strong, the financial imbalances were so large and the high level of inflation had gained such a firm foothold that a downturn was almost impossible to avoid.

Monetary policy and financial stability

Norges Bank's operational objective for monetary policy is inflation over time of 2½ per cent. This objective can normally be achieved by applying different interest rate paths. The choice of path may have an impact on developments in output and employment in the short term. It may also affect how quickly we achieve the inflation target. Choosing between the different strategies involves balancing fluctuations in output and employment against deviations from the inflation target in the short term. A rapid and pronounced change in the interest rate would be appropriate in cases where there is a risk that

inflation may deviate considerably from the target over a longer period, or where heightening turbulence in financial markets or a cost-push shock resulting from wage negotiations indicate that confidence in monetary policy is in jeopardy. Financial market confidence in the inflation target provides Norges Bank with greater opportunities for promoting stability in the real economy, even more so as inflation targeting is incorporated as an anchor for wage determination.

The impact of monetary policy occurs with a lag. The current inflation rate does not therefore provide sufficient information to determine the level at which interest rates should be set now. Our analyses indicate that a substantial share of the effects of an interest rate change will occur within two years. Two years is thus a reasonable time horizon for achieving the inflation target of 2 1/2 per cent. Using this time horizon, we avoid substantial variations in output and employment. A shorter horizon than two years would result in wider swings in production.

Credit developments and developments in equity and property prices influence inflation. With an inflation targeting regime, we take these variables into account to a certain extent when setting interest rates.

Equities and dwellings account for a substantial share of household wealth. Higher equity and house prices increase the value of this wealth. The increase in wealth can relatively rapidly result in rising consumption

(Chart 5). Several studies indicate that an increase in the value of housing wealth is more likely to lead to higher consumption than a corresponding increase in the value of equity wealth.

Higher prices for commercial buildings may be passed on in the form of higher prices for goods and services. Developments in asset prices can thus affect inflation more directly.

In Norway, a high proportion of households own their own dwelling. Even when we include securities funds and some insurance claims, Norwegian households' housing wealth is far higher than their equity wealth (Chart 6). For Norwegian households, changes in house prices will therefore probably have a greater impact on consumption than changes in equity prices. In Norway, it became more common to own equities for all income and age groups in the 1990s. This was to a large extent reversed last year as a result of the fall in equity prices. We should nevertheless not rule out the possibility that fluctuations in equity prices in the future may have stronger effects on the real economy than we have witnessed so far.

Developments in various asset prices may also influence investment. High equity prices may make it easier to gain access to capital to finance the acquisition of new machinery and buildings.

A rise in property prices provides scope for raising larger loans against collateral in the asset. Possibilities for increased credit may contribute to higher demand for goods and services. The process may be self-reinforcing since part of the available credit can be used to purchase dwellings and other property. Similarly, bubbles in the stock market can result in overinvestment. When equity and property prices start to fall, companies are left with too much real capital and investment declines. This may lead to or amplify an economic downturn.

There may be several factors that imply that particular emphasis should not be placed on financial imbalances in the conduct of monetary policy. First, it may take a long time before imbalances are triggered. The uncertainty surrounding developments so far ahead is considerable.

In addition, it is often difficult to determine with a sufficient degree of certainty whether financial imbalances are developing. It is also difficult to determine the magnitude of the imbalances and how close they are to being triggered. An increase in interest rates will not necessarily curb the build-up of financial imbalances to a sufficient extent. It cannot be ruled out that in some cases very substantial interest rate changes will be required. The costs may then be high.

History has demonstrated that the basis for downturns is laid during upturns. Financial crises are often characterised by an initial phase of excessive optimism, where risk assessments deteriorate, the willingness to incur debt increases and asset prices rise. When negative news appears and spreads, investments do not match expectations and the sentiment is reversed, asset prices fall. Many

Chart 5 Relationship between asset prices, debt and the real economy

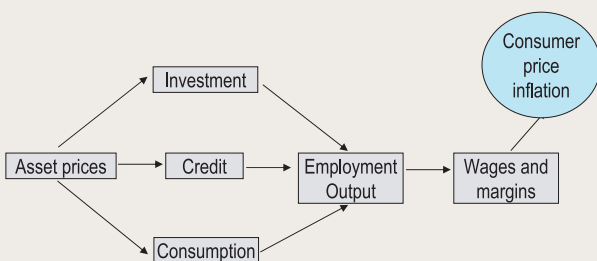
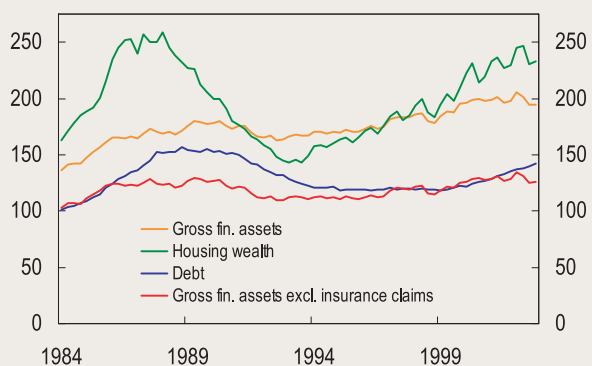


Chart 6 Household gross financial assets, housing wealth and debt. Percentage of disposable income



Source: Norges Bank

experience problems in servicing their debt. The factors that contributed to the upturn may also amplify the downturn.

As a rule, periods of expansion are accompanied by higher inflation. The objectives of price stability and financial stability then imply the same medicine: a higher interest rate. However, this will not always be the case. In Japan, equity and property prices surged in the 1980s, while inflation was low. In the US, household and corporate debt rose fairly sharply and equity prices trebled between 1994 and 1999, and inflation was moderate. Some observers³ have therefore posed the following question: has the functioning of the economy changed so that higher demand does not necessarily translate into higher inflation, but instead results in growing financial imbalances? If so, a conflict may arise between achieving the inflation target in the short term and financial stability

There are several reasons why financial bubbles can develop in periods of low inflation. First, a highly credible monetary policy results in low inflation expectations. Explicit or implicit long-term price and wage contracts will become more common. It will take longer for higher demand to translate into higher inflation. Cyclical changes will have less impact on inflation. Moreover, periods of higher productivity growth may lay the basis for high corporate earnings, heightened optimism and reduced risk awareness. At the same time, with strong productivity growth, inflation remains low. Banks that record low losses and solid results can increase lending without eroding their capital adequacy level. Debt-financed investments may lead to a faster rise in house and property prices. A third factor is that strong international competition may contribute to curbing inflation during a period of strong economic expansion. China, because of its access to an abundance of cheap labour and its substantial production capacity, has contributed to a fall in prices for many manufactured goods.

In Norway, we have not experienced situations where there has been a conflict between the objectives of financial stability and price stability. Prior to the last banking crisis, household debt rose sharply and house prices increased, while at the same time inflation was high. When monetary policy was tightened last year, a sharp rise in domestic costs, with the outlook pointing to higher inflation, was accompanied by high credit growth. House prices are now falling, which in the long run will probably contribute to curbing credit growth. Wage growth has been reduced and inflation is subdued.

Even though high asset prices and strong credit growth build up in a period of low inflation, these imbalances may influence inflation in the somewhat longer run. In that event, a tightening of monetary policy may be consistent with the objective of maintaining low and stable inflation over time. This will also stabilise developments in production. In order to achieve this, economists have recommended that monetary policy should

place emphasis on developments in credit growth and asset prices when extraordinary conditions so warrant. In some cases, this will mean that a somewhat longer horizon than normal is applied in order to achieve the inflation target. The advantage is that substantial deviations from the target would be avoided in the somewhat longer run.

If imbalances have been allowed over time to become severe, however, situations may arise where the interest rate should be set lower than implied by the inflation target, in order to prevent financial instability from being triggered.

In the Norges Bank Watch report of 25 September 2001, Norges Bank was encouraged to place greater emphasis on asset prices. A two-stage strategy was proposed. The first stage is the current flexible inflation targeting. The second stage consists of monitoring credit developments and asset prices and, in special cases, overruling the signals given by the first stage. This is in line with the reasoning above.

Statements by the Monetary Policy Committee in the

Norges Bank Watch 2001

- "The first and main stage is flexible inflation targeting...."
- "The additional stage consists of monitoring credit aggregates. It requires the central bank to monitor a number of credit aggregates, and to intervene and possibly to overrule the signals given by the first stage. One would expect that this would not happen frequently. In normal times it will remain unused."

Source: Norges Bank Watch 2001

Bank of England last autumn are an example of the emphasis placed on risk factors for future economic developments. In the minutes of the meeting on 9-10 October 2002, the Committee pointed to the build-up of financial imbalances as a factor which implied that the interest rate should be kept unchanged rather than reducing it.

Considerable work remains before the available indica-

Bank of England

- "An interest rate reduction seemed likely at present predominantly to affect house prices, household borrowing and consumption, which were already increasing strongly. A further reduction in the repo rate risked creating an unsustainable increase in debt which might subsequently unwind sharply. This would increase the risk of undershooting the inflation target in the medium term."

Source: Minutes of the Monetary Policy Committee Meeting, 9 and 10 October 2002, Bank of England

³ See, for example, Borio, English and Filardo (2002): "A tale of two perspectives: old or new challenges for monetary policy?", BIS Working Papers No. 127.

tors of financial imbalances can be regarded as satisfactory. High credit growth or sharp rises in asset prices alone do not necessarily pose a threat to financial stability. Research conducted by the BIS has shown that periods of strong credit growth, a rise in asset prices and a high level of investment will almost always put pressures on the financial system.⁴ Earlier banking crises may provide some indication of where the critical levels are

The IMF has shown that bubbles that burst in the housing market lead to a financial crisis more often than stock market bubbles.⁵ The IMF also finds that the probability of bubbles bursting in the housing market is greater than is the case for stock markets. A decline in the housing market also has a greater impact on output and employment. Housing wealth has a greater impact on consumption than other assets. The contagion effects via the banking system are stronger because housing and property loans normally account for a substantial share of banks' loans.

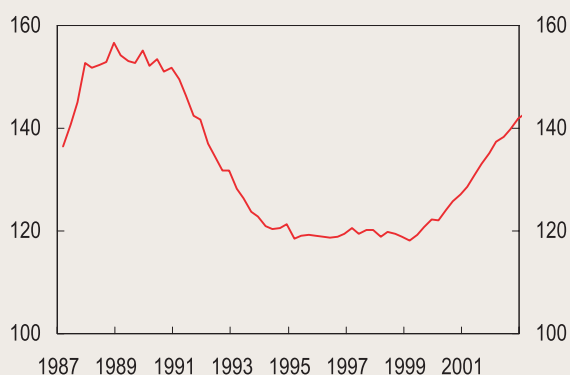
A sharp rise in asset prices and debt build-up may pose a risk to economic stability. To minimise this risk, there may be situations when it is appropriate to apply a somewhat longer horizon than the normal two-year horizon for achieving the inflation target. A precondition for this is that financial market participants are confident that inflation will be low and stable over time.

The current situation

Today, private sector debt and house prices are at a historically high level. Banks' loan losses will probably rise. However, our assessment is that the banking sector is reasonably well equipped to cope with the increase.

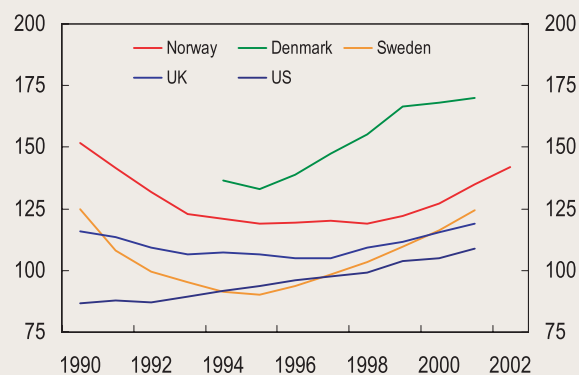
For a long time, household debt in Norway has risen at a far higher rate than income growth. The debt burden has therefore risen rapidly and is high in a historical context (Chart 7). Partly as a result of the reduction in interest rates, interest expenses are moderate. High and growing debt means, however, that households are vulnerable to sharp increases in interest rates or a substan-

Chart 7 Household debt burden. Loan debt as a percentage of disposable income



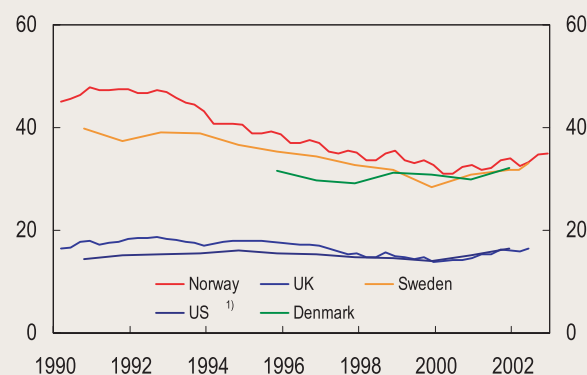
Source: Norges Bank

Chart 8 Household debt as a percentage of disposable income



Sources: Sveriges Riksbank, Danmarks Nationalbank, OECD and Norges Bank

Chart 9 Household debt as a percentage of gross financial assets and housing wealth



¹⁾ Non-financial assets are used instead of housing wealth for US

Sources: Sveriges Riksbank, Danmarks Nationalbank, OECD and Norges Bank

tial rise in unemployment. Some groups of households are particularly at risk.

The change in monetary policy from a fixed exchange rate regime to an inflation target has probably made it less likely that households will be exposed to a "dual shock" in the form of higher unemployment and higher interest rates, as was the case during the banking crisis. This may imply that households can bear a somewhat higher debt burden than was the case prior to the banking crisis.

The level of household debt in Norway is also high by international standards, although not as high as in Denmark (Chart 8).

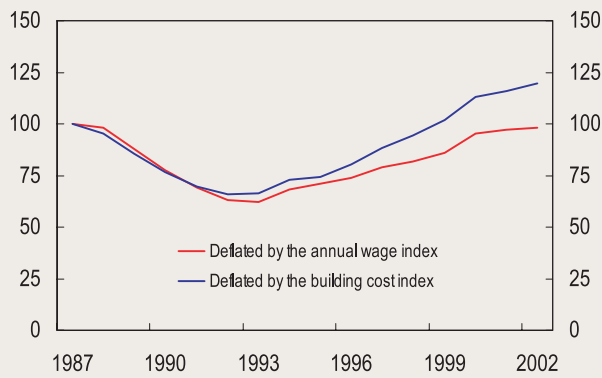
However, if we look at debt in relation to wealth, the picture is very similar for all the Nordic countries (Chart 9). In Denmark, household financial wealth is high, while housing wealth is relatively high among households in Norway. The value of the housing stock may partly explain the level of debt. However, housing wealth does not provide a liquid buffer against payment problems.

After a lengthy and sharp increase, house prices have edged down recently (Chart 10). From May last year to

⁴ Borio, and Lowe (2002): "Asset prices, financial and monetary stability: exploring the nexus", BIS Working Papers No. 114.

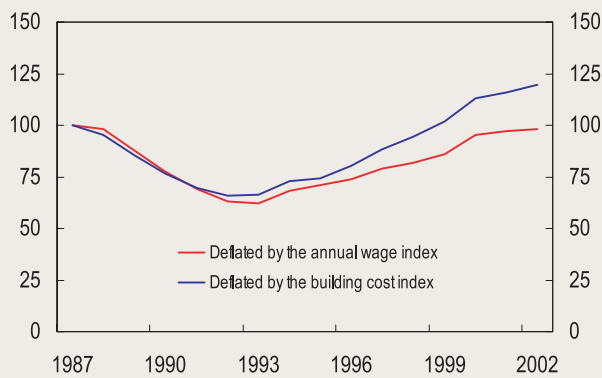
⁵ IMF (2003): World Economic Outlook, April.

Chart 10 House prices deflated by the building cost index and annual wage index. Index, 1987=100



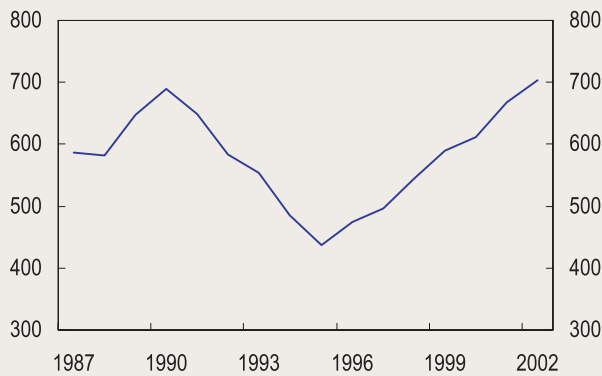
Source: Norges Bank

Chart 10 House prices deflated by the building cost index and annual wage index. Index, 1987=100



Source: Norges Bank

Chart 11 Debt burden in non-financial enterprises excl. petroleum and shipping. As a percentage of cash surplus¹⁾ excl. interest expenses



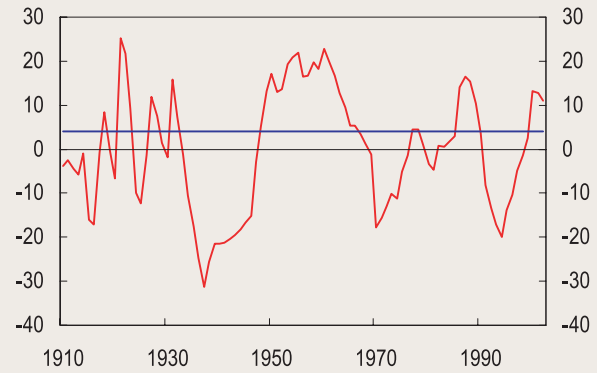
¹⁾ Cash surplus = Value added - labour costs + net capital income

Sources: Statistics Norway and Norges Bank

May this year, house prices fell by 1.1 per cent.⁶ The price level is nonetheless high in a historical context.

Growth in corporate debt has been more moderate, but

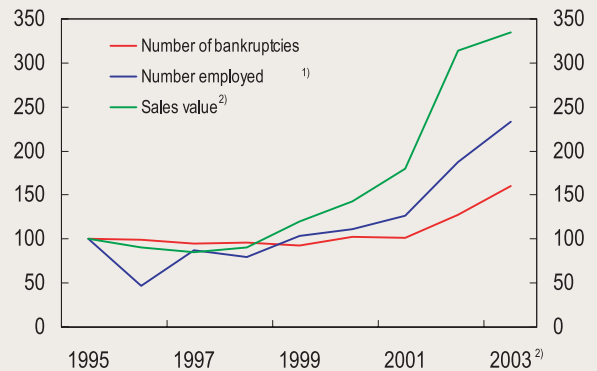
Chart 12 Credit gap: Debt in municipalities, non-financial institutions and households as a percentage of GDP - difference between actual observations and trend¹⁾. Percentage points



¹⁾ Trend is calculated using a rolling HP filter (=1600), according to the method of Borio and Lowe (2002). Calculated using annual data from 1899. Mainland C3 as a percentage of mainland GDP is used as of 1995.

Source: Gerdrup (2003) and Norges Bank

Chart 13 Developments in number of bankruptcies, employment and sales value of bankrupt companies. Index



¹⁾ Turnover and employment in last normal operating year

²⁾ Annualised figures based on Q1 2003

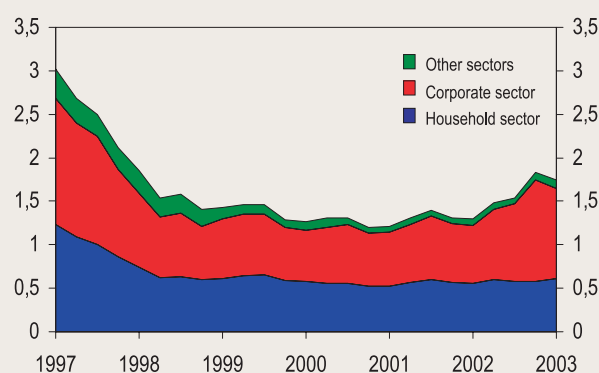
Source: Statistics Norway

the debt burden is high (Chart 11).

Debt growth among Norwegian borrowers can also be illustrated by the credit gap, an indicator developed by the BIS (Chart 12). The credit gap is derived from developments in the ratio of credit to nominal GDP and is defined as the deviation between actual developments in this variable and trend. The analyses show that a credit gap of more than 4 percentage points can predict almost 80 per cent of banking crises in a selection of countries. In some cases, the indicator also signals some banking crises that do not materialise. Accuracy improves when other indicators are included in addition to the credit gap. The credit gap for Norway was above the "critical" level prior to and during the crisis in the 1920s. This was first due to high debt growth and later to a fall in GDP. During the Second World War, private sector debt fell sharply, but was followed by a catch-up period. The next episode of a wide credit gap was in the 1980s, prior to

⁶ Source: Norwegian Association of Real Estate Agents, Association of Real Estate Agency Firms, finn.no (Norwegian search database for classified advertising, including real estate, on the Internet) and ECON

Chart 14 Gross non-performing loans, by sector. All banks. In billions of NOK



Source: Norges Bank

the last banking crisis. The gap is also wide today.

More sluggish developments in the Norwegian economy have contributed to a sharp rise in the number of bankruptcies over the past year (Chart 13). In spite of the pronounced reduction in interest rates in recent months, we must expect a large number of bankruptcies and somewhat higher bank losses in the period ahead as a result of continued rather weak economic growth in Norway.

Gross non-performing loans to the business sector increased considerably through 2002 (Chart 14). During the banking crisis, loans to commercial property companies accounted for a substantial share of banks' loan losses. Losses on such loans are relatively small today. Lower rental and property prices and higher vacancy rates may suggest that losses in this sector will increase in the period ahead.

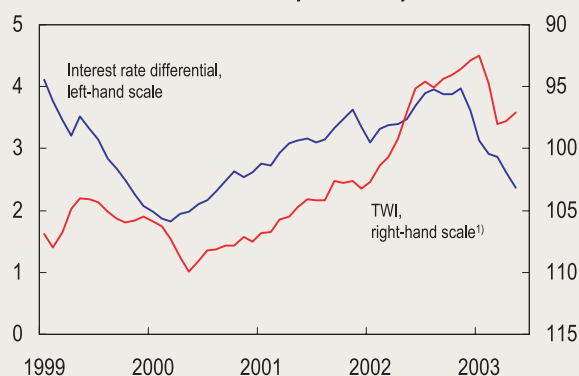
Most banks, including the largest, have satisfactory financial strength and are fairly well equipped to cope with substantial losses. We therefore consider the outlook for financial stability to be satisfactory, even though loan losses are moving up. Debt growth and the level of household debt are high. However, we expect debt growth to slow in time, partly due to weaker economic developments and as an after-effect of the leveling-off of house prices. Consequently, developments in debt and house prices are no longer an obstacle to an easing of monetary policy.

The exchange rate as an asset price

An asset price of particular importance to economic developments is the exchange rate. It differs from other asset prices in a number of ways and it is to a lesser extent linked to financial stability.

In the long term, changes in the exchange rate will essentially be based on underlying fundamentals. If inflation in Norway is persistently higher than that of our trading partners, the nominal krone exchange rate will tend to depreciate. In the very long term, the nomi-

Chart 15 Trade-weighted exchange rate index (TWI) and three-month interest rate differential. July 1999 – May 2003



¹⁾ A rising curve denotes an appreciation of the krone

Source: Norges Bank

nal exchange rate will therefore be determined by inflation differentials. There is a tendency for the real exchange rate to return to its long-term average. Changes in the real exchange rate in the short and medium term may also reflect, for example, differences in productivity growth across countries or developments in the terms of trade.

Bubbles may develop in the foreign exchange market in the same way as in markets for other assets. However, abrupt changes in the exchange rate are not necessarily a bubble. The exchange rate may move more in the short term than is necessary in the long term. One reason may be that the exchange rate must overshoot its long-term level because market participants weigh the interest rate differential against the possibility of a future depreciation of the krone.

The relatively wide interest rate differential between Norway and other countries was an important driving force behind the appreciation of the krone from 2000 to 2002 (Chart 15). Themes in the foreign exchange market vary over time. Analyses carried out by Norges Bank indicate that the interest rate differential has a greater impact on the exchange rate the more equity prices fall and the lower the expected variability is between the main currencies. The oil price increased considerably from the end of 2001. In isolation, this probably also contributed to making the Norwegian krone more attractive.

Norway's key rate, the sight deposit rate, has been among the highest in the OECD countries. The fewer countries there are with a wide interest rate differential, the greater the demand will be for NOK-denominated assets.

The exchange rate may serve as an automatic stabiliser. In periods of excessive activity in the economy, or expectations of excessive activity, the exchange rate may appreciate, even if the sight deposit rate does not change. Similarly, the exchange rate may depreciate if activity is low.

With inflation targeting, we no longer have a specific

objective for the krone exchange rate. The krone is floating. The exchange rate represents an important channel through which monetary policy functions. Changes in the exchange rate are desirable when they contribute to stabilising inflation. To what extent the exchange rate will depreciate as a result of a reduction in the sight deposit rate depends on several factors. The more the krone depreciates as a result of a reduction in interest rates, the less the sight deposit rate will have to be reduced when it is appropriate to relax monetary policy. A weaker currency contributes to higher economic activity and thereby higher inflation. In addition, consumer price inflation will increase because prices for imported consumer goods will be higher if the exchange rate depreciates.

The response to a change in the exchange rate will depend on how the change is judged to influence inflation. This is consistent with the way we normally take other asset prices into account.

Conclusion

In conclusion, I would like to comment briefly on current economic developments. Global economic growth appears to be weaker than previously projected. This is partly because the after-effects of the financial bubble that burst appear to be more substantial and more protracted than previously assumed. It is expected that a number of countries will reduce their interest rates again, and that the level of interest rates in other countries will remain low for some time. In Norway, price inflation is lower than implied by the inflation target and will remain low in the period ahead. The krone has remained strong, partly due to the fall in international interest rates, weakening the impact of our interest rate reductions.

Growth in the Norwegian economy is now likely to be weak. Although private consumption continues to show strong growth and oil investment is providing an impetus to the Norwegian business sector, labour market developments have been weaker than expected in our previous Inflation Report. Employment has fallen and unemployment is on the rise. House prices are falling and many commercial properties are vacant. It now appears that fiscal policy will have a more neutral impact on overall demand, and growth in public consumption and employment is no longer rising. Fiscal policy as drawn up in the Revised National Budget will therefore not contribute to locking in the strong krone.

One encouraging development is that wage growth appears to have moderated more quickly than expected. This may partly be explained by the interim wage settlement this year, as in 1999. However, with greater awareness on the part of employers in the public sector and a low level of activity in some business sectors, the risk that wage growth will again pick up seems to have been reduced.

Norges Bank has previously stated that a rapid and

pronounced change in the interest rate would be appropriate if, for example, heightening turbulence in financial markets or a cost-push shock resulting from wage negotiations indicate that confidence in monetary policy is in jeopardy. Similarly, it would be appropriate to change the interest rate in larger steps if the outlook points to inflation that deviates substantially from the inflation target over a longer period.

We have experienced a period of monetary policy easing. This period is not over. The next assessment of the interest rate will take place at Norges Bank's Executive Board meeting on 25 June. Our next *Inflation Report* will be presented at the same time.

Banks' counterparty risk – results of a survey conducted by Norges Bank and the Banking, Insurance and Securities Commission

Karsten Gerdrup, Economist, Division of Financial Analysis and Structure, and Bjørn Bakke, Economist, Division of Financial Infrastructure and Payment Systems

Norges Bank has overall responsibility for promoting financial stability and works systematically to identify conditions that could trigger a systemic crisis. As part of this work, Norges Bank, in collaboration with the Banking, Insurance and Securities Commission, has conducted a survey of Norwegian banks' exposures to their largest counterparties. The aim of the survey is to assess the risk of liquidity or solvency problems at Norwegian banks as a result of the failure of an important counterparty to fulfil its obligations. One exception is exposures to some large counterparties in foreign exchange transactions, but the credit risk associated with this type of transaction is expected to be reduced significantly when the krone is included in the international currency settlement system CLS in the first half of 2003. However, liquidity risk will not be reduced to the same extent.¹

1 Introduction

Over the past 20-30 years, many countries have experienced banking crises that have had considerable consequences for the real economy (Hoggarth and Saporta, 2001). In Norway, the banking crisis between 1988 and 1992 coincided with the deepest downturn since the Second World War. The work to prevent a crisis from affecting large parts of the financial system has been assigned high priority by the authorities and international organisations, and the supervisory authorities' role has been strengthened in many countries. Regulations and supervisory practices have increasingly been based on incentives that motivate the banks to have buffers which reflect the risk of unexpected large losses (capital adequacy rules) or reduced liquidity (liquidity rules²), or to limit the concentration of risk in a portfolio (rules on large exposures). In the new proposal on capital adequacy rules (Basel II), emphasis is placed on providing banks with incentives to use risk-reducing techniques and advanced risk systems.

Regulations and supervision are to a large extent oriented towards ensuring stability in individual institutions, not necessarily towards the financial system as a whole. Even though solid and liquid individual institutions contribute to stability in the financial system as a whole, theoretical and empirical studies conducted in recent years have shown that analyses of risks in individual institutions provide limited information about the risks to the system as whole (Summer, 2002). First, banks may be exposed to different risks that can be diversified to a limited extent. Second, liquidity or solvency problems in one bank may spread to the wider financial system via a network of uncollateralised interbank exposures. Third, a loss of confidence may result in funding problems for several institutions. The causes of a systemic crisis are

discussed further in a separate box. In practice, a systemic crisis will be caused by a combination of these three factors, but this article considers the risk of a systemic crisis as a result of direct contagion of liquidity or solvency problems.

Norges Bank and the Banking, Insurance and Securities Commission have collected information on large Norwegian banks' uncollateralised exposures to their largest counterparties at the end of the second quarter for the past three years. The information was collected pursuant to the Banking, Insurance and Securities Commission's general mandate. Sweden's Riksbank (the central bank) has conducted this type of survey on a quarterly basis since June 1999, and our survey is largely modelled on the Swedish one, which is described in Blåvarg and Nimander (2002).

Chapter 2 provides a more detailed description of the survey. Chapter 3 analyses the results of the survey. Chapter 3.1 describes the banks' exposures. The risk associated with different types of exposures may vary. Chapter 3.2 divides counterparties into sectors. This breakdown shows how exposed banks can be to direct contagion of liquidity and solvency problems abroad and the possibility of direct contagion between banks in the survey. The risk linked to large, uncollateralised exposures will also depend on how diversified the Norwegian banking system's counterparties are. This aspect is examined in Chapter 3.3. Chapter 3.4 estimates the size of possible losses as a percentage of Tier 1 capital should several counterparties default. Chapter 3.5 assesses the liquidity risk associated with delayed payment by a counterparty. Chapter 4 assesses foreign exchange settlement risk and the implications of Continuous Linked Settlement (CLS). Chapter 5

¹ Thanks to Ingrid Andresen, Dag Henning Jacobsen, Asbjørn Fidjestøl, Sigbjørn Atle Berg, Henning Strand, Kirsti Forfang (Banking, Insurance and Securities Commission) and Asbjørn Enge for useful comments. Ingrid Andresen and Dag Henning Jacobsen have also provided assistance in preparing the data material.

² Cf. Basel Committee on Banking Supervision (2000): Sound Practices for Managing Liquidity in Banking Organisations.

Types of risk

- Liquidity risk: The risk of losses when a counterparty does not settle an obligation when due, but on some unspecified date thereafter.
- Credit risk: The risk of losses when a counterparty does not settle an obligation when due or at time thereafter.
- Systemic risk: The risk that the banking system's ability to perform its main functions such as credit intermediation and risk management is disrupted to such a severe extent that financial stability is threatened. Such risk is also linked to the risk that liquidity and solvency problems spread throughout the banking system.

provides a summary of the survey results.

2 Survey procedure

Norges Bank and the Banking, Insurance and Securities Commission have conducted semi-annual surveys of Norwegian banks' largest counterparty exposures (30 June 2001, 31 December 2001 and 30 June 2002). The 10 largest Norwegian banks were requested to report the following exposures in total and their exposures to the 15 largest counterparties:

- *Positive market value of derivatives.* Banks have different financial assets where the value is linked to the underlying asset. Depending on developments in the price of the asset, the bank may record an asset or a liability on the reporting date. If the contract value is positive, the bank will incur a loss if the counterparty defaults. The banks were requested to state both the gross and net value of the derivatives exposures, i.e. the value both before and after legally binding netting agreements are taken into account.
- *Value of securities issued by the counterparty.* Such securities comprise equities or interest-bearing instruments (bonds). Although banks risk that the value of the shares will be written down to zero should a counterparty become insolvent, there will normally be some recovery if it owns bonds.
- *Uncollateralised deposits/loans.* Banks tend to invest surplus liquidity as uncollateralised deposits in or as loans to other banks. Banks will therefore experience liquidity problems if the deposits cannot be withdrawn as agreed, or a direct loss if the counterparty becomes insolvent.
- *Guarantees and unutilised committed credit lines.* An issued guarantee is a conditional claim, which the counterparty can apply if a third party does not fulfil its obligations. An unutilised credit line also repre-

sents an exposure that could give rise to losses if an insolvent counterparty uses it.

- *Principal amount in foreign exchange transactions:* The banks normally deliver foreign exchange sold before receiving confirmation of the foreign exchange purchased. If one party does not fulfil its obligations, the counterparty can in the worst case incur a loss equivalent to the principal amount. This risk is referred to as Herstatt risk, and implies that banks' currency options can be regarded as uncollateralised loans.
- *Collateralised loans.* Banks also have collateralised loans that have been extended to their largest counterparties to uncollateralised exposures. The estimated value of the collateral has been deducted. However, collateral values may fall and potential losses on such loans may thus prove to be larger.

In the ranking of the banks' counterparties, foreign exchange settlement exposures or collateralised loans are not taken into account. The reason that foreign exchange transactions are not taken into account is that most of the credit risk here will probably be eliminated when the krone is included in CLS. CLS will reduce this risk through the introduction of Payment versus Payment (PvP) in foreign exchange settlement, i.e. a bank will only receive foreign exchange purchased when it has fulfilled its payment obligations in CLS (see Chapter 4). A drawback associated with this system is that large counterparties to foreign exchange transactions are not included among the 15 largest counterparties. The banks were therefore asked to specify their 10 largest counterparties to foreign exchange transactions, both in total and broken down by currency pairs.

Extending collateralised loans to households and non-financial enterprises is the most important activity of most banks, but the focus of this survey is on uncollateralised exposures. Collateralised loans are therefore included only as supplementary information to provide a more complete picture of counterparties to such transactions.

The scope of the survey is limited in that only 10 banks were requested to report their exposures to their 15 largest counterparties (and total exposure to all counterparties). The banks were not asked to provide information that could be of significance to the risk linked to various exposures (e.g. maturity). However, these limitations do not necessarily represent a shortcoming. The risk of a systemic crisis as a result of problems at a small or medium-sized bank seems limited. For the same reason, the Riksbank only included the four largest banks in its surveys because the Swedish banking market is far more concentrated than the Norwegian market. As only large counterparties can cause serious liquidity or solvency problems in a bank, banks' exposures to the 15 largest counterparties provide a sufficient basis for the survey. As regards information on conditions that may influence the risk associated with the exposures, it should be noted that the aim of the survey was

How do systemic crises arise?

A systemic crisis in the banking sector may arise in at least three different ways:

First, a large portion of the banking sector may be exposed to risks that feature a strong positive correlation, and which banks cannot eliminate through diversification. The use of credit derivatives and collateral can, for example, reduce a bank's risk of losses as a result of default on the part of borrowers. However, a macroeconomic crisis may reduce the debt servicing capacity of counterparties in the credit agreements and the value of the collateral. Exposure to risks that can be diversified to a limited extent makes the banks vulnerable to the same type of conditions, with sluggish economic developments and falling asset values. According to Hellwig (1995) deregulation and intensified competition since the mid-1970s have increased this type of risk in the banking sector. The banks' scope for building up buffers against large losses by operating with a high interest margin has become more limited as a result of stronger competition, at the same time as the possibilities for eliminating risk through diversification have been reduced. For example, Borio and Lowe (2002) cite wide swings in macroeconomic developments, property prices and credit conditions as important factors behind many crises that have affected parts of various countries' financial systems over the past 20 years. This was, for example, the explanation for the crisis in the Nordic countries 10 years ago and the crisis that affected the savings bank industry in the US (S&L crisis) in the 1980s and a large group of smaller banks in the UK in 1991.

Second, a systemic crisis can be triggered by crises in individual banks. Experience shows that crises at large financial institutions can occur without warning. Baring Brothers failed unexpectedly in 1995 because of certain traders' derivatives transactions, and the hedge fund Long Term Capital Management (LTCM) failed in 1998 as a result of a high debt burden and negative market effects. The LTCM case in particular shows that uncollateralised exposures between financial institutions can trigger a systemic crisis. Furfine (1999) has analysed this more closely. Large exposures between banks generally occur as a result of banks' different activities. A smoothly functioning

interbank market enhances the liquidity of each bank and the effectiveness of monetary policy. The interbank market also provides opportunities for earnings, gains and risk mitigation, but also makes the banking system vulnerable to crises at individual banks. Exposures in the interbank market are often uncollateralised. In principle, this risk can be eliminated if the central bank is a counterparty, and guarantees settlement finality, but this entails a considerable degree of moral hazard (Rochet and Tirole, 1996).

Third, a systemic crisis may occur as a result of a loss of market confidence with an associated liquidity shortage. Triggering factors behind a loss of confidence may be a negative macroeconomic shock, an interest rate increase or unexpected, large losses at several banks. Banks that are not exposed to direct contagion or a negative macroeconomic shock could still be affected if markets believe this to be the case. The risk of a loss of confidence may arise because banks' depositors, creditors and investors have limited information about a bank's liquidity and financial strength (asymmetrical information) (Jacklin and Bhattacharya, 1988).

In practice, a systemic crisis will occur as a result of a *combination* of the factors above. Inasmuch as a large portion of the banking system is vulnerable to a negative macroeconomic shock and a fall in asset prices, a crisis can be intensified by large, uncollateralised exposures between banks. Furthermore, a loss of confidence may cause a crisis to develop into a systemic crisis. For example, Barings did not lead to a systemic crisis (Logan, 2000), and the reason was that favourable macroeconomic conditions reduced the likelihood of a loss of confidence in the financial system. The LTCM crisis did, however, fuel fears of severe problems in financial markets, both directly because LTCM was an important operator in many markets, and indirectly as a result of a general confidence crisis (Greenspan, 1998). There was already considerable uncertainty in financial markets after the crisis in Asia in 1997/1998 and in Russia in 1998. The Federal Reserve Bank of New York contributed to a smooth resolution of the crisis, with private financial institutions taking over control of the LTCM Fund without the use of government funds.

primarily to assess the banks' capacity to bear potential large losses, not to assess the likelihood that such losses might occur.

However, a more important shortcoming is that the banks have only reported their exposures at three different points in time. Since the exposures may show con-

siderable variations between the reporting dates, the results must be interpreted with caution.

Moreover, there will be overlapping between exposures that are to be reported to the Banking, Insurance and Securities Commission pursuant to the regulation on large exposures, and exposures in the separate survey on

banks' largest counterparty exposures as they are conducted at the same time. To some extent, the banks may therefore be particularly cautious about keeping exposures within the regulation's limits on the reporting dates. The survey of the largest counterparties may thus to some extent show systematically low figures compared with the exposures in the periods between reporting dates. Exposures linked to foreign exchange and securities transactions are, however, not subject to the regulation, which means that the banks can, in principle, have unlimited large exposures in connection with such transactions.³

3 The importance of large, uncollateralised counterparty exposures for the Norwegian banking system

3.1 Uncollateralised exposures by type

Chart 1 provides a summary of total exposures by type for the 15 largest counterparties of each of the 10 banks included in the survey. The Chart shows that:

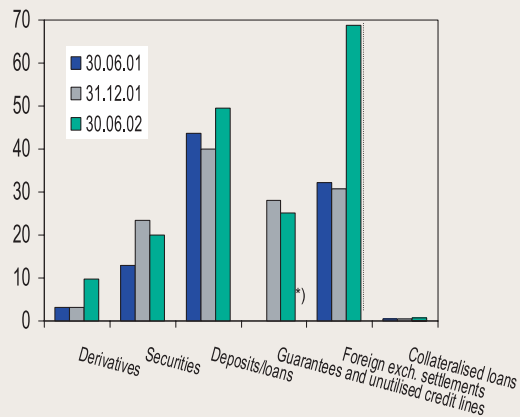
- Positive market value for derivatives came to about NOK 3 billion on the two first reporting dates and close to NOK 10 billion in the most recent survey. Chart 2 shows that legally binding netting agreements sharply reduce actual exposures. As a result, exposures in the form of derivatives are of limited importance compared with other financial instruments, but the value of such exposures can change considerably with pronounced effects as a result of changes in underlying asset prices. Foreign financial institutions are the most important counterparties to such agreements.
- Securities holdings came to NOK 20-30 billion on the two most recent reporting dates, but were considerable lower on the first reporting date because of the omission of one bank. The banks' securities holdings comprise both securities issued by other financial institutions and by non-financial enterprises.
- Uncollateralised exposures in the form of deposits/loans totalled NOK 40-50 billion in all three surveys. Such exposures are the natural result of activity in the interbank market where other Norwegian banks are the main counterparties.
- Guarantees and unutilised credit lines came to NOK 25-30 billion in the two most recent surveys, but were not included in the first survey conducted. Guarantees and credit lines are extended to both financial and non-financial institutions.
- Foreign exchange settlement exposures came to NOK 107.91 and 134 billion, respectively, in the three surveys. This indicates that foreign exchange settlement exposures tend to be high and variable. The main counterparties are international financial institutions, although smaller Norwegian banks use larger

Norwegian banks as counterparties.

- The value of uncollateralised loans to the same counterparties came to NOK 0.4 and 0.7 billion in the three surveys, and can thus be regarded as very limited.

The results of the survey show that the banks have relatively large exposures in the form of securities holdings, uncollateralised deposits/loans, guarantees and unutilised credit lines, but that the absolute largest exposures are foreign exchange settlement exposures. The

Chart 1 15 largest counterparty exposures for different types of exposure.^{1) 2)} In billions of NOK



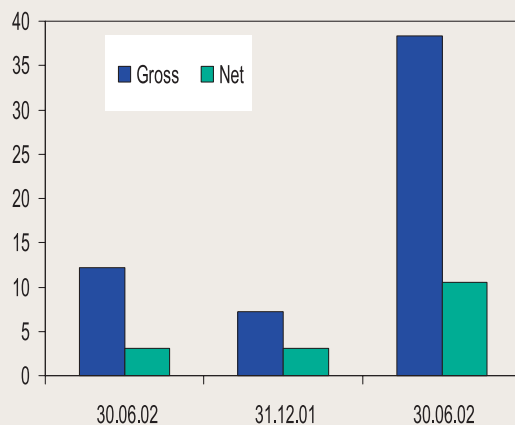
¹⁾ Guarantees and unutilised lines of credit were not included 30.06.01, but in some cases may be included under deposits/loans.

¹⁾ Foreign exchange settlement exposures and collateralised loans (adjusted for value of collateral furnished) are supplementary information.

²⁾ One bank is omitted in connection with reporting 30.06.01.

Sources: Banking, Insurance and Securities Commission and Norges Bank

Chart 2 Sum of gross and net¹⁾ derivatives exposures for the 15 largest counterparties.²⁾ In billions of NOK



¹⁾ Gross derivatives exposures minus the value of legally binding netting agreements or similar collateral

²⁾ One bank is omitted in connection with reporting 30.06.01.

Sources: Banking, Insurance and Securities Commission and Norges Bank

³ The following exposures are not subject to the regulation: i) exposures in foreign exchange transactions that are part of ordinary settlement within 48 hours after payment, and ii) exposures in transactions linked to the purchase and sale of securities that are part of ordinary settlement within five business days after payment date, or after the date of delivery of securities if delivery occurs first.

planned inclusion of the krone in CLS may thus make a considerable contribution to the work aimed at reducing risk in the Norwegian banking sector. Derivatives are of less importance, primarily because of the measures taken to reduce the counterparty risk linked to such agreements.

3.2 What types of counterparties are important for banks?

The distribution of exposures by type of counterparty can influence the risk of a systemic crisis, partly because the risk varies according to type of counterparty. However, an equally important factor is whether the banks in the survey are exposed to the Norwegian banking industry (to banks both included and not included in the survey). If no such exposures exist, a systemic crisis due to liquidity or solvency problems spreading from bank to bank cannot occur. In a closer examination, we have divided counterparties into the following categories: foreign financial institutions, foreign non-financial enterprises, Norwegian non-financial enterprises and Norwegian banks and financial institutions.

The survey shows that the banks included in the survey have large, uncollateralised exposures to different types of counterparties (see Charts 3a and b). Exposures to foreign financial institutions are the largest, and are particularly sizeable when taking account of foreign exchange settlement exposures. Even though some of these financial institutions have been given a lower rating as a result of weak economic developments in recent years, the Norwegian banks' largest counterparties still have high ratings from international rating agencies. The risk of payment default can thus be regarded as marginal. Moreover, the largest uncollateralised exposures

to such counterparties are linked to foreign exchange transactions, and with the inclusion of the Norwegian krone in CLS the credit risk associated with these exposures will be reduced markedly.

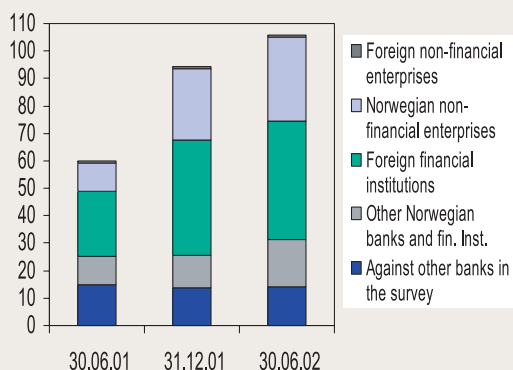
Exposures to Norwegian banks (included and not included in the survey) are the second largest. However, the three surveys would indicate that the largest Norwegian banks' exposures to each other are so small that there is no systemic risk in isolation. An exception to this could be some foreign exchange settlement exposures, but the credit risk associated with these exposures is expected to be eliminated with the inclusion of the krone in CLS. The sum of large and uncollateralised exposures to other Norwegian banks is then likely to fall to less than 50 per cent of the banks' Tier 1 capital.

Exposures to Norwegian non-financial enterprises make up the third largest category of exposures. With the exception of the largest enterprises, they are rarely rated, and the banks' risk exposure to such enterprises can be difficult to assess. However, it can be assumed that the banks' risk exposure to this category of counterparties will largely depend on developments in the Norwegian economy, and for some of the larger enterprises on global economic developments.

The surveyed banks' exposures to foreign non-financial enterprises were smallest. If the exposures in the three surveys are representative, the risk of a bank experiencing serious problems as a result of payment default on the part of one of these counterparties is very limited. Developments in the international economy thus have a limited direct impact on the risk associated with uncollateralised exposures, unless the developments were to give rise to a solvency and liquidity crisis at larger foreign banks.

A significant difference between exposures to domestic and foreign counterparties is that exposures to for-

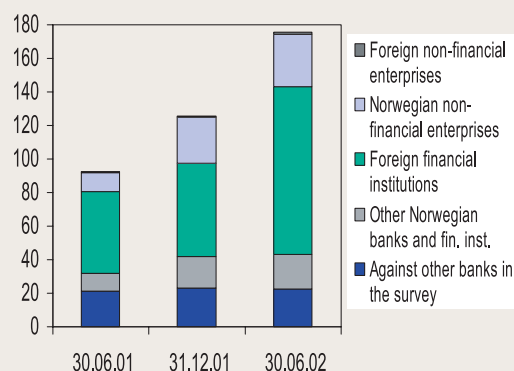
Chart 3a Sum of the 15 largest counterparty exposures grouped by counterparty type.¹⁾ (Ex. foreign exchange settlements and collateralised loans) In billions of NOK



¹⁾ One bank is omitted in connection with reporting 30.06.01.

Sources: Banking, Insurance and Securities Commission and Norges Bank

Chart 3b Sum of the 15 largest counterparty exposures by counterparty type.¹⁾ (Incl. foreign exchange settlements and collateralised loans) In billions of NOK



¹⁾ One bank is omitted in connection with reporting 30.06.01.

Sources: Banking, Insurance and Securities Commission and Norges Bank

foreign counterparties primarily involve foreign exchange transactions. The portion of uncollateralised exposures to foreign counterparties is thus expected to decline when the krone is included in CLS. As a result, Norwegian banks' credit risk exposure to Norwegian counterparties is expected to increase over time, but this does not necessarily imply that liquidity risk will increase to the same extent.

3.3 How diversified is the Norwegian banking system?

If several Norwegian banks have large exposures to one and the same counterparty, can payment default on the part of that counterparty have a direct and serious impact on the Norwegian banking industry? The five largest counterparties to the banks in the survey are shown in Chart 4. The counterparties are ranked by totalling the exposures of each bank in the survey to each counterparty. The exposures involving foreign exchange transactions and collateralised loans were not taken into account in the ranking. The ranking shows that the largest counterparties for the banks in the survey were foreign financial institutions and Norwegian non-financial enterprises.

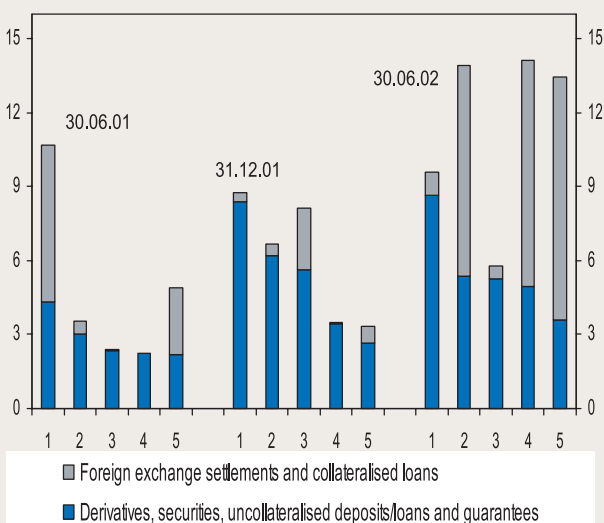
The size of the banks' total exposures to the largest counterparty seem to be broadly the same in the three surveys. In the most recent survey and the second survey, the largest total exposure was to the same counterparty, at NOK 8.6 and 8.4 billion respectively, if one excludes exposures involving foreign exchange trans-

actions and collateralised loans. The size of these exposures cannot be directly compared with the largest total exposure in the first survey, as one of the banks was not included. A comparison of total exposures for the nine banks that were included in each survey does not indicate that there was any considerable difference in the exposure to the largest counterparty in the three surveys.

The survey indicates that it is highly unlikely that one or several banks would be directly affected by a large counterparty becoming illiquid or insolvent. In the most recent survey, the exposures to the largest, second largest and fifth largest counterparty were concentrated on one bank. On the other hand, five banks were exposed to the third largest counterparty and four banks to the fourth largest counterparty. With regard to financial stability, it is unclear whether it is an advantage for exposures to be spread among several banks or not. On the one hand, the risk of a liquidity or solvency crisis at a bank will be reduced if the exposure to a large counterparty is spread among several banks. On the other hand, such a spread of exposure means that there is a risk that several banks will become illiquid or insolvent as a direct result of payment default on the part of a counterparty.

The inclusion of foreign exchange settlement exposures increases the banks' exposures considerably. Each of the counterparties that are ranked as two, four and five will then entail exposures of NOK 14-15 billion for the banks in the survey (see Chart 4). Moreover, the largest foreign exchange settlement exposures are not stated on the ordinary form, but only in the supplementary reporting forms (see Chapter 4). (This is not shown in Chart 4, which only includes the largest counterparties in other types of exposure.) It can therefore be concluded that the banks' largest exposures involved foreign exchange transactions in the three surveys.

Chart 4 The five largest counterparties for banks, ranked by exposures *excl.* foreign exchange settlements and collateralised loans.¹⁾ In billions of NOK



¹⁾ One bank is omitted in connection with reporting 30.06.01.

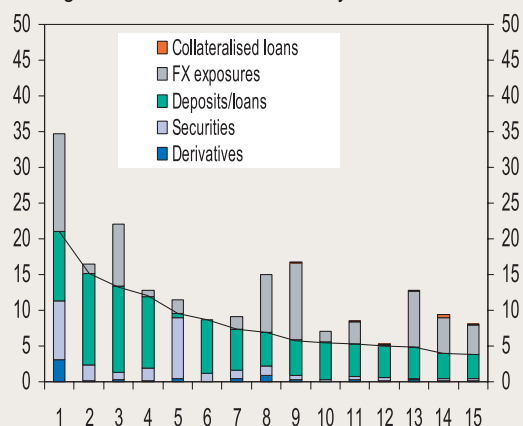
Sources: Banking, Insurance and Securities Commission and Norges Bank

3.4 The importance of the largest counterparty exposures

In addition to the size of the exposures, the risk associated with the banks' uncollateralised exposures will depend on their ability to sustain losses. Measured as a percentage of Tier 1 capital, the banks included in the survey show some increase in exposures to the 15 largest counterparties (see Charts 5a-c). If only the nine banks included in all three surveys are taken into account, the increase is not equally clear. Moreover, some of the uncollateralised exposures are very short-term and can show a pronounced change in the periods between the surveys, particularly foreign exchange settlement exposures. The size of the exposures declines sharply from the largest to the 15th exposure.

In the most recent survey, the banks' average exposure to the largest counterparty accounted for 32 per cent of Tier 1 capital. In this case, uncollateralised

Chart 5a Exposures to the 15 largest counterparties¹⁾, measured as a percentage of Tier 1 capital. Weighted average for the banks in the survey 30.06.01²⁾

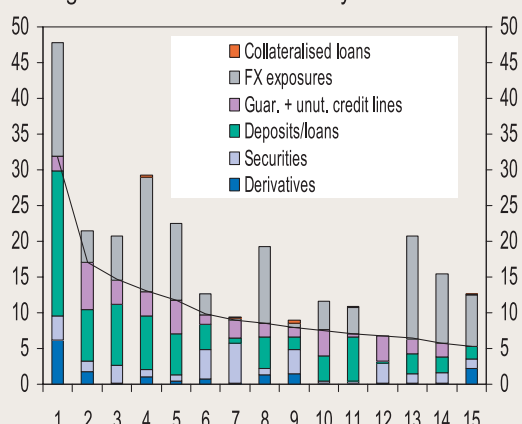


¹⁾ Foreign exchange settlement exposures and collateralised loans (adjusted for value of collateral furnished) are supplementary information and are not taken into account in the ranking.

²⁾ One bank is omitted in connection with reporting 30.06.01.

Sources: Banking, Insurance and Securities Commission and Norges Bank

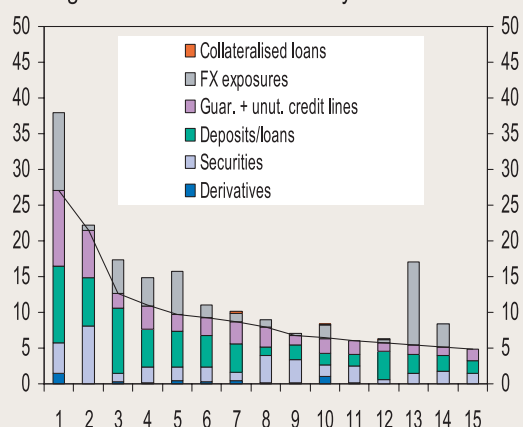
Chart 5c Exposures to the 15 largest counterparties¹⁾, measured as a percentage of Tier 1 capital. Weighted average for the banks in the survey 30.06.02



¹⁾ Foreign exchange settlement exposures and collateralised loans (adjusted for value of collateral furnished) are supplementary information and are not taken into account in the ranking.

Sources: Banking, Insurance and Securities Commission and Norges Bank

Chart 5b Exposures to the 15 largest counterparties¹⁾, measured as a percentage of Tier 1 capital. Weighted average for the banks in the survey 31.12.01



¹⁾ Foreign exchange settlement exposures and collateralised loans (adjusted for value of collateral furnished) are supplementary information and are not taken into account in the ranking.

Sources: Banking, Insurance and Securities Commission and Norges Bank

deposits/loans were particularly large, accounting for 20 per cent of Tier 1 capital while derivatives accounted for 6 per cent. When foreign exchange settlement exposures and uncollateralised loans are included, the exposure to the largest average counterparty increases to as much as 48 per cent of Tier 1 capital. This is primarily attributable to foreign exchange settlement exposures.

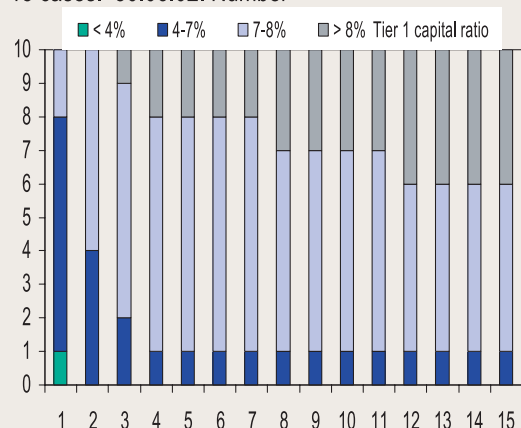
There are fairly wide variations among the banks. For example, the most exposed bank would have lost 33, 53 and 57 per cent, respectively, of Tier 1 capital on the three survey dates if the bank's largest counterparty had become insolvent, with no recovery.

Charts 6a and b show the distribution of Tier 1 capital ratios after losses for each of the ten banks included in the survey in the case of a loss of each of the 15 largest exposures with a direct effect on Tier 1 capital. Chart 6a does not include foreign exchange settlement exposures and uncollateralised loans. In this case, the Tier 1 capital ratio would fall below the minimum statutory requirement of 4 per cent for only one bank if the largest exposure is lost.⁴ If the Bank does not satisfy the statutory minimum requirement, measures are implemented by the Banking, Insurance and Securities Commission. The question can be raised as to how a bank's creditor or investor will react to such a situation, or to a situation where the bank's earnings deteriorate and the bank barely satisfies the statutory minimum requirement.

If the largest counterparty exposure is lost, seven banks will have a Tier 1 capital ratio between 4 and 7 per cent. With Tier 1 capital ratio below 7 per cent, the Banking, Insurance and Securities Commission's minimum requirement for raising subordinated term debt is not satisfied. This implies a limitation on the banks' possibilities for satisfying the minimum capital adequacy requirement of 8 per cent. Two banks will have a Tier 1 capital ratio between 7 and 8 per cent if the largest counterparty exposure is lost. These banks would have

⁴ Pursuant to Regulation no. 875 of 22 October 1990 relating to minimum capital adequacy requirements applying to financial institutions, etc., the institutions are to have a capital adequacy ratio of 8 per cent of the basis of calculation, cf. §2. Regulation no. 435 of 1 June 1990 defined the required capital composition. According to this regulation, Tier 2 capital shall not make up more than 100 per cent of Tier 1 capital, cf. §8. This means that Tier 1 capital cannot fall below 4 per cent. The same section also stipulates that subordinated loan capital with a fixed maturity shall not exceed 50 per cent of Tier 1 capital. The size of subordinated loan capital and its composition will determine the rules that will be binding if a loss results in a reduction in Tier 1 capital. For example, even if the Tier 1 capital ratio exceeds 4 per cent, the 8 per cent capital adequacy requirement may be breached if the bank is unable to raise the supplementary capital required to fill the gap. If the Tier 1 capital ratio falls below 4 per cent, the bank will have breached the minimum total capital adequacy requirement of 8 per cent.

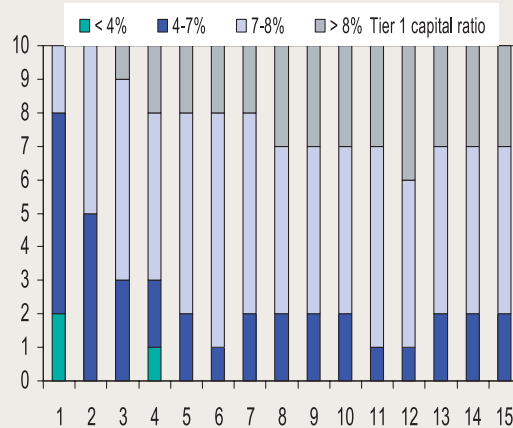
Chart 6a Effect on the Tier 1 capital ratio of the loss of the exposures against each of the 15 largest counterparties¹⁾ (*excl.* foreign exchange settlements and collateralised loans). Banks in the survey (10) are distributed by Tier 1 capital ratio after loss in each of the 15 cases. 30.06.02. Number



¹⁾ It is assumed that there is no dividend from the estate.

Sources: Banking, Insurance and Securities Commission and Norges Bank

Chart 6b Effect on the Tier 1 capital ratio of the loss of the exposures against each of the 15 largest counterparties¹⁾ (*incl.* foreign exchange settlements and collateralised loans). Banks in the survey (10) are distributed by Tier 1 capital ratio after loss in each of the 15 cases. 30.06.02. Number



¹⁾ It is assumed that there is no dividend from the estate.

Sources: Banking, Insurance and Securities Commission and Norges Bank

the possibility of raising subordinated term debt even after such a potential loss. None of the banks would satisfy the capital adequacy requirements with Tier 1 capital alone. If a less important counterparty were to default, the effect on Tier 1 capital would naturally be more limited.

If foreign exchange settlement exposures and collateralised loans are included, potential losses increase considerably measured as a percentage of Tier 1 capital. Several of the banks in the survey would then have a Tier 1 capital ratio that is lower than the minimum statutory requirement of 4 per cent and the Banking, Insurance and Securities Commission's 7 per cent minimum requirement for raising subordinated term debt (see Chart 6b). Of the banks that satisfy the minimum Tier 1 capital requirement, several would have a total capital ratio that is below the minimum statutory requirement of 8 per cent.

The examples in this section illustrate that losses may be considerable if one or several of the banks' 15 largest counterparties default. The losses should be regarded as a ceiling. Normally, dividend payments from an estate in bankruptcy will substantially reduce losses. Nor will a loss reduce Tier 1 capital to the same extent if the bank has a positive result after losses from other activities.

3.5 Large counterparties and banks' liquidity risk

The survey shows the banks' exposures to their largest counterparties, and thus provides a basis for assessing the liquidity problems that a bank may face if a large counter-

party defaults. However, a problem here is that the maturity structure of the counterparty's obligations is not included in the survey, which makes it difficult to determine the associated liquidity effect on a given day. Moreover, it is difficult to make any certain assumptions about the effect on market confidence of large losses at bank as a result of counterparty default. If market confidence remains intact, the bank can procure liquidity by issuing bonds, for example, or by direct funding in the interbank market. However, if a bank loses market confidence, it may not even be able to cope with a minor liquidity problem. The previous banking crisis would indicate that foreign banks in particular tend to be more cautious about lending to Norwegian banks in turbulent periods.

The liquidity problems a bank may encounter in the NOK market can to some extent be assessed by comparing available liquidity with the size of the banks' exposures. In this context, a bank's liquidity refers to a bank's available funds in Norges Bank's Settlement System (NBSS), i.e. the bank's balance on its account in Norges Bank in addition to its access to borrowing funds against collateral furnished. If we assume that the largest counterparty's obligations mature on the same day, and that the counterparty cannot fulfil its obligations, most of the banks in the survey will show a liquidity reduction equivalent to 20-30 per cent of the banks' liquidity in NBSS. Some of the larger banks may, however, experience a somewhat larger decline in liquidity due to large foreign exchange settlement exposures.

The quantity of available liquidity varies widely among Norwegian banks, and the banks' ability to cope with

liquidity problems as a result of counterparty default thus depends on the timing. If this occurs when liquidity is ample, the bank may have sufficient liquidity to handle the situation alone. However, if this occurs in a period of tight liquidity, it may prove difficult to raise loans in the interbank market. However, the data would indicate that in most cases the bank will be able to cope with a reduction in liquidity as a result of a failure on the part of the largest counterparty to settle at the agreed time.

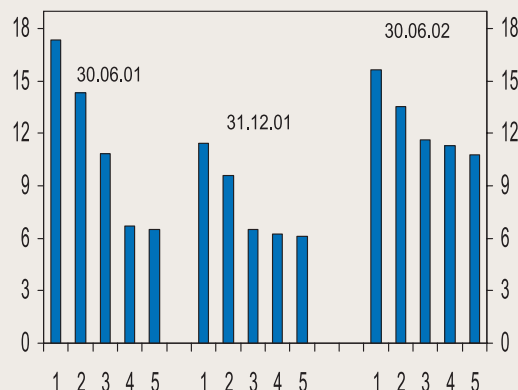
4 Foreign exchange settlement risk and CLS

In a foreign exchange transaction, the parties settle in two independent national payment systems. This involves an uncollateralised exposure for the banks as they normally deliver the foreign exchange sold before receiving confirmation of the foreign exchange purchased. Foreign exchange transactions involve particularly large exposures for banks (see Chart 7) The banks must therefore report their foreign exchange settlement exposures on a separate form. They are only to report exposures to their 10 largest counterparties, as the number of counterparties is normally lower for foreign exchange transactions than transactions involving other financial instruments. Generally, the counterparties are not the same as in the first part of the survey (see page 5), but may involve some of the same counterparties in cases where the banks in the survey have substantial exposures *both* in foreign exchange transactions and in the form of other types of exposures that are included in the survey (uncollateralised deposits, derivatives, etc.). The figures will therefore deviate from those in the rest of the article.

For the banks in the survey, total exposures in connection with foreign exchange transactions came to NOK 217, 147 and 195 billion, respectively, in the three surveys.⁵ The risk to the Norwegian banking industry linked to these exposures will partly depend on how diversified the counterparties are, i.e. whether the transactions are concentrated on a few or many counterparties. Chart 7 shows that the largest overall exposure for 8 large Norwegian banks to one single counterparty was NOK 17.4, 11.4 and 15.6 billion in the three surveys. The banks' capacity for coping with such a loss will partly depend on the size of their Tier 1 capital. In the most extreme case, one bank would have lost 120, 41 and 71 per cent of its Tier 1 capital in the three surveys, assuming that the largest counterparty had become insolvent, with no recovery. Even if this may seem improbable, it should nevertheless be noted that the banks' credit risk linked to foreign exchange settlement is considerable.

With the aim of limiting this type of credit risk, large banks from several countries collaborated to establish the foreign exchange settlement system Continuous Linked Settlement (CLS). The main feature of CLS is Payment versus Payment (PvP) in the settlement of for-

Chart 7 Foreign exchange settlement exposures against the same counterparty for 8¹⁾ large Norwegian banks. Five largest counterparties. In billions of NOK



¹⁾ Two of the banks supplied supplementary information about foreign exchange settlements that could not be coordinated with the others. The magnitude for these banks, however, is very little.

Sources: Banking, Insurance and Securities Commission and Norges Bank

foreign exchange transactions. Banks that participate in CLS will settle transactions in a common multi-currency bank, CLS Bank (CLSB). In CLSB, participating banks will have an account in all the currencies included in CLS. Banks' payments in CLSB will be between CLSB's accounts in the respective central banks. A transaction between two banks will only be settled and the amount disbursed if both parties have fulfilled their obligations. This means that a bank will not receive foreign exchange from a counterparty before it has fulfilled its obligations. CLS will thereby eliminate most of the credit risk in foreign exchange transactions.

At present, only 7 currencies are included in CLS⁶, but CLS has decided to include the Norwegian krone. Even if the krone is not yet included in CLS, Norwegian banks can participate in settlement involving other currencies included in CLS. However, settlements in CLS require that both parties settle their part of the transaction in CLS, and since Norwegian banks' foreign exchange transactions normally involve Norwegian kroner, the potential risk reduction for Norwegian banks will be limited in the first round. Once the Norwegian krone is included in CLS in the first half of 2003, most of the credit risk linked to Norwegian banks' foreign exchange transactions will be eliminated next year if Norwegian banks use CLS.

The liquidity risk linked to banks' foreign exchange settlement exposures will not be reduced to the same extent, however. If a bank does not use CLS, all or portions of a bank's foreign exchange transactions will not be settled in CLS. This means that banks' counterparties will see changes in their positions in individual currencies, and that they may not have sufficient cover for

⁵ In the first reporting round, one bank submitted figures for exposures that had been registered one month later than the other banks.

⁶ Australian dollar (AUD), Canadian dollar (CAD), Swiss franc (CHF), euro (EUR), pound sterling (GBP), Japanese yen (JPY) and US dollar (USD)

some currencies even if they have paid in a sufficient amount according to their own payment plan. To ensure that as many transactions as possible are settled, CLS will send a notice to such banks that they must increase the amount in the relevant currencies. If a bank is not in a position to increase the amount sufficiently in such a situation within a relatively limited period, transactions with other counterparties will not be settled. If CLS is to function as intended, it is therefore essential that the banks participating in CLS have a sound liquidity management policy.

5 Summary

A smoothly functioning interbank market promotes an efficient banking industry, but the exposures that arise can have destabilising effects if they are substantial. The results of our three surveys are to a large extent in line with the Riksbank's findings, and show that few banks have exposures that are so large that they would result in serious solvency or liquidity problems should a large counterparty fail to settle. This is the case even if the totality of one exposure is lost. The one exception to this is some of the banks' foreign exchange settlement exposures.

Uncollateralised foreign exchange settlement exposures are at times considerable and may exceed the banks' Tier 1 capital. This type of exposure is not subject to any extensive regulation, unlike most other types of financial instruments. Moreover, foreign exchange transactions are concentrated on a few counterparties, with the risk of direct contagion of liquidity and solvency problems to Norwegian banks at the same time if one of these counterparties defaults or does not settle at the agreed time. However, there seems to be little risk that large counterparties to foreign exchange transactions will create problems for Norwegian banks. These counter-

parties are all large international financial institutions with a solid rating. However, recent negative developments in the global economy have also affected these institutions, which indicates that this risk is not negligible.

The Norwegian krone will be included in CLS in the course of the first half of 2003. According to the survey, more than half of the uncollateralised exposures involve counterparties to foreign exchange transactions. The inclusion of the krone in CLS is thus expected to reduce substantially uncollateralised exposures to foreign counterparties. CLS will have a more limited impact on exposures to domestic counterparties, albeit with some reduction in the credit risk linked to exposures to these counterparties as well. Liquidity risk will remain unchanged, and may even increase when the krone is included in CLS.

The fairly solid capital position of Norwegian banks is one important reason why uncollateralised counterparty exposures do not represent a substantial systemic risk. If the banks adapt by reducing their capital ratios to the minimum requirement set out in the regulation, or their capital ratios fall for other reasons, some banks and the banking system as a whole may become more vulnerable to negative shocks. It may thus be appropriate to monitor developments in the banks' largest counterparty exposures as part of the work to promote financial stability. If counterparty exposures reach a high level, for example in relation to the banks' capital base, there may be a need for measures to reduce risk in the form of netting agreements and increased collateral requirements. Moreover, if the authorities are to manage a crisis successfully at one or several banks, the direct contagion effects have to be determined. A survey of crisis banks' largest counterparty exposures would constitute an important source of information in such a situation.

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Norges Bank publishes more detailed statistics on its website, www.norges-bank.no. The Bank's statistics calendar, which shows future publication dates, is only published on this website.

Financial institution balance sheets

Table 1. Norges Bank. Balance sheet.^{1) 2)} In millions of NOK

	31.12.2002	28.02.2003	31.03.2003	30.04.2003
FINANCIAL ASSETS				
Foreign assets	841 614	894 844	932 768	938 538
International reserves ^{3) 4)}	224 226	222 148	241 859	231 318
Government Petroleum Fund investments	608 475	663 211	681 873	698 053
Other foreign assets	8 913	9 485	9 036	9 167
Domestic claims	16 120	16 357	15 906	15 895
Bearer bills	2 088	3 402	2 712	2 935
Bearer bonds	10 750	10 721	10 615	10 693
Loans to banks	3	3	147	3
Loans, deposits and earned interest	2 121	1 397	1 518	1 905
Other domestic claims	1 158	834	914	359
Stocks and assets	1 597	1 542	1 540	1 530
Stocks	22	22	21	19
Assets	1 575	1 520	1 519	1 511
Costs	0	23 927	34 831	42 575
TOTAL ASSETS	859 331	936 670	985 045	998 538
LIABILITIES AND CAPITAL				
Foreign liabilities	62 773	65 891	71 491	69 683
IMF holdings of NOK	8 888	9 460	9 011	9 141
Other foreign liabilities	53 885	56 431	62 480	60 542
Counterpart of SDR allocation	1 583	1 648	1 671	1 635
Notes and coins in circulation	44 955	40 236	39 718	40 151
Domestic deposits	720 367	766 462	787 129	805 280
Treasury	52 492	38 115	45 463	85 033
Government Petroleum Fund	608 475	663 211	681 873	698 053
Banks	59 053	64 964	59 570	22 043
Other deposits	347	172	223	151
Interest accrued, not yet due, to the Treasury	0	213	274	418
Other domestic debt	4 214	4 481	13 546	4 881
Equity	25 439	25 439	25 439	25 439
Valuation adjustments	0	24 683	33 638	34 738
Income	0	7 617	12 139	16 313
TOTAL LIABILITIES AND CAPITAL	859 331	936 670	985 045	998 538
Items not included in this balance sheet:				
Foreign currency sold forward	14 550	80 122	24 108	20 998
Foreign currency purchased forward	15 806	57 430	25 906	25 369
Derivatives sold	159 417	141 294	173 546	134 196
Derivatives purchased	168 005	172 404	211 863	159 417
Allotted, unpaid shares in the BIS	310	310	310	310

¹⁾ Some presentational changes have been made in the monthly balance sheet report, to apply as from April 2003.

The periods shown for comparison have been revised accordingly.

²⁾ The periods shown for comparison in Table 2 have not been revised.

³⁾ International reserves include fixed income instruments subject to repurchase agreements.

⁴⁾ Securities and gold are valued at real value.

Table 2. Norges Bank. Specification of international reserves¹⁾. In millions of NOK

	31.12.2001	31.12.2002	28.02.2003	31.03.2003	30.04.2003
Gold	2 346	2 806	2 941	2 870	2 525
Special drawing rights in the IMF	3 192	2 190	2 312	2 345	2 253
Reserve position in the IMF	6 533	6 886	6 959	7 641	7 150
Loans to the IMF	1 165	834	854	844	813
Bank deposits abroad	55 447	87 914	72 019	90 793	86 523
Foreign Treasury bills	-	567	1 122	863	824
Foreign certificates	-	-	1 028	1 159	1 527
Foreign bearer bonds ²⁾	117 275	104 573	116 938	114 249	116 120
Foreign shares	22 952	16 357	15 934	18 893	20 104
Accrued interest	2 628	2 053	1 911	2 167	-6 519
Short-term assets	-	-	-	-	-
Total	211 538	224 180	222 018	241 824	231 320

¹⁾ See footnotes in Table 1.

²⁾ Includes bonds subject to repurchase agreements

Source: Norges Bank

Table 3. State lending institutions. Balance sheet. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Cash holdings and bank deposits	2 456	2 254	2 439	2 803	2 284
Total loans	182 931	183 194	186 121	188 275	189 366
Of which:					
To the general public ¹⁾	180 654	180 934	183 852	185 932	188 608
Claims on the central government and social security administration	-	-	-	-	-
Other assets	10 132	9 000	7 914	6 217	9 794
Total assets	195 519	194 448	196 474	197 295	201 444
Bearer bond issues	44	39	38	34	33
Of which:					
In Norwegian kroner	44	39	38	34	33
In foreign currency	-	-	-	-	-
Other loans	182 622	182 964	185 776	187 482	191 156
Of which:					
From the central government and social security administration	182 622	182 964	185 776	187 482	191 156
Other liabilities, etc.	5 968	4 549	6 165	5 317	5 921
Share capital, reserves	6 885	6 896	4 495	4 462	4 334
Total liabilities and capital	195 519	194 448	196 474	197 295	201 444

¹⁾ Includes local government administration, non-financial enterprises and households

Sources: Statistics Norway and Norges Bank

Table 4. Commercial and savings banks. Balance sheet. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Cash	4 599	4 644	4 393	5 063	4 030
Deposits with Norges Bank	50 756	39 084	54 048	57 760	58 547
Deposits with commercial and savings banks	16 750	19 366	14 807	16 026	17 763
Deposits with foreign banks	48 820	43 561	21 194	29 596	23 390
Treasury bills	3 834	3 440	5 898	4 289	6 395
Other short-term paper	13 099	14 206	15 104	15 770	10 034
Government bonds etc. ¹⁾	5 740	5 174	8 644	3 128	2 576
Other bearer bonds	84 733	86 001	89 697	93 383	97 752
Loans to foreign countries	51 208	49 960	49 303	46 264	49 024
Loans to the general public	1 046 090	1 073 189	1 089 520	1 096 291	1 117 134
Of which:					
In foreign currency	88 531	84 160	85 118	81 765	84 446
Loans to mortgage and finance companies, insurance etc. ²⁾	84 110	87 059	94 208	96 485	96 749
Loans to central government and social security admin.	134	369	434	671	557
Other assets ³⁾	98 603	100 495	94 411	104 281	153 178
Total assets	1 508 476	1 526 548	1 541 661	1 569 007	1 637 129
Deposits from the general public	714 090	734 771	723 986	757 519	758 326
Of which:					
In foreign currency	22 759	21 553	21 387	20 129	21 768
Deposits from commercial and savings banks	25 938	22 498	18 503	19 369	21 917
Deposits from mortg. and fin. companies, and insurance etc. ²⁾	40 509	52 998	39 453	46 049	45 463
Deposits from central government, social security admin. and state lending institutions	8 204	8 696	7 729	8 611	9 652
Funds from CDs	67 251	72 744	75 165	78 559	80 666
Loans and deposits from Norges Bank	487	705	596	1 035	1 407
Loans and deposits from abroad	17 029	16 291	15 302	14 221	14 898
Other liabilities	531 053	511 700	553 760	538 263	600 746
Share capital/primary capital	25 328	25 839	28 106	28 157	28 399
Allocations, reserves etc.	75 719	75 688	73 242	72 430	74 070
Net income	2 868	4 618	5 819	4 794	1 585
Total liabilities and capital	1 508 476	1 526 548	1 541 661	1 569 007	1 637 129
Specifications:					
Foreign assets	146 581	151 662	118 426	125 338	137 497
Foreign debt	394 688	360 357	377 881	370 392	415 804

¹⁾ Includes government bonds and bonds issued by lending institutions.

²⁾ Includes mortgage companies, finance companies, life and non-life insurance companies and other financial institutions.

³⁾ Includes unspecified loss provisions (negative figures) and loans and other claims not specified above.

Sources: Statistics Norway and Norges Bank

Table 5. Commercial and savings banks. Loans and deposits by sector¹⁾. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Loans to:					
Local government (incl. municipal enterprises)	10 632	10 224	10 267	10 107	9 817
Non-financial enterprises ²⁾	365 993	369 751	366 660	358 995	366 179
Households ³⁾	669 465	693 213	712 593	727 189	741 138
Total loans to the general public	1 046 090	1 073 189	1 089 520	1 096 291	1 117 134
Deposits from:					
Local government (incl. municipal enterprises)	47 519	46 315	42 381	43 925	42 627
Non-financial enterprises ²⁾	207 452	207 857	212 912	225 443	219 261
Households ³⁾	459 119	480 599	468 693	488 152	496 438
Total deposits from the private sector and municipalities	714 090	734 771	723 986	757 519	758 326

¹⁾ Includes local government administration, non-financial enterprises and households.

²⁾ Includes private enterprises with limited liability etc., and state enterprises.

³⁾ Includes sole proprietorships, unincorporated enterprises and wage earners, etc.

Sources: Statistics Norway and Norges Bank

Table 6. Mortgage companies. Balance sheet. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Cash and bank deposits	5 011	4 405	5 735	3 535	4 291
Notes and certificates	1 683	1 359	289	3 652	2 869
Government bonds ¹⁾	908	915	1 097	656	657
Other bearer bonds	51 023	58 931	54 788	49 829	51 650
Loans to:					
Financial enterprises	23 867	24 465	24 834	28 007	30 150
The general public ²⁾	163 955	165 700	168 558	182 005	187 251
Other sectors	11 106	11 796	10 230	9 907	9 435
Others assets ³⁾	-1 980	-1 041	2 361	1 204	4 413
Total assets	255 573	266 530	267 892	278 795	290 716
Notes and certificates	31 607	34 145	33 295	30 111	33 809
Bearer bonds issues in NOK ⁴⁾	59 446	60 651	62 151	63 337	60 531
Bearer bond issues in foreign currency ⁴⁾	81 688	85 404	83 090	89 301	95 463
Other funding	67 331	70 832	73 542	80 022	83 386
Equity capital	11 705	11 881	12 134	11 963	12 345
Other liabilities	3 796	3 617	3 680	4 061	5 182
Total liabilities and capital	255 573	266 530	267 892	278 795	290 716

¹⁾ Includes government bonds and bonds issued by state lending institutions.

²⁾ Includes local government administration, non-financial enterprises and households.

³⁾ Foreign exchange differences in connection with swaps are entered net in this item. This may result in negative figures for some periods.

⁴⁾ Purchase of own bearer bonds deducted.

Sources: Statistics Norway and Norges Bank

Table 7. Finance companies. Balance sheet. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Cash and bank deposits	2 011	1 847	1 481	1 861	1 651
Notes and certificates	105	104	114	97	123
Bearer bonds	20	0	0	0	0
Loans ¹⁾ (gross) to:	85 636	86 746	87 086	86 433	88 934
The general public ²⁾ (net)	81 537	83 101	83 675	83 239	85 740
Other sectors (net)	3 885	3 455	3 205	3 051	3 010
Other assets ³⁾	2 318	2 213	2 480	2 283	2 459
Total assets	90 090	90 910	91 161	90 674	93 167
Notes and certificates	550	675	600	600	0
Bearer bonds	115	115	65	65	65
Loans from non-banks	10 010	10 108	10 287	10 673	10 979
Loans from banks	65 321	63 721	63 537	62 940	64 945
Other liabilities	6 649	8 300	8 541	8 014	9 369
Capital, reserves	7 445	7 991	8 131	8 382	7 809
Total liabilities and capital	90 090	90 910	91 161	90 674	93 167

¹⁾ Includes subordinated loan capital and leasing finance.

²⁾ Includes local government administration, non-financial enterprises and households.

³⁾ Includes specified and unspecified loan loss provisions (negative figures)

Source: Norges Bank

Table 8. Life insurance companies. Main assets. In millions of NOK

	31.12.2001	31.03.2002	30.06.2002	30.09.2002	31.12.2002
Cash and bank deposits	13 467	16 315	28 875	14 956	22 494
Norwegian notes and certificates	29 699	31 834	33 710	33 146	37 337
Foreign Treasury bills and notes	1 189	3 002	2 327	7 735	13 084
Norwegian bearer bonds	101 819	106 898	110 717	112 449	121 379
Foreign bearer bonds	83 147	79 495	84 144	105 789	96 277
Norwegian shares, units, primary capital certificates and interests	48 478	45 802	36 262	32 295	31 398
Foreign shares, units, primary capital certificates and interests	56 271	61 490	47 309	33 189	30 236
Loans to the general public ¹⁾	24 483	23 014	23 173	23 201	23 123
Loans to other sectors	934	738	1 447	680	656
Other specified assets	53 214	54 083	51 242	56 971	54 316
Total assets	412 701	422 671	419 206	420 411	430 300

¹⁾ Includes local government administration, non-financial enterprises and households

Source: Statistics Norway

Table 9. Non-life insurance companies. Main assets. In millions of NOK

	31.12.2001	31.03.2002	30.06.2002	30.09.2002	31.12.2002
Cash and bank deposits	6 454	7 454	7 539	7 285	7 860
Norwegian notes and certificates	3 631	5 057	5 647	6 055	7 949
Foreign notes and certificates	249	372	405	862	860
Norwegian bearer bonds	13 111	13 454	16 308	15 730	14 710
Foreign bearer bonds	13 005	13 244	13 706	14 582	13 823
Norwegian shares, units, primary capital certificates, interests	10 826	9 983	8 244	7 312	6 767
Foreign shares, units, primary capital certificates, interests	11 658	11 024	7 625	7 715	4 320
Loans to the general public ¹⁾	935	854	826	875	919
Loans to other sectors	147	144	349	138	212
Other specified sectors	40 452	45 498	41 916	41 499	40 575
Total assets	100 468	107 084	102 565	102 053	97 995

¹⁾ Includes local government administration, non-financial enterprises and households.

Source: Statistics Norway

Table 10a. Securities funds' assets. Market value. In millions of NOK

	31.12.2001	31.03.2002	30.06.2002	30.09.2002	31.12.2002
Bank deposits	3 734	4 171	4 769	3 566	3 713
Treasury bills, etc. ¹⁾	717	957	1 184	1 525	2 928
Other Norwegian short-term paper	20 104	19 014	19 440	21 541	21 140
Foreign short-term paper	242	0	0	0	0
Government bonds, etc. ²⁾	4 163	4 322	3 949	4 144	2 776
Other Norwegian bonds	25 093	24 679	25 014	24 730	23 883
Foreign bonds	2 193	0	0	0	0
Norwegian equities	31 106	32 948	26 795	19 327	20 017
Foreign equities	43 401	47 943	38 969	31 188	32 385
Other assets	2 320	2 313	2 130	1 698	1 711
Total assets	133 073	136 346	122 250	107 721	108 553

¹⁾ Comprises Treasury bills and other certificates issued by state lending institutions.

²⁾ Comprises government bonds and bonds issued by state lending institutions.

Sources: Norwegian Central Securities Depository and Norges Bank

Table 10b. Securities funds' assets under management by holding sector. Market value.
In millions of NOK

	31.12.2001	31.03.2002	30.06.2002	30.09.2002	31.12.2002
Central government and social security administration	275	354	379	414	421
Commercial and savings banks	3918	3358	3442	2672	2631
Other financial corporations	19184	15770	12762	10623	11175
Local government admin. and municipal enterprises	7893	7860	8106	7953	8058
Other enterprises	25240	23859	21840	20742	21116
Households	72605	80392	71165	61212	60922
Rest of the world	2741	3536	3340	2889	3012
Total assets under management	131 856	135 129	121 034	106 505	107 337

Sources: Norges Bank and the Norwegian Central Securities Depository

Securities statistics

Table 11. Shareholdings registered with the Norwegian Central Securities Depository (VPS), by holding sector. Estimated market value. In millions of NOK

Holding sector	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Central government and social security administration	271 787	238 711	198 032	214 025	196 897
Norges Bank	0	0	0	0	0
State lending institutions	4	4	3	13	14
Savings banks	3 393	3 065	2 930	3 007	2 886
Commercial banks	13 983	10 852	6 976	6 834	18 007
Insurance companies	37 338	26 253	21 378	19 756	17 917
Mortgage companies	201	81	67	71	34
Finance companies	5	4	3	3	2
Mutual funds	36 460	29 221	20 820	21 637	18 491
Other financial enterprises	31 512	30 829	38 781	49 245	47 802
Local government administration and municipal enterprises	5 528	5 252	3 746	3 355	3 182
State enterprises	10 226	8 608	7 705	8 340	7 830
Other private enterprises	163 783	141 432	128 089	129 578	117 654
Wage-earning households	54 208	45 330	39 778	41 941	40 108
Other households	2 765	2 354	1 862	1 918	1 791
Rest of the world	278 695	247 474	198 284	186 552	151 501
Unspecified sector	1 865	949	1 011	943	705
Total	911 755	790 420	669 464	687 217	624 820

Sources: Norwegian Central Securities Depository and Norges Bank

Table 12. Share capital and primary capital certificates registered with the Norwegian Central Securities Depository, by issuing sector. Nominal value. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Savings banks	9 126	9 126	11 280	11 284	11 284
Commercial banks	15 712	15 724	15 725	15 595	15 845
Insurance companies	1 124	1 124	2 758	2 525	2 525
Mortgage companies	2 194	2 194	2 194	2 194	2 194
Finance companies	5	5	5	5	5
Other financial enterprises	11 411	11 097	19 806	20 048	20 238
Local government administration and municipal enterprises	2	2	2	2	2
State enterprises	18 425	18 508	18 463	18 468	18 268
Other private enterprises	45 105	45 265	45 019	44 817	46 108
Rest of the world	6 884	5 571	5 677	5 489	5 716
Unspecified sector	0	0	0	0	0
Total	109 987	108 618	120 929	120 426	122 184

Sources: Norwegian Central Securities Depository and Norges Bank

Table 13. Net purchases and net sales (-) in the primary and secondary markets of shares registered with the Norwegian Central Securities Depository, by purchasing, selling and issuing sector¹⁾. Estimated market value. In millions of NOK

Issuing sector	Purchasing/ selling sector																	Total ²⁾
	Cent.gov't and social security	Norges Bank	State lending inst.	Sav. banks	Comm. banks	Insur. companies	Mort. companies	Fin. companies	Secur. funds	Other financ. enterpr.	Local gov't & munic. enterpr.	State enterpr.	Other private enterpr.	Wage-earning households	Other households	Rest of the world	Unsp. sector	
Comm. banks	-1	0	0	-14	1 705	-166	0	0	-70	-56	-31	0	-120	-249	-10	-281	-7	701
Insurance companies	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-1	0	0
Mortgage companies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finance companies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other financial enterpr.	-15	0	0	-11	590	120	1	0	23	154	0	0	-53	-101	-9	-487	-2	210
Local gov't. admin. and municipal enterpr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
State enterprises	1	0	0	-2	3 771	118	-3	0	-167	23	1	4	47	4	0	-3 781	0	15
Other private enterpr.	100	0	1	136	6 116	215	-19	0	-801	259	1	-64	714	-261	52	-4 771	-6	1 673
Rest of the world	-2	0	0	-12	612	89	2	0	110	-63	-3	0	-396	-5	-9	-344	6	-14
Unspecified sector	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	84	0	1	98	12 794	375	-18	0	-905	317	-32	-60	192	-612	23	-9 664	-9	2 585

¹⁾ Issues at issue price + purchases at market value – sales at market value – redemption value.

²⁾ Total shows net issues in the primary market. Purchases and sales in the secondary market result in redistribution between owner sectors, but add up to 0.

Sources: Norwegian Central Securities Depository and Norges Bank

Table 14. Bondholdings in NOK registered with the Norwegian Central Securities Depository, by holding sector. Market value. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Central government and social security administration	26 484	26 865	26 175	26 709	24 658
Norges Bank	5 610	7 030	6 710	7 034	6 765
State lending institutions	209	193	183	166	162
Savings banks	28 357	30 617	35 112	33 813	34 185
Commercial banks	38 549	39 727	42 225	44 209	42 956
Insurance companies	163 016	168 546	170 384	182 923	195 999
Mortgage companies	13 159	13 671	15 575	14 968	15 084
Finance companies	27	30	27	67	65
Mutual funds	29 602	29 653	29 554	28 227	30 124
Other financial enterprises	3 534	4 198	3 706	4 061	7 650
Local government administration and municipal enterprises	14 215	15 819	18 640	18 591	20 350
State enterprises	4 105	2 317	2 600	2 951	3 060
Other private enterprises	23 329	23 191	22 624	22 092	23 544
Wage-earning households	15 841	16 390	16 470	16 512	16 987
Other households	4 814	5 082	5 154	5 042	5 846
Rest of the world	57 974	59 773	66 338	66 810	72 625
Unspecified sector	973	689	708	574	580
Total	429 799	443 790	462 187	474 748	500 640

Sources: Norwegian Central Securities Depository and Norges Bank

Table 15. Bondholdings in NOK registered with the Norwegian Central Securities Depository, by issuing sector. Nominal value. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Central government and social security administration	132 785	139 771	141 793	124 640	139 843
State lending institutions	252	231	220	199	194
Savings banks	64 969	71 795	75 289	77 604	81 534
Commercial banks	63 694	64 116	67 557	68 756	70 310
Insurance companies	990	915	915	435	435
Mortgage companies	66 187	67 012	69 988	70 703	66 840
Finance companies	550	550	500	500	500
Other financial enterprises	2 300	2 300	2 300	3 796	3 708
Local government administration and municipal enterprises	44 411	43 590	44 402	43 981	48 756
State enterprises	14 398	14 688	15 621	35 060	33 454
Other private enterprises	36 716	38 186	37 020	36 338	36 476
Households	23	23	23	81	196
Rest of the world	10 191	10 001	11 721	13 332	13 780
Unspecified sector	0	0	0	0	0
Total	437 466	453 178	467 349	475 425	496 026

Sources: Norwegian Central Securities Depository and Norges Bank

Table 16. Net purchases and net sales (-) in the primary and secondary markets for NOK-denominated bonds registered with the Norwegian Central Securities Depository, by purchasing, selling and issuing sector.¹⁾ Market value. In millions of NOK

2003 Q1	Purchasing/ selling sector																	Unsp. sector	Total ²⁾
	Cent.gov't and social security	Norges Bank	State lending inst.	Sav. banks	Comm. banks	Insur. companies	Mort. companies	Fin. companies	Secur. funds	Other financ. enterpr.	Local gov't & munic. enterpr.	State enterpr.	Other private enterpr.	Wage-earning households	Other house-holds	Rest of the world			
Central government and social security admin.	-1 805	-424	0	-75	-179	11 780	140	0	667	-62	-50	13	88	-63	58	5 137	0	15 227	
State lending inst.	0	0	-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4
Savings banks	10	0	0	1 024	8	814	695	0	602	-86	25	-19	410	-35	189	644	-2	4 280	
Commercial banks	47	0	0	-361	2 360	-119	-789	0	380	171	31	66	-258	301	60	-138	6	1 757	
Insur. companies	0	0	0	0	0	0	0	0	1	0	0	0	1	0	-1	0	0	1	
Mortgage companies	-25	0	0	-749	-180	-1 862	358	0	185	-431	67	0	-133	-4	15	-448	0	-3 206	
Finance companies	0	0	0	0	0	1	0	0	0	0	0	0	-1	0	0	0	0	0	
Other financial enterprises	0	0	0	0	2	29	0	0	59	0	44	0	-98	0	5	6	0	47	
Local gov't. admin. and municipal enterprises	113	0	0	152	318	2 654	-38	-2	388	38	1 615	20	-13	6	174	-36	0	5 389	
State enterprises	-404	0	0	649	-210	-201	-2	0	41	-218	15	2 176	287	-1	293	-1 033	0	1 392	
Other private enterprises	-894	0	0	-285	-955	-139	-68	0	-341	1 316	42	6	1 380	37	-16	57	-1	139	
Households	0	0	0	0	0	20	0	0	0	30	0	0	27	5	2	0	3	88	
Rest of the world	0	0	0	10	-46	-346	-15	0	8	0	2	0	26	134	0	674	4	448	
Unspecified sector	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	-2 957	-424	-4	365	1 118	12 631	281	-2	1 989	758	1 792	2 263	1 717	380	779	4 862	10	25 558	

¹⁾ Issues at issue price + purchases at market value – sales at market value – redemption value.

²⁾ Total shows net issues in the primary market. Purchases and sales in the secondary market result in redistribution between owner sectors, but add up to 0.

Sources: Norwegian Central Securities Depository and Norges Bank

Table 17. NOK-denominated short-term paper registered with the Norwegian Central Securities Depository by holding sector. Market value. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Central government and social security administration	6 444	5 845	6 635	3 806	9 037
Norges Bank	3 053	2 219	2 590	2 298	2 177
State lending institutions	0	0	0	0	0
Savings banks	3 529	3 435	3 846	4 424	3 878
Commercial banks	13 633	13 546	16 610	14 890	10 721
Insurance companies	42 046	44 160	45 333	52 320	49 107
Mortgage companies	173	2 569	1 682	1 238	3 525
Finance companies	58	48	61	30	33
Mutual funds	21 180	22 577	25 183	26 054	25 834
Other financial enterprises	2 656	1 900	2 196	2 722	3 518
Local government administration and municipal enterprises	4 022	8 918	7 352	6 526	5 860
State enterprises	10 944	4 784	6 078	1 510	12 847
Other private enterprises	6 762	6 442	6 877	7 038	5 456
Wage-earning households	121	191	232	274	301
Other households	1 245	1 331	1 137	1 049	1 387
Rest of the world	13 394	11 846	12 457	10 980	10 814
Unspecified sector	48	8	7	22	6
Total	129 308	129 819	138 277	135 180	144 502

Sources: Norwegian Central Securities Depository and Norges Bank

Table 18. Outstanding short-term paper, by issuing sector.¹⁾ Nominal value. In millions of NOK

Issuing sector	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Central government and social security administration	36 500	33 000	41 500	51 500	62 500
Counties	1 163	1 076	1 026	474	622
Municipalities	3 280	3 722	3 140	4 285	4 241
State lending institutions	0	0	0	0	0
Commercial banks	21 937	21 744	18 867	18 434	14 357
Savings banks	34 421	36 311	39 616	40 538	37 629
Mortgage companies	4 380	3 572	3 497	1 787	4 255
Finance companies	550	625	600	600	0
Other financial enterprises	0	0	0	0	0
State enterprises	4 630	8 605	10 627	5 420	2 135
Municipal enterprises	11 094	10 039	9 522	8 526	6 944
Private enterprises	11 690	13 723	12 061	9 547	11 187
Rest of the world	2 400	1 225	1 700	2 500	3 190
Total	132 045	133 642	142 156	143 611	147 060

¹⁾ Comprises short-term paper issued in Norway in NOK by domestic sectors and foreigners and paper in foreign currency issued by domestic sectors.

Source: Norges Bank

Credit and liquidity trends

Table 19. Credit indicator and money supply

	Volume figures at end of period NOKbn			Percentage growth				
				Over past 12 months			Over past 3 months Annualised rate ⁴⁾	
	C2 ¹⁾	C3 ²⁾	M2 ³⁾	C2 ¹⁾	C3 ²⁾	M2 ³⁾	C2	M2
December 1994	893.5	1 075.8	501.3	2.3	1.3	5.8	2.8	1.3
December 1995	936.0	1 123.6	530.3	4.9	5.2	6.0	5.4	1.3
December 1996	992.5	1 213.4	564.4	6.0	5.3	6.4	7.7	4.5
December 1997	1 099.1	1 363.7	578.5	10.2	10.2	1.8	10.1	3.0
December 1998	1 192.8	1 521.5	605.3	8.3	12.2	4.4	6.3	5.4
December 1999	1 295.0	1 697.2	670.1	8.4	8.0	10.5	9.7	8.4
December 2000	1 460.9	1 921.1	731.8	12.3	10.6	8.8	11.8	7.4
December 2001	1 608.2	2 078.1	795.2	9.7	7.1	9.3	8.8	10.9
January 2002	1 614.9	2 086.1	821.0	9.4	7.4	10.1	8.5	11.0
February 2002	1 622.4	2 089.5	812.4	8.9	7.3	8.1	8.2	10.9
March 2002	1 632.5	2 100.9	812.9	8.8	7.5	8.8	8.2	5.6
April 2002	1 647.2	2 117.9	800.1	8.9	7.4	8.7	8.7	4.7
May 2002	1 655.3	2 108.8	805.7	9.2	7.1	7.3	9.9	5.5
June 2002	1 667.9	2 108.6	844.5	9.5	7.3	9.8	10.3	8.5
July 2002	1 674.5	2 117.1	837.1	9.3	7.4	9.0	10.3	8.9
August 2002	1 682.9	2 120.5	826.4	9.1	7.8	7.6	8.8	4.0
September 2002	1 690.7	2 123.1	820.7	8.6	7.6	6.3	7.8	3.2
October 2002	1 701.7	2 140.0	844.7	8.6	7.1	8.6	7.5	3.6
November 2002	1 723.9	2 156.7	829.2	8.9	6.9	7.8	8.4	10.1
December 2002	1 724.6	2 151.7	855.4	8.9	6.9	8.3	9.5	9.7
January 2003	1 734.5	2 159.9	866.6	9.0	6.9	6.3	9.3	8.0
February 2003	1 744.6	2 187.1	858.8	8.8	7.0	6.2	8.5	2.5
March 2003	1 756.5		854.3	8.7		5.5	6.8	0.6
April 2003	1 765.3		844.6	8.2		5.9		

¹⁾ C2 = Credit indicator. Credit from domestic sources; actual figures.

²⁾ C3 = Total credit from domestic and foreign sources; actual figures.

³⁾ M2 = Money supply.

⁴⁾ Seasonally adjusted figures

Source: Norges Bank

**Table 20. Domestic credit supply to the general public¹⁾, by source. In millions of NOK.
12-month growth as a percentage**

	31.12.2000		31.12.2001		31.12.2002		30.04.2003	
	Amount	%	Amount	%	Amount	%	Amount	%
Private banks	938 076	13.8	1 030 694	9.6	1 097 144	8.2	1 120 113	7.0
State lending institutions	167 921	3.9	176 494	5.1	185 932	5.3	189 356	4.4
Norges Bank	575	1.6	603	4.9	651	8.0	728	19.1
Mortgage companies	144 846	20.4	167 698	15.6	182 006	10.9	189 818	16.7
Finance companies	66 809	12.1	79 474	14.6	83 239	9.9	85 486	8.4
Life insurance companies	23 047	-8.0	24 482	0.2	23 124	-5.5	23 830	3.3
Pension funds	4 796	-3.9	3 742	7.1	3 742	0.0	3 742	0.0
Non-life insurance companies	1 649	24.8	934	-43.4	919	-1.6	920	9.5
Bond debt ²⁾	82 838	9.7	89 671	8.2	107 399	19.8	112 371	24.1
Notes and short-term paper	24 259	27.0	23 752	-2.1	26 145	10.1	24 055	-25.0
Other sources	6 038	27.4	10 624	76.0	14 295	34.6	14 865	25.5
Total domestic credit (C2)³⁾	1 460 854	12.3	1 608 168	9.7	1 724 596	8.9	1 765 284	8.2

¹⁾ Comprises local government administration, non-financial enterprises and households

²⁾ Adjusted for non-residents' holdings of Norwegian private and municipal bonds in Norway.

³⁾ Corresponds to Norges Bank's credit indicator (C2).

Source: Norges Bank

Table 21. Composition of money supply. In millions of NOK

Actual figures at end of period	Notes and coins	Transaction account deposits	M1 ¹⁾	Other deposits ²⁾	CDs	M2 ³⁾	Change in M2 last 12 months, total
December 1994	40 454	172 154	210 108	286 081	5 116	501 305	25 290
December 1995	42 069	178 653	217 727	296 799	15 731	530 257	28 952
December 1996	43 324	208 072	247 937	294 741	21 686	564 364	34 107
December 1997	46 014	227 382	269 597	278 741	30 200	578 538	14 174
December 1998	46 070	237 046	279 188	292 820	33 321	605 329	26 791
December 1999	48 020	300 131	343 496	295 822	30 803	670 121	64 792
December 2000	46 952	328 816	371 340	326 351	34 152	731 843	61 722
December 2001	46 633	344 109	386 147	370 172	38 899	795 218	63 375
January 2002	42 613	350 854	389 293	393 988	37 746	821 027	71 321
February 2002	41 510	346 813	384 287	390 769	37 342	812 398	56 458
March 2002	42 002	346 918	384 789	384 961	43 124	812 874	60 599
April 2002	40 746	337 329	374 096	381 891	44 146	800 133	59 463
May 2002	40 785	342 667	379 393	379 315	47 000	805 708	49 073
June 2002	41 900	378 726	416 494	381 452	46 540	844 486	68 794
July 2002	40 945	365 142	401 902	389 106	46 078	837 086	63 619
August 2002	40 649	349 274	385 825	394 607	45 931	826 363	54 280
September 2002	40 188	350 270	386 502	388 380	45 822	820 704	44 864
October 2002	40 024	358 125	394 210	404 464	45 998	844 672	62 994
November 2002	40 783	349 028	385 824	398 522	44 822	829 168	55 224
December 2002	44 955	360 553	400 835	409 354	45 201	855 390	60 172
January 2003	41 157	360 620	397 901	426 302	42 438	866 641	45 614
February 2003	40 236	359 575	396 153	421 505	41 162	858 820	46 422
March 2003	39 718	363 231	399 373	412 803	42 163	854 339	41 465
April 2003	40 151	354 817	391 088	417 288	36 193	844 569	44 436

¹⁾ The narrow money concept M1 constitutes the money-holding sector's stock of Norwegian notes and coins plus the sector's transaction account deposits in Norges Bank, commercial banks and savings banks (in NOK and foreign currency).

²⁾ Excluding restricted bank deposits (BSU, IPA, withholding tax accounts, etc).

³⁾ The broad money concept M2 constitutes the sum of M1 and the money-holding sector's other bank deposits and CDs (in NOK and foreign currency) excluding restricted bank deposits (BSU, IPA, withholding tax accounts, etc).

Source: Norges Bank

Table 22. Household financial balance. Financial investments and holdings, by financial instrument. In billions of NOK

	Financial investments					Holdings				
	Year		Q4			Year			At 31 Dec.	
	1999	2000	2001	2001	2002	1999	2000	2001	2001	2002
Bank deposits, etc. ¹⁾	33.4	33.0	39.5	14.0	22.8	407.9	440.9	480.5	480.5	527.9
Bonds, etc. ²⁾	2.2	7.8	6.7	2.9	-0.3	10.9	18.2	21.5	21.5	22.9
Shares, etc. ³⁾	2.6	4.5	6.8	0.9	0.2	166.6	174.7	173.0	173.0	165.0
Units in securities funds	7.0	11.7	2.3	0.2	-0.6	77.9	85.7	78.1	78.1	66.5
Insurance claims	20.6	23.0	32.9	12.5	7.7	428.0	455.1	471.7	471.7	490.1
Loans and other assets ⁴⁾	5.4	7.0	7.4	0.2	-1.9	100.9	107.9	115.3	115.3	119.6
Total assets	71.2	87.1	95.6	30.6	27.9	1192.2	1282.5	1340.1	1340.1	1392.0
Loans from commercial and savings banks	49.9	66.5	67.9	20.1	16.0	525.3	591.9	659.8	659.8	727.3
Loans from state lending inst. and Norges Bank	6.0	7.7	8.5	1.4	1.5	134.3	141.4	149.1	149.1	156.7
Loans from private mortgage and finance companies	0.4	6.2	14.2	3.6	4.2	47.1	53.5	67.7	67.7	80.1
Loans from insurance companies	-3.9	-2.5	-0.5	0.2	-0.2	19.2	16.7	16.2	16.2	16.2
Other liabilities ⁵⁾	5.5	-0.3	7.8	8.3	7.7	83.3	82.6	89.9	89.9	89.5
Total liabilities	58.2	77.6	97.8	33.6	29.3	809.3	886.2	982.8	982.8	1069.8
Net	13.0	9.4	-2.3	-3.0	-1.3	383.0	396.3	357.3	357.3	322.1

¹⁾ Notes and coins and bank deposits.

²⁾ Bearer bonds, savings bonds, premium bonds, notes and short-term Treasury notes.

³⁾ VPS-registered (registered with the Norwegian Central Securities Depository), non-registered shares and primary capital certificates.

⁴⁾ Loans, accrued interest, holiday pay claims and tax claims.

⁵⁾ Other loans, bonds and notes, tax liabilities, and accrued interest.

Sources: Norges Bank and Statistics Norway

Table 23. Money market liquidity. Liquidity effect from 1 January to end period. In millions of NOK

Supply+/-/withdrawal-	1.1 - 31.12		1.1 - 31.5	
	2001	2002	2002	2003
Central gov't. and other public accounts (excl. paper issued by state lending inst. and gov't.)	-115 094	5 950	-24 849	-36 856
Paper issued by state lending inst. and gov't.	8 514	-13 598	-8 501	-28 534
Purchase of foreign exchange for Gov't Petroleum Fund	120 300	56 545	21 435	14 620
Other foreign exchange transactions	91	421	0	0
Holdings of banknotes and coins ¹⁾ (estimate)	424	1 741	5 859	3 597
Overnight loans	-126	0	0	0
Fixed-rate loans	-6 011	-15 140	-7 140	0
Other central bank financing	-8 135	-18 700	15	17 840
Total reserves	-37	17 219	-13 181	-29 333
Of which:				
Sight deposits with Norges Bank	-37	17 219	-13 181	-29 333
Treasury bills	0	0	0	0
Other reserves (estimate)	0	0	0	0

¹⁾ The figures are mainly based on Norges Bank's accounts. Discrepancies may arise between the bank's own statements and banking statistics due to different accruals.

Source: Norges Bank

Interest rate statistics

Table 24. Nominal interest rates for NOK. Averages. Per cent per annum

	1-month		3-month		12-month		Interest rate on banks' overnight loans in Norges Bank	Interest rate on banks' sight deposits with Norges Bank
	NIDR	NIBOR	NIDR	NIBOR	NIDR	NIBOR		
January 2002	6.7	6.5	6.5	6.3	6.4	6.2	8.5	6.5
February 2002	6.7	6.6	6.7	6.6	6.8	6.7	8.5	6.5
March 2002	6.8	6.7	6.9	6.7	7.0	6.9	8.5	6.5
April 2002	6.9	6.7	6.9	6.8	7.2	7.0	8.5	6.5
May 2002	6.9	6.7	7.1	6.9	7.5	7.3	8.5	6.5
June 2002	7.0	6.9	7.3	7.1	7.7	7.5	8.5	6.5
July 2002	7.3	7.2	7.4	7.3	7.6	7.4	8.9	6.9
August 2002	7.3	7.1	7.4	7.3	7.5	7.3	9.0	7.0
September 2002	7.3	7.1	7.3	7.1	7.2	7.0	9.0	7.0
October 2002	7.3	7.1	7.3	7.1	7.0	6.8	9.0	7.0
November 2002	7.3	7.1	7.3	7.1	6.9	6.7	9.0	7.0
December 2002	7.1	6.9	6.8	6.6	6.4	6.1	8.7	6.7
January 2003	6.4	6.2	6.2	6.0	5.9	5.6	8.3	6.3
February 2003	6.1	5.9	5.9	5.7	5.5	5.3	8.0	6.0
March 2003	5.8	5.6	5.7	5.5	5.4	5.2	7.6	5.6
April 2003	5.6	5.4	5.5	5.3	5.2	5.0	7.5	5.5
May 2003	5.3	5.2	5.1	4.9	4.7	4.5	7.0	5.0

Note: NIDR = Norwegian Interbank Deposit Rate, a pure krone interest rate

NIBOR = Norwegian Interbank Offered Rate, constructed on the basis of currency swaps

Source: Norges Bank

Table 25. Short-term interest rates¹⁾ for key currencies in the Euro-market. Per cent per annum

	DKK	GBP	JPY	SEK	USD	EUR	Interest rate differential
							NOK/EUR
January 2002	3.6	4.0	0.1	3.8	1.8	3.3	2.9
February 2002	3.5	4.0	0.1	3.9	1.9	3.3	3.1
March 2002	3.6	4.1	0.1	4.1	2.0	3.4	3.2
April 2002	3.6	4.1	0.1	4.3	1.9	3.4	3.3
May 2002	3.7	4.1	0.0	4.4	1.9	3.4	3.3
June 2002	3.7	4.1	0.0	4.4	1.8	3.4	3.6
July 2002	3.6	4.0	0.0	4.4	1.8	3.4	3.8
August 2002	3.5	3.9	0.0	4.3	1.8	3.3	3.8
September 2002	3.4	3.9	0.0	4.3	1.8	3.3	3.8
October 2002	3.4	3.9	0.0	4.3	1.7	3.2	3.8
November 2002	3.2	3.9	0.0	4.1	1.4	3.1	3.9
December 2002	3.0	4.0	0.0	3.8	1.4	2.9	3.5
January 2003	2.9	3.9	0.0	3.8	1.3	2.8	3.1
February 2003	2.8	3.7	0.0	3.7	1.3	2.7	2.9
March 2003	2.6	3.6	0.0	3.5	1.3	2.5	2.9
April 2003	2.6	3.6	0.0	3.5	1.3	2.5	2.6
May 2003	2.5	3.6	0.0	3.3	1.2	2.4	2.4

¹⁾ Three-month rates, monthly average of daily quotations.

Sources: OECD and Norges Bank

Table 26. Yields on Norwegian bonds¹⁾. Per cent per annum

	3-year		5-year		10-year	
	Gov't	Private	Gov't	Private	Gov't	Private
January 2002	6.0	6.6	6.1	6.7	6.2	6.9
February 2002	6.3	6.9	6.4	6.9	6.4	7.0
March 2002	6.6	7.0	6.5	7.1	6.6	7.1
April 2002	6.6	7.2	6.6	7.1	6.7	7.2
May 2002	6.9	7.3	6.8	7.3	6.8	7.3
June 2002	7.1	7.5	6.9	7.4	6.8	7.4
July 2002	6.8	7.2	6.7	7.1	6.6	7.1
August 2002	6.5	7.0	6.4	6.9	6.3	6.9
September 2002	6.2	6.7	6.1	6.6	6.1	6.6
October 2002	6.1	6.7	6.1	6.6	6.2	6.7
November 2002	6.0	6.6	6.0	6.5	6.1	6.6
December 2002	5.6	6.3	5.7	6.3	5.9	6.4
January 2003	5.3	5.9	5.4	6.0	5.7	6.1
February 2003	4.9	5.4	5.0	5.5	5.3	5.6
March 2003	5.0	5.3	5.1	6.3	5.2	5.7
April 2003	4.9	5.3	5.0	6.3	5.3	5.8
May 2003	4.4	5.2	4.6	5.7	5.0	5.6

¹⁾ Whole-year interest rate paid in arrears. Monthly average. As of 1 January 1993 based on interest rate on representative bonds weighted by residual maturity.

Source: Norges Bank

Table 27. Yields on government bonds¹⁾ in key currencies. Per cent per annum

	DEM	DKK	FIM	FFR	GBP	JPY	SEK	USD	Interest rate
									differential
									NOK/DEM ²⁾
January 2002	4.9	5.2	5.1	5.0	4.9	1.4	5.3	5.2	1.3
February 2002	5.0	5.2	5.2	5.0	4.9	1.5	5.4	5.0	1.4
March 2002	5.2	5.5	5.4	5.2	5.2	1.5		5.4	1.4
April 2002	5.2	5.5	5.4	5.3	5.2	1.4		5.3	1.5
May 2002	5.2	5.5	5.5	5.3	5.3	1.4		5.2	1.5
June 2002	5.1	5.4	5.3	5.1	5.1	1.4		4.9	1.7
July 2002	4.9	5.2	5.2	5.0	5.0	1.3		4.6	1.6
August 2002	4.7	4.9	4.9	4.7	4.7	1.3		4.2	1.7
September 2002	4.5	4.8	4.7	4.5	4.5	1.2		3.9	1.6
October 2002	4.6	4.9	4.7	4.6	4.6	1.1		3.9	1.6
November 2002	4.6	4.9	4.7	4.6	4.6	1.0		4.1	1.6
December 2002	4.4	4.7	4.5	4.4	4.5	1.0		4.1	1.5
January 2003	4.2	4.5	4.3	4.2	4.4	0.8		4.0	1.4
February 2003	4.0	4.3	4.1	4.0	4.2	0.8		3.9	1.3
March 2003	4.1	4.3	4.2	4.1	4.3	0.7		3.8	1.2
April 2003	4.2	4.5	4.3	4.2	4.4	0.7		4.0	1.1
May 2003	3.9	4.1	3.9	3.9	4.1	0.6		3.5	1.1

¹⁾ Government bonds with 10 years to maturity. Monthly average of daily quotations.

²⁾ Differential between yields on Norwegian and German government bonds with 10 years to maturity.

Sources: OECD and Norges Bank

Table 28. Commercial and savings banks. Average interest rates and commissions on utilised loans in NOK to the general public at end of quarter. Per cent per annum.

	Loans, excl. non-accrual loans								
	Total loans	Local government	Non-financial public	Non-financial private	Households	Credit lines		Repayment loans	
			enterprises	enterprises		Overdrafts and building loans	Housing loans	Other loans	
2002 Q1									
Commercial banks	8.11	7.50	7.99	8.28	8.01	9.83	7.88	7.89	
Savings banks	8.51	7.13	7.76	8.89	8.41	10.88	8.12	8.75	
All banks	8.31	7.30	7.93	8.52	8.24	10.28	8.01	8.27	
2002 Q2									
Commercial banks	8.15	7.90	7.97	8.40	7.99	9.73	7.86	8.06	
Savings banks	8.51	7.34	7.72	8.97	8.38	10.80	8.11	8.80	
All banks	8.33	7.63	7.91	8.62	8.21	10.18	8.01	8.39	
2002 Q3									
Commercial banks	8.59	7.79	8.03	8.82	8.47	10.53	8.32	8.38	
Savings banks	8.98	7.60	8.12	9.33	8.89	11.34	8.60	9.22	
All banks	8.79	7.70	8.05	9.02	8.71	10.87	8.48	8.75	
2002 Q4									
Commercial banks	8.49	7.60	7.73	8.57	8.47	10.39	8.34	8.19	
Savings banks	8.91	7.49	7.85	9.16	8.85	11.16	8.58	9.11	
All banks	8.71	7.55	7.76	8.80	8.69	10.73	8.48	8.59	
2003 Q1									
Commercial banks	7.52	6.48	6.67	7.66	7.47	9.45	7.32	7.30	
Savings banks	7.94	6.48	6.98	8.32	7.84	10.25	7.56	8.26	
All banks	7.74	6.48	6.75	7.92	7.68	9.81	7.46	7.71	

Source: Norges Bank

Table 29. Commercial and savings banks. Average interest rates on deposits in NOK from the general public at end of quarter. Per cent per annum

	Total deposits	Local government	Non-financial public	Non-financial private	Households	Deposits on transaction accounts	Other deposits
			enterprises	enterprises			
2002 Q1							
Commercial banks	5.38	6.06	5.96	5.52	5.22	4.72	6.07
Savings banks	5.41	6.47	6.41	5.62	5.22	4.26	6.09
All banks	5.40	6.33	6.12	5.55	5.22	4.53	6.08
2002 Q2							
Commercial banks	5.27	6.07	6.25	5.43	5.05	4.62	6.05
Savings banks	5.32	6.70	6.78	5.70	5.06	4.09	6.09
All banks	5.29	6.45	6.42	5.53	5.06	4.40	6.08
2002 Q3							
Commercial banks	5.77	6.37	6.57	6.02	5.54	5.00	6.40
Savings banks	5.83	6.91	6.78	6.06	5.66	4.57	6.54
All banks	5.80	6.70	6.64	6.03	5.60	4.95	6.48
2002 Q4							
Commercial banks	5.74	6.22	6.23	5.85	5.62	5.18	6.36
Savings banks	5.85	6.60	6.53	5.89	5.75	4.55	6.53
All banks	5.79	6.46	6.36	5.86	5.69	4.92	6.46
2003 Q1							
Commercial banks	4.89	5.17	5.23	4.82	4.90	4.30	5.53
Savings banks	4.89	5.63	5.57	4.97	4.78	3.73	5.52
All banks	4.89	5.46	5.36	4.88	4.83	4.06	5.52

Source: Norges Bank

**Table 30. Life insurance companies. Average interest rates by type of loan at end of quarter.
Per cent per annum**

	Housing loans	Other loans	Total loans
31.03.2002	7.7	6.8	7.3
30.06.2002	7.9	7.1	7.5
30.09.2002	8.0	7.1	7.5
31.12.2002	7.8	7.0	7.3
31.03.2003	6.9	6.4	6.7

Source: Norges Bank

Table 31. Mortgage companies. Average interest rates, incl. commissions on loans to private sector at end of quarter. Per cent per annum

	Housing loans	Loans to private enterprises	Total loans
31.03.2002	7.4	7.5	7.1
30.06.2002	7.5	7.6	7.2
30.09.2002	7.8	7.8	7.4
31.12.2002	7.8	7.7	7.3
31.03.2003	7.2	7.2	6.7

Source: Norges Bank

Profit/loss and capital adequacy data

**Table 32. Profit/loss and capital adequacy: commercial banks¹⁾.
Percentage of average total assets**

	2001	2002	Q1	
			2002	2003
Interest income	7.6	7.3	7.0	6.8
Interest expenses	5.8	5.5	5.3	5.1
Net interest income	1.8	1.9	1.8	1.7
Total other operating income	1.1	0.8	0.9	0.8
Other operating expenses	1.9	1.8	1.7	1.6
Operating profit before losses	1.0	0.9	0.9	0.8
Recorded losses on loans and guarantees	0.3	0.5	0.1	0.6
Ordinary operating profit (before taxes)	0.7	0.4	0.9	0.3
Capital adequacy ratio ²⁾	11.7	11.1	11.7	11.4
Of which:				
Core capital	8.7	8.4	8.7	8.4

¹⁾ Parent banks (excluding branches abroad) including Postbanken and foreign-owned branches.

²⁾ As a percentage of the basis of measurement for capital adequacy.

Source: Norges Bank

Table 33. Profit/loss and capital adequacy: savings banks.
Percentage of average total assets

	2001	2002	Q1	
			2002	2003
Interest income	8.1	7.8	7.6	7.3
Interest expenses	5.6	5.3	5.1	5.0
Net interest income	2.5	2.5	2.4	2.3
Total other operating income	0.7	0.5	0.8	0.5
Other operating expenses	1.8	1.8	1.8	1.7
Operating profit before losses	1.4	1.2	1.4	1.2
Recorded losses on loans and guarantees	0.3	0.4	0.2	0.2
Ordinary operating profit (before taxes)	1.2	0.8	1.3	0.9
Capital adequacy ratio ¹⁾	13.8	13.5	13.5	13.5
Of which:				
Core capital	11.0	11.1	10.8	10.8

¹⁾ As a percentage of the basis of measurement for capital adequacy.

Source: Norges Bank

Table 34. Profit/loss and capital adequacy: finance companies¹⁾.
Percentage of average total assets

	2001	2002	Q1	
			2002	2003
Interest income	10.3	9.4	9.2	9.5
Interest expenses	6.0	5.5	5.2	4.9
Net interest income	4.2	4.0	4.0	4.5
Total other operating income	2.8	2.4	2.2	2.0
Other operating expenses	4.4	4.0	3.7	3.9
Operating profit before losses	2.6	2.4	2.5	2.7
Recorded losses on loans and guarantees	0.5	0.6	0.2	0.9
Ordinary operating profit (before taxes)	2.1	1.8	2.3	1.8
Capital adequacy ratio ²⁾	11.3	10.9	11.6	10.4
Of which:				
Core capital	9.8	9.3	10.1	8.9

¹⁾ All Norwegian parent companies (excl. OBOS) and foreign-owned branches.

²⁾ As a percentage of the basis of measurement for capital adequacy.

Source: Norges Bank

Table 35. Profit/loss and capital adequacy: mortgage companies¹⁾.
Percentage of average total assets

	2001	2002	Q1	
			2002	2003
Interest income	6.5	5.3	5.4	5.0
Interest expenses	5.7	4.7	4.7	4.3
Net interest income	0.8	0.7	0.7	0.7
Total other operating income	-0,0	-0,0	0.0	0.0
Other operating expenses	0.2	0.2	0.2	0.1
Operating profit before losses	0.6	0.5	0.6	0.6
Recorded losses on loans and guarantees	0.0	0.0	0.0	0.0
Ordinary operating profit (before taxes)	0.6	0.5	0.6	0.5
Capital adequacy ²⁾	14.7	12.7	14.3	12.7
Of which:				
Core capital	11.2	10.4	11.0	10.2

¹⁾ All Norwegian parent companies.

²⁾ As a percentage of the basis of measurement for capital adequacy.

Source: Norges Bank

Exchange rates

Table 36. The international value of the krone and exchange rates against selected currencies. Monthly average of representative market rates

	Trade-weighted krone exchange rate ¹⁾	1 EUR	100 DEM	100 DKK	100 FIM	100 FRF	1 GBP	100 JPY	100 SEK	1 USD
January 2002	102.72	7.9208	404.98	106.56	133.22	120.75	12.85	6.76	85.84	8.97
February 2002	101.34	7.7853	398.06	104.78	130.94	118.69	12.73	6.70	84.78	8.95
March 2002	100.67	7.7191		103.86			12.53	6.73	85.19	8.81
April 2002	99.16	7.6221		102.53			12.42	6.58	83.44	8.61
May 2002	97.06	7.5147		101.07			11.96	6.49	81.53	8.19
June 2002	95.13	7.4048		99.62			11.50	6.29	81.25	7.75
July 2002	94.60	7.4050		99.66			11.60	6.32	79.90	7.46
August 2002	95.09	7.4284		100.02			11.67	6.39	80.32	7.60
September 2002	94.38	7.3619		99.12			11.67	6.22	80.30	7.51
October 2002	94.06	7.3405		98.80			11.65	6.04	80.62	7.48
November 2002	93.58	7.3190		98.53			11.49	6.02	80.59	7.31
December 2002	92.91	7.2953		98.24			11.36	5.87	80.20	7.17
January 2003	92.52	7.3328		98.66			11.16	5.81	79.93	6.90
February 2003	94.75	7.5439		101.51			11.26	5.87	82.49	7.00
March 2003	98.02	7.8450		105.62			11.49	6.12	85.03	7.26
April 2003	97.78	7.8316		105.47			11.37	6.02	85.56	7.22
May 2003	97.10	7.8711		106.01			11.04	5.80	85.97	6.80

¹⁾ The nominal effective krone exchange rate is calculated on the basis of the NOK exchange rate against the currencies of Norway's 25 main trading partners, calculated as a chained index and trade-weighted using the OECD's weights. The weights, which are updated annually, are calculated on the basis of each country's competitive position in relation to Norwegian manufacturing. The index is set at 100 in 1990. A rising index value denotes a depreciating krone.

Further information can be found on Norges Bank's website (www.norges-bank.no).

Source: Norges Bank

Table 37. Exchange cross rates. Monthly average of representative exchange rates

	DEM/USD ¹⁾	DEM/GBP ¹⁾	USD/EUR	JPY/DEM ¹⁾	JPY/USD
January 2002	2.2145	3.1720	0.883	59.876	132.60
February 2002	2.2480	3.1979	0.870	59.426	133.59
March 2002			0.876		130.93
April 2002			0.886		130.75
May 2002			0.917		126.29
June 2002			0.955		123.34
July 2002			0.992		118.04
August 2002			0.978		118.95
September 2002			0.981		120.68
October 2002			0.981		123.91
November 2002			1.001		121.49
December 2002			1.018		122.01
January 2003			1.062		118.74
February 2003			1.077		119.35
March 2003			1.080		118.61
April 2003			1.084		119.97
May 2003			1.157		117.20

¹⁾ Converted via the euro on the basis of the rate at 31.12.1998. This conversion was discontinued as at 28.02.2002.

Source: Norges Bank

Balance of payments

Table 38. Balance of payments. In millions of NOK

	2001	2002	January-March	
			2002	2003
Goods balance	234 046	190 755	49 621	54 338
Service balance	28 284	24 654	7 436	5 791
Net interest and transfers	-23 811	-14 784	-2 083	-6 090
A. Current account balance	238 519	200 625	54 974	54 039
Of which:				
Petroleum activities ¹⁾	321 353	261 947	63 323	75 432
Shipping ¹⁾	46 707	38 682	9 223	9 123
Other sectors	-129 541	-100 004	-17 572	-30 516
B. Net capital transfers	-840	-462	870	218
C. Capital outflow excl. Norges Bank	-26 849	66 361	7 705	-5 781
Distributed among:				
Central government sector	14 832	4 439	-2 146	17
Local government sector	237	719	433	117
Commercial and savings banks	-36 137	-74 713	-32 934	-23 489
Insurance	9 540	42 208	9 159	5 188
Other financial institutions	-13 263	-38 529	-913	-15 896
Shipping	-768	2 684	1 306	-710
Petroleum activities	-42 379	-30 246	-10 699	69
Other private and state enterprises	5 000	30 714	34 248	12 244
Unallocated (incl. errors and omissions)	36 089	129 085	9 251	16 679
D. Norges Bank's net capital outflow (A + B - C)	264 528	133 802	48 139	60 038
E. Valuation changes in Norges Bank's net foreign assets	-41 057	-131 634	-43 035	-42 270
Change in Norges Bank's net foreign assets (D + E)	223 471	2 168	5 104	17 768

¹⁾ Specified by Norges Bank on the basis of items from the balance of payments.

Sources: Statistics Norway and Norges Bank

Table 39. Norway's foreign assets and debt. In billions of NOK

	31.12.2001			31.12.2002			31.03.2003		
	Assets	Debt	Net	Assets	Debt	Net	Assets	Debt	Net
Central government admin.	28.3	64.2	-35.9	29.6	68.0	-38.4	30.3	68.9	-38.6
Norges Bank incl. Petroleum Fund	959.5	176.8	782.7	1060.1	273.3	786.8	1189.4	328.7	860.7
State lending institutions	7.5	0.0	7.5	7.5	0.0	7.5	7.5	0.0	7.5
Commercial and savings banks	137.7	360.1	-222.4	126.8	375.1	-248.3	139.4	423.5	-284.1
Mortgage companies	45.6	127.1	-81.5	56.8	135.5	-78.7	57.2	156.9	-99.7
Finance companies	3.7	30.1	-26.4	2.9	25.7	-22.8	3.0	25.9	-22.9
Insurance companies	204.9	19.1	185.8	190.7	20.2	170.5	195.2	20.3	174.9
Local government	0.0	2.2	-2.2	0.2	1.6	-1.4	0.2	1.5	-1.3
Municipal enterprises	0.3	8.9	-8.6	0.2	8.5	-8.3	0.3	10.1	-9.8
State enterprises	111.8	92.4	19.4	129.2	83.3	45.9	137.5	82.7	54.8
Other Norwegian sectors	456.4	441.4	15.0	435.7	416.8	18.9	440.0	425.8	14.2
Undistributed and errors and omissions	0.0	0.0	0.0	101.6	0.0	101.6	118.3	0.0	118.3
All sectors	1955.7	1322.3	633.4	2141.3	1408.0	733.3	2318.3	1544.3	774.0

Norges Bank calculates the holdings figures on the basis of Statistics Norway's annual census of foreign assets and liabilities and sectoral statistics for financial industries. These are combined with the figures on changes in the form of transactions and valuation changes from the balance of payments and sectoral statistics for insurance and mortgage companies.

Sources: Statistics Norway and Norges Bank

International capital markets

Table 40. Changes in banks' international assets.¹⁾ In billions of USD

	1999	2000	2001	2002	Outstanding At 31 Dec.
Total	276.1	1 221.5	859.4	794.3	13 425.6
Of which vis-à-vis:					
Non-banks	298.2	288.8	442.1	299.2	4 567.1
Banks (and undistributed)	-22.0	932.7	417.3	495.1	8 858.5

¹⁾ International assets (external positions) comprise

- cross-border claims in all currencies
- foreign currency loans to residents
- equivalent assets, excluding lending

Source: Bank for International Settlements

Table 41. Banks' international claims by currency. Percentage of total international assets

	December			
	1999	2000	2001	2002
US dollar (USD)	41.5	43.3	45.2	41.8
Deutsche mark (DEM)	..	..	..	..
Swiss franc (CHF)	2.4	2.2	2.1	2.0
Japanese yen (JPY)	9.0	8.2	6.1	5.5
Pound sterling (GBP)	4.3	4.4	4.4	4.3
French franc (FRF)	..	..	..	..
Italian lira (ITL)	..	..	..	..
ECU/EURO ¹⁾	27.8	27.8	28.5	33.4
Undistributed ²⁾	15.0	14.2	13.7	13.0
Total in billions of USD	9 939.5	10 778.6	11 631.5	13 425.6

¹⁾ From January 1999.

²⁾ Including other currencies not shown in the table, and assets in banks in countries other than the home countries of the seven currencies specified.

Source: Bank for International Settlements

Foreign currency trading

Table 42. Foreign exchange banks. Foreign exchange purchased/sold forward with settlement in NOK. ¹⁾ In billions of NOK at end of month

	Purchased net from:					Purchased gross from:		Sold gross to:	
	Central gov't ²⁾	Other financial inst. ³⁾	Non- financial sector	Foreign sector	Total	Non- financial sector	Foreign sector	Non- financial sector	Foreign sector
April 2002	0.1	56.5	64.1	-24.2	96.5	105.4	650.2	41.3	674.4
May 2002	0.1	51.1	60.5	-21.3	90.4	108.1	636.6	47.6	657.9
June 2002	-0.2	44.9	56.4	-6.9	94.2	106.8	647.1	50.4	654.0
July 2002	-0.1	49.6	56.4	-22.5	83.4	110.6	642.8	54.2	665.3
August 2002	-0.1	49.7	53.6	-2.2	101.0	107.2	646.7	53.6	648.9
September 2002	-0.1	33.4	46.0	31.4	110.7	102.9	622.2	56.9	590.8
October 2002	0.0	20.7	46.0	28.2	94.9	99.8	606.6	53.8	578.4
November 2002	-0.1	22.3	47.9	32.0	102.1	99.6	592.5	51.7	560.5
December 2002	0.0	22.1	48.3	65.0	135.4	102.2	645.6	53.9	580.6
January 2003	0.0	23.9	22.2	55.0	101.1	110.0	632.2	87.8	577.2
February 2003	0.0	32.7	46.7	64.9	144.3	121.7	630.8	75.0	565.9
March 2003	0.0	49.4	42.4	32.2	124.0	114.4	595.9	72.0	563.7
April 2003	0.0	36.3	44.1	55.5	135.9	110.7	620.7	66.6	565.2

¹⁾ Excl. exchange rate adjustments.

²⁾ Central government administration, social security administration and Norges Bank.

³⁾ Incl. possible discrepancies between forward assets and forward liabilities within the category of foreign exchange banks.

Source: Statements from commercial and savings banks (registered foreign exchange banks) to Norges Bank

Table 43. Foreign exchange banks. Overall foreign currency position. In millions of NOK

	31.03.2002	30.06.2002	30.09.2002	31.12.2002	31.03.2003
Foreign assets, spot	217 232	203 986	194 813	192 705	215 543
Foreign liabilities, spot	366 240	317 645	351 361	326 594	365 732
1. Spot balance, net	-149 008	-113 659	-156 548	-133 889	-150 189
2. Forward balance, net	76 692	121 215	122 975	136 072	108 394

Source: Norges Bank

Table 44. Norges Banks' foreign currency transactions with various sectors. In billions of NOK

	Week in 2003																	
	2002	1-52	10	11	12	13	14	15	16	17	18	19	20	21	22	1-22		
1. Norwegian customers																		
Net spot ¹⁾	48	5.5	-29.4	14.2	14.2	-0.2	-50.5	21.9	-2.0	-2.6	41.0	-12.8	-8.8	36.3	14.1	26.7		
Net forward ¹⁾	10	2.2	-18.8	14.5	14.5	-2.5	-55.3	34.2	-11.0	-4.1	37.1	-5.9	-13.2	35.2	-2.2	15.9		
-Change in purchase contracts ²⁾	38	3.3	-10.6	-0.4	2.3	2.3	4.8	-12.3	9.1	1.5	3.8	-6.9	4.4	1.1	16.2	10.8		
- Change in sales contracts ³⁾	-12	6.4	2.0	-1.9	-6.2	-6.2	-6.3	15.5	-18.7	-4.9	-3.8	4.7	-8.0	2.9	-23.6	-26.1		
	26	9.8	-8.6	-2.2	-3.9	-3.9	-1.5	3.2	-9.7	-3.4	0.0	-2.3	-3.6	4.0	-7.4	-15.1		
2. Foreign sector																		
Net spot ¹⁾	-81	-7.8	27.7	-15.8	5.1	5.1	39.3	-15.7	-4.6	6.4	-28.5	17.0	8.2	-28.5	-15.0	-9.3		
Net forward ¹⁾	-18	-7.7	12.2	-13.0	-0.8	-0.8	9.3	-2.0	3.4	-11.9	-2.5	12.1	-0.5	-8.1	9.0	14.0		
-Change in purchase contracts ²⁾	-63	-0.1	15.5	-2.8	5.9	5.9	30.0	-13.7	-8.0	18.2	-26.0	4.9	8.7	-20.5	-24.0	-23.3		
- Change in sales contracts ³⁾	-126	7.8	-13.9	-20.1	2.6	-7.2	-7.2	-5.9	36.7	-64.7	48.5	-34.8	1.0	29.6	18.6	-3.2		
	-189	7.7	1.7	-23.0	8.5	22.8	-19.6	28.7	-46.4	22.5	-30.0	9.7	9.2	-5.4	-26.4			
3. Norges Bank																		
Net spot ¹⁾	53	0.7	0.7	0.8	0.8	0.8	0.5	0.4	0.3	0.6	0.6	0.7	0.5	0.1	0.0	12.5		
Net forward ¹⁾	53	0.7	0.7	0.8	0.8	0.8	0.5	0.4	0.3	0.6	0.6	0.7	0.5	0.1	0.0	12.5		
-Change in purchase contracts ²⁾	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
- Change in sales contracts ³⁾	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4. Other																		
Increase in Norwegian customers' net currency claims on banks	-11	4.0	-1.2	-1.5	-1.5	-2.5	10.1	-4.3	-0.3	-4.7	-12.4	-4.7	0.6	-3.5	6.7	-20.0		
Increase in banks' total positions	4	0.9	1.3	-1.5	-1.5	1.6	0.3	-1.4	0.2	2.0	2.0	-1.7	-1.6	-2.1	-0.4	-2.9		
Specification of foreign sector spot:																		
Net NOK claims on banks ⁴⁾	-13	-3.4	10.8	-16.3	0.7	0.7	9.9	-1.4	1.8	-10.7	-7.7	11.9	-0.6	-0.5	4.7	9.0		
VPS-registered shares ⁵⁾	-2	-1.5	0.2	0.0	-0.5	-0.5	0.2	-1.3	1.3	-0.2	4.2	1.9	-0.4	-5.3	-0.9	0.0		
VPS-registered bonds ⁵⁾	-5	-1.1	1.7	-0.8	-0.1	-0.1	0.0	0.5	0.3	-0.7	0.6	-1.1	0.0	-2.1	4.5	-2.7		
VPS-registered notes and certificates ⁵⁾	1	-1.4	-0.5	4.0	-1.0	-1.0	-0.8	0.3	0.1	-0.2	0.4	-0.5	0.4	-0.2	0.7	0.7		
Foreign sector purchases of VPS-reg. securities, total	-	42.8	34.4	28.8	35.5	33.90	34.9	54.7	19.0	42.0	60.0	67.0	43.0	51.0	45.5	832.4		
Foreign sector sales of VPS-registered securities, total	-	38.80	35.90	32.00	33.90	33.90	34.23	54.10	20.00	41.00	65.00	68.00	43.00	43.00	49.70	829.8		

¹⁾ Positive figures denote that the sectors in question purchase foreign currency from Norwegian banks.

²⁾ Positive figures denote that the sectors in question increase their contracts for purchase of NOK, and negative figures denote a decline in purchase contracts.

³⁾ Positive figures denote that the sectors in question increase their sales contracts in NOK, and negative figures denote a decline in sales contracts.

⁴⁾ Positive figures denote a reduction of NOK deposits from the foreign sector in Norwegian banks.

⁵⁾ Positive figures denote net sales of VPS-registered securities by the foreign sector.

