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Norges Bank's reports on financial stability

Norges Bank shall foster robust and efficient payment systems and financial markets. This is in accordance with the Norges Bank Act and the Payment Systems Act. Norges Bank therefore monitors the economy and the financial industry in order to detect any trends that may weaken the stability of the financial system, and strives to limit the risks in the payment systems. Should a situation arise in which financial stability is threatened, Norges Bank, in consultation with other authorities, will if necessary implement measures to strengthen the financial system.

The *Financial Stability* report contains information gathered by Norges Bank through its monitoring work. The purpose of publishing this information is to increase awareness and contribute to debate on issues with a bearing on financial stability. The report is published twice a year, and is discussed by Norges Bank's Executive Board.

Financial stability means that the financial system is robust to disturbances in the economy, so that it is able to mediate financing, carry out payments and redistribute risk in a satisfactory manner. Experience shows that the foundation for financial instability is built during periods with strong growth of debt and asset prices. Banks play a very central part in extending credit and mediating payments, and are thus of importance to financial stability.

The consequences for financial stability of disturbances in the economy depend among other things on:

- the level of and movements in debt and asset prices, and developments in factors that affect the debt servicing capacity of borrowers,
- banks' exposure to different types of risk,
- banks' earnings and financial strength, i.e. how well equipped they are to deal with losses
- whether problems that arise in part of the financial system are amplified and/or spread to other parts of the system.

The focus of the report is on these factors. The first two chapters present a discussion of macroeconomic developments of particular importance for financial stability, both global and national. We look in particular at developments in debt, asset prices and the debt servicing capacity of borrowers. A broader review of macroeconomic developments is provided in Norges Bank's *Inflation Report*. Chapter 3 considers banks' earnings and financial strength, and the risk picture banks are facing. Credit, liquidity and market risk are discussed in each report. Other types of risk, such as counterparty risk, settlement risk and operational risk, are examined at regular intervals. Developments in other financial institutions are also considered. Many of these institutions are linked to banks through financial conglomerates.

The discussion of the various types of risk culminates in a qualitative assessment of **risk magnitude**. We use the designations low, relatively low, moderate, relatively high and high risk. We also indicate which direction risk has moved in since the previous report. Our assessments are based on a broad range of information. In our overall assessment of the financial stability outlook, we weigh up the different types of risk in a discretionary manner. Because of the structure of banks' exposures, we place great emphasis on credit risk (the risk of loan losses.) The risk assesment may be different for the short and the long term. For example, there may be situations where credit risk is low in the short term because of low interest rates and/or favourable economic developments. However, the same factors may lead to debt building up and to inflation of asset price that may result in loan losses in the long term.

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Somewhat improved outlook, but imbalance in debt growth

The decline in interest rates since December 2002 has reduced the interest burden of the household and enterprise sectors and strengthened their debt servicing capacity. Fewer companies went bankrupt in the third quarter, and the total market value of bankrupt entities has fallen since last autumn. At the same time, the decline in property values and rental prices in parts of the commercial property market is eroding the value and earnings of many property companies. Banks have extended large loans to enterprises of this kind. Although banks' earnings have declined somewhat, their financial strength is satisfactory.

Credit growth is still somewhat higher than economic growth. In relation to gross domestic product, credit to mainland Norway is back at the high level of around 1989-90. Debt growth is in imbalance, with strong growth in household debt and low growth in enterprise sector debt. This situation reflects high house prices and substantial growth in household consumption, while corporate investment remains low.

The fall in interest rates is boosting activity in the Norwegian economy and strengthening the enterprise sector. At the same time, the household debt burden is still on the rise, adding uncertainty to economic developments. If households have to reduce their demand for goods and services later in order to service their debt, turnover and results in the enterprise sector will be adversely affected. This in turn may lead to higher loan losses for banks.

Norway's stable, low inflation and the change in monetary policy from exchange rate targeting to flexible inflation targeting have reduced the probability that households will be subjected to a "double shock" in the form of both higher unemployment and higher interest rates, as was the case during the banking crisis. In recent years cyclical fluctuations have also been substantially less pronounced than in the 1970s and 1980s. This may imply that households will be able to cope with a somewhat higher debt burden than prior to the banking crisis.

On the whole, the outlook for financial stability is considered to be satisfactory. As a result of the improved debt servicing capacity of households and enterprises, the outlook for financial stability is assessed as being somewhat better than it was six months ago.

Svein Gjedrem

Summary

Signs of higher economic growth

Developments in international financial markets in the summer and autumn of 2003 reflect expectations of stronger economic growth. Bond yields have risen, and after bottoming out in about March this year, equity prices in the largest markets have climbed some 25-35%. The banking industry in many countries has reported improved results this year. However, the positive trend is vulnerable to economic disturbances, partly due to imbalances in the US economy.

Growth in the Norwegian economy came to a halt in winter 2002-2003, but is now showing some signs of picking up, reflecting inter alia the sharp fall in interest rates. Norges Bank's key rate has been reduced by 2.5 percentage points since the May report and by 4.5 percentage points since December 2002.

Higher loan losses in Norwegian banks, but signs of improvement

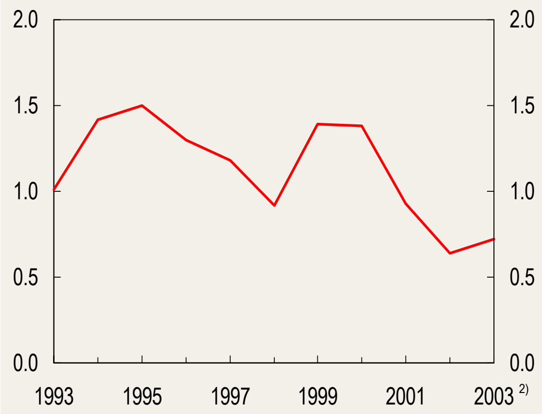
Banks' results in the first three quarters of 2003 were somewhat lower than in the same period of 2002. This is partly due to sluggish developments in the Norwegian economy, which contributed to a rise in banks' loan losses. However, from the second to the third quarter of 2003, banks' loan losses fell, and results improved. We expect stronger results in the fourth quarter of 2003 than in the fourth quarter of 2002, when banks had high loan losses and weak results. The upswing in securities markets has boosted banks' income in the form of income from securities holdings, trading in securities and ownership interests in life insurance companies. The fall in interest rates has reduced banks' net interest income, but also improved borrowers' debt servicing capacity. Partly because many banks had high lending growth, their average core capital ratio declined somewhat from the third quarter of 2002 to the third quarter of 2003. Many banks have issued preferred capital securities and increased their subordinated loan capital to boost their financial strength.

Continued high credit growth for households

Growth in overall credit and domestic credit has slowed somewhat since the previous report, but mainland credit in relation to GDP has increased to a historically high level. Household debt is increasing sharply, while enterprise sector debt is expanding at a moderate pace. The sharp rise in the value of dwellings in recent years is one of the main factors behind the marked growth in household debt. After falling somewhat through the spring, house prices have shown a rising tendency again since the summer, and are at a high in a historical context.

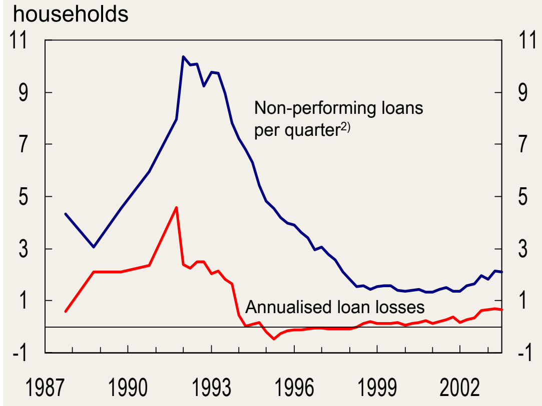
The fall in interest rates has improved households' debt servicing capacity. Banks' credit risk associated with loans to households is therefore reduced, and assessed as relatively low. At the same time, household debt has been growing far more strongly than household disposable income for a number of years. The debt burden has therefore increased substantially. If debt continues

Chart 1 Banks' pre-tax operating profit as a percentage of ATA[1)]



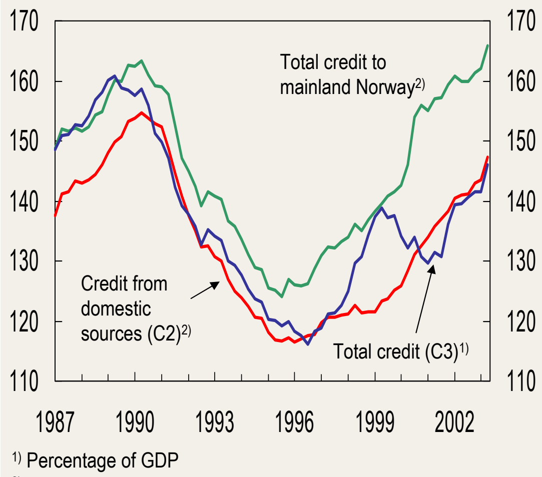
1) Excluding foreign branches
2) Annualised figures for 2003 based on first three quarters
Source: Norges Bank

Chart 2 Non-performing loans and loan losses in banks.[1)] Percentage of gross lending to municipalities, non-financial enterprises and households



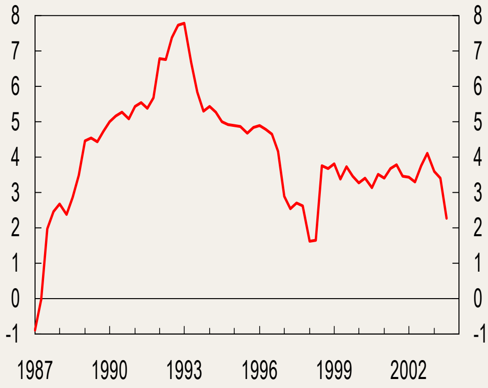
1) Excluding branches of foreign banks
2) Annual data for the period 1987-1991
Source: Norges Bank

Chart 3 Credit as a percentage of GDP



1) Percentage of GDP
2) Per cent of mainland GDP
Source: Norges Bank

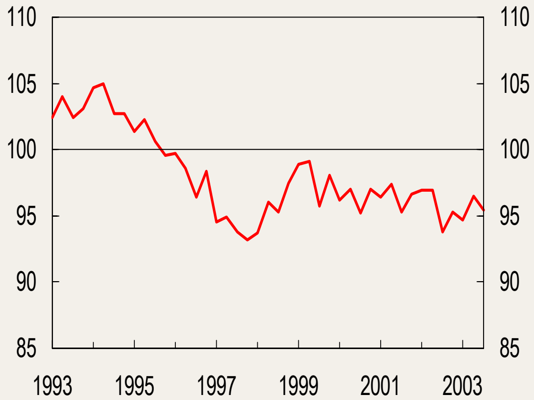
Chart 4 Household borrowing rate after tax deflated by consumer price inflation[1]. Per cent



[1] CPI excluding energy products until 1993, Norges Bank's calculations for CPI adjusted for taxes changes and excluding energy products until 2000 Q2, after that CPI-ATE. Projection for household real interest rate after tax for 2003 Q3 based on money market rate

Source: Norges Bank

Chart 5 Developments in banks'[1] liquidity indicator[2]



[1] Excluding branches of foreign banks

[2] Stable financing (customer deposits, equities and bonds) as a percentage of illiquid assets (lending and other long-term assets)

Source: Norges Bank

to increase at the same pace as today, the debt burden will pass the level in the previous banking crisis in the course of 2005, which would increase households' vulnerability to economic disturbances.

The fall in interest rates eases corporate debt servicing

Sluggish developments in the Norwegian economy through 2002 and into 2003 contributed to a sharp rise in the number of bankruptcies. The increase in the number of bankruptcies has since slowed, and in the third quarter of 2003 the number of bankruptcies fell. Many small entities have gone bankrupt. The total market value of bankrupt entities has fallen since the peak in the third quarter of 2002.

The fall in interest rates has improved enterprises' debt servicing capacity. An economic upturn will have the same effect. The property industry is the largest recipient of bank loans. Because earnings have been low, we consider the risk associated with parts of the property industry to be relatively high, and unchanged from our assessment in the May report. Enterprises in some industries, such as fish farming and commercial services, are still exposed. For the enterprise sector as a whole, the estimate for expected loss per krone of debt remained roughly unchanged from 2001 to 2002. Although financial vulnerability differs across industries, overall vulnerability is assessed as moderate, and somewhat lower than six months ago.

Somewhat lower liquidity risk, but mixed picture

Banks have increased their share of stable financing somewhat since the last report. For a number of small and medium-sized banks, this is partly because the risk premium they have to pay for short-term financing has increased. Overall, liquidity risk for banks is regarded as relatively low and somewhat lower than in May. However the liquidity risk for some small banks is higher.

Lower counterparty risk

Few of banks' exposures to counterparties are so large that the banks would have serious problems with financial strength if a major counterparty could not meet its obligations. A relatively limited share of the exposures are to large Norwegian banks. This means that there is limited risk of liquidity and solvency problems spreading across Norwegian banks. This risk has decreased since September this year, when NOK was included in the international foreign exchange settlement system, CLS.

Outlook for financial stability somewhat improved

Overall, the outlook for financial stability is considered to be satisfactory, and somewhat more favourable than in May 2003. At the same time, there is a risk that over time growth in household debt may lead to increased loan losses for banks. A higher debt burden makes households more vulnerable. A sudden debt consolidation among households would reduce the earnings and debt servicing capacity of many enterprises.

1 International developments and Norwegian securities markets

Global developments influence the Norwegian financial sector through several channels, via both the real economy and financial markets. Developments in the global economy have an impact on growth, the krone exchange rate and interest rates in Norway. This in turn has an influence on Norwegian enterprises and households, and thereby banks' lending portfolios. Norwegian securities markets are influenced by developments in international securities markets. Banks are influenced by developments in securities markets through changes in income derived from trading on their on behalf or on behalf of customers. Developments in securities markets and in the international banking industry also affect Norwegian banks' funding costs.

1.1 The global picture

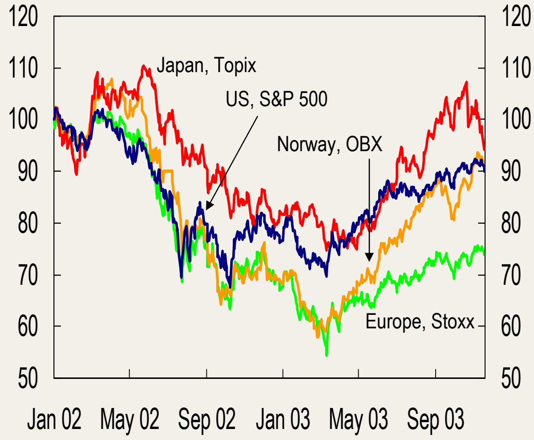
This summer and autumn, international financial markets have been marked by increased confidence in an economic upswing. Since the trough was reached in March 2003, equity prices have climbed some 25-35% in the largest markets (see Chart 1.1). The increase in bond yields in recent months (see Chart 1.2) reflects confidence in higher growth, but the immediate effect of the fall in prices is a loss of wealth for bond owners. Macroeconomic indicators in a number of countries show a more positive trend than has been the case for a long time, and corporate results have generally improved. Both sovereign states and individual enterprises are therefore considered to be less risky borrowers now than was the case only a short time ago. This positive trend, however, is vulnerable to a swift correction of financial imbalances. There is uncertainty associated with a sharp rise in debt and house prices in many countries and to movements in bond prices. The greatest uncertainty, however, is associated with the large current account deficit in the US and possible consequences for global economic developments and the financial system if the value of the dollar should abruptly depreciate further.

1.2 Continued large financial imbalances in the US

The US is expected to record a current account deficit equivalent to about 5% of GDP this year. With the exception of three quarters in 1991-1992, the US has had a continuous deficit over the past 21 years. In 2002, the country had a net foreign debt corresponding to 25% of GDP.

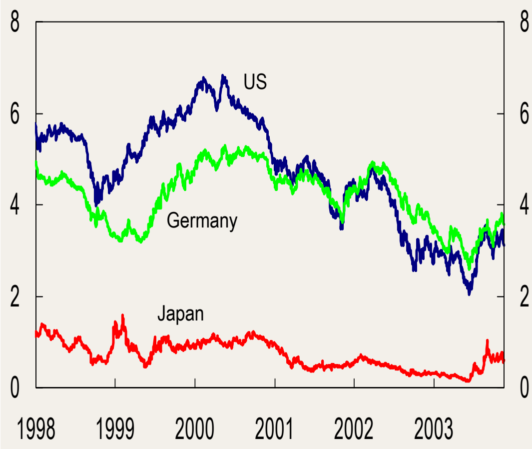
Asian countries' purchases of US securities are now to an increasing extent financing the US current account deficit (see Chart 1.3). While until recently the current account deficit was due to low private saving, it is now a rapidly rising budget deficit that is the main factor. Foreign investors are now primarily buying government securities, while earlier they bought private securities. It is particularly central banks in countries

Chart 1.1 International equity indices. Indexed, 02.01.02 = 100



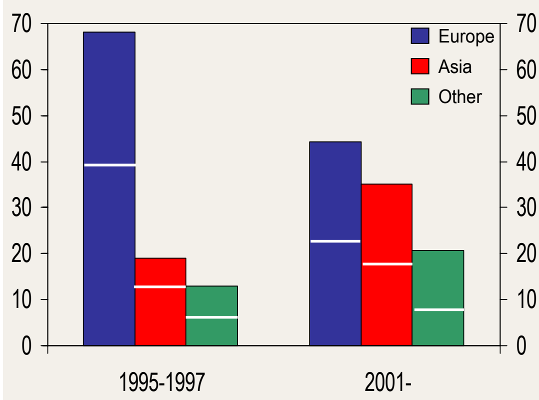
Source: EcoWin

Chart 1.2 Yield on government bonds with 5 years to maturity. Per cent



Source: EcoWin

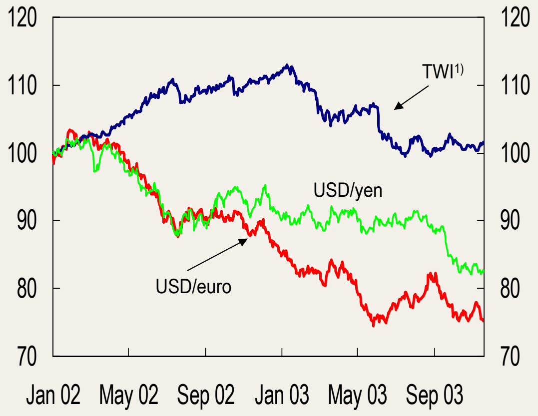
Chart 1.3 Net purchase of securities from the US. Per cent of total purchase in the same period[1)]



1) Lowest part of each bar indicates the share of government securities

Source: United States Department of the Treasury

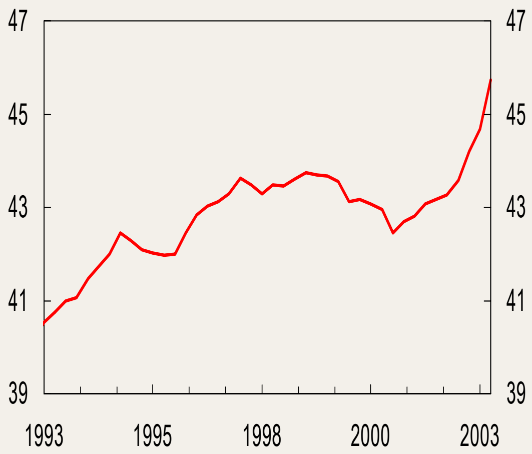
Chart 1.4 Exchange rates. Daily quotations. Indexed, 01.01.02 = 100



1) Trade-weighted exchange rate index, inverted

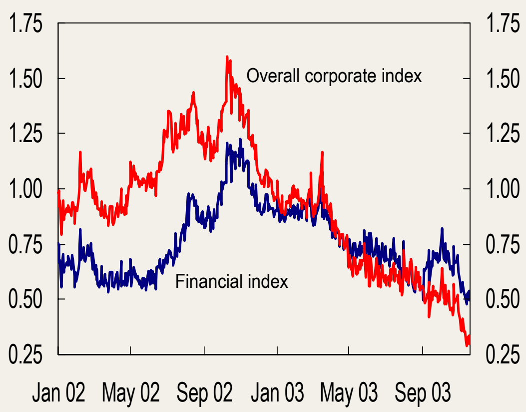
Sources: EcoWin and Norges Bank

Chart 1.5 Housing loans as a per cent of housing wealth. US household sector



Source: Board of Governors of the Federal Reserve

Chart 1.6 Yield spreads between corporate and government bonds in the euro area. Percentage points



Source: Datastream

with a large trade surplus and, in part, high capital inflows that are building up large foreign exchange reserves through interventions. The purchases are being made either to counter an appreciation of a floating currency or as a result of a fixed exchange rate regime. China, Taiwan, Japan, South Korea and India increased their foreign exchange reserves by a total of USD 444bn between January 2002 and end-September this year. Most of the reserves are denominated in dollars.

The US dollar has depreciated (see Chart 1.4), which is contributing to reducing the US current account deficit. If purchases of US government securities decline, it will be more difficult to finance the budget deficit, possibly resulting in a rise in long-term interest rates in the US. In recent years, economic growth in the US has been sustained by private consumption, fuelled by rising house prices, low interest rates and tax cuts. As a result of the fall in long-term interest rates, households have undertaken extensive refinancing of their home mortgages and, at the same time, increased the loan-to-asset value ratio (see Chart 1.5). Gross housing wealth is accounting for a steadily higher share of total household wealth. Following a long period of high debt growth and low saving, household consumption in the US is not very robust to a fall in the housing market or an increase in interest rates.

1.3 International banking industry

Improved results for banks in Europe and the US

For several years, subdued economic activity and large losses on loans and other claims on the telecom sector have contributed to low profitability and substantial loan loss provisions in large parts of the European banking industry. In mid-2003, however, many banks' financial statements showed improved results and a decline in loan loss provisions. This also applies to a number of banks in the Nordic countries. These have the largest potential spillover effect on the Norwegian financial industry through subsidiaries, branches and other activities focused on Norway. The European banking industry will be vulnerable in the event of weaker-than-projected cyclical developments. This autumn, the risk premium on bonds issued by financial institutions in the euro area has increased relative to the corporate sector as a whole (see Chart 1.6).

Banks in the US have shown substantially improved results. Pre-tax profits increased by 11% in the second quarter of 2003 compared with the same period one year earlier, and the default rate has fallen markedly (see Chart 1.7). US banks have fared well through the period of falling stock markets, and have recorded considerable earnings on their securities positions over the past year.

New measures to strengthen Japanese banks

In general, Japanese banks have low equity capital and large portfolios of non-performing loans, even though the latter has declined somewhat (see Table 1.1). Deflation has increased

House prices and credit growth internationally

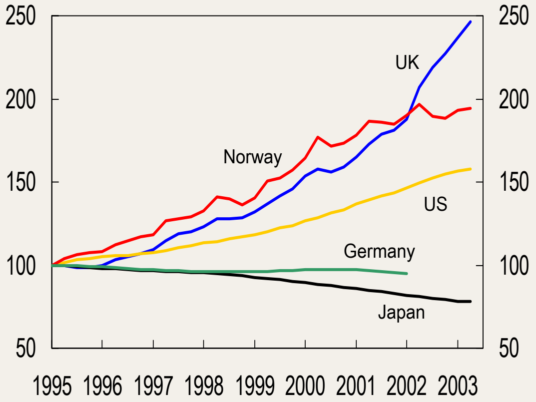
The housing market is of considerable importance to financial stability. Dwellings normally account for the largest wealth component for households. A rise in house prices may lead to an increase in households' home mortgages, both because it is more expensive to buy a dwelling and because they borrow more in connection with refinancing. In many countries banks are the most important source of financing for house purchases. Mortgages are usually provided with the dwelling serving as collateral. Banks are therefore vulnerable to a decline in house prices. Banks also have exposures to the construction sector. A fall in house prices may result in lower construction activity, excess capacity and weaker results in the industry. This will increase banks' credit risk.

For a long time, statistics on house prices have not been readily available or very comparable. As a result of an increased focus on financial stability in recent years, a number of countries have initiated projects in order to compile and publish statistics on the housing market.[1]

Chart 1 shows changes in indexed nominal house prices in selected countries since 1995. In the UK and Norway, house prices have risen sharply. In the last three years, however, the rate of increase has been far stronger in the UK than in Norway. The US index is somewhat flatter, but has nevertheless risen by more than 50% since 1995. Germany and Japan have experienced the opposite, with stable or falling house prices throughout the period.

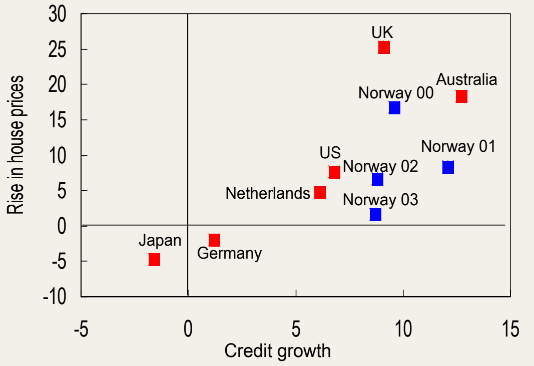
Countries that record a sharp rise in house prices also have high growth in total domestic credit (see Chart 2). Among the countries examined here, only Germany and Japan have recorded low or negative credit growth. The positive relationship between the rise in house prices and credit growth also applies to earlier observation dates. Norway is an example of a country where credit growth may remain high even after house prices level off. In the period from 2000 to 2003, the 12-month rise in house prices fell from 17% to about 2%, while the 12-month growth in credit remained more stable at about 9-12%. One reason for continued high credit growth is the preceding period of sharp increases in house prices, which often results in an increase in the loan-to-asset value ratio in connection with a change in ownership. In addition, housing turnover has remained buoyant. This is discussed further in section 2.2.

Chart 1 Nominal house price indices in selected countries. Indexed, 01.03.95 = 100



Sources: Deutsche Bundesbank,EcoWin and Statistics Norway

Chart 2 Rise in house prices and growth in domestic credit in selected countries. 12-month growth, March 2003[1)]. Per cent



1) Rise in house prices as of June 2002 for Germany. For Norway, figures are for March of each year in the period 2000-2003.

Sources: Deutsche Bundesbank, EcoWin, IMF, Kadaster, Norges Bank, Statistics Norway and Statistics Australia

[1] For example, the German central bank has recently published national house price indices for the first time, cf. article in the central bank's *Monthly report* for September 2003.

enterprises' debt burden in real terms, but low interest rates mean that a number of enterprises can service their loans despite weak earnings. As a result of bank's exposed positions, their capacity to extend new loans to the large number of small and medium-sized enterprises is limited.

The authorities are now supporting measures whereby banks' lending portfolios are being sold to companies that issue securities based on these lending portfolios. The objective is both to promote a better securities market for financing enterprises and to strengthen banks' balance sheets. The central bank has announced that it will be able to purchase such securities for up to JPY 1000bn (about NOK 63bn). Since autumn 2002, the central bank has also made substantial equity purchases from banks in order to reduce their exposure to the stock market.

More than half of the core capital in the largest banks consists of deferred tax assets, which cannot function as a buffer against losses in the short term. The IMF has estimated that a 20% drop in the stock market or a 3 percentage point higher write-off of loan losses will result in the loss of all equity capital, except tax credits, in the largest banks. In May 2003, the Japanese government injected new capital into one of the country's largest banks after the rules on the recording of tax credits were tightened. Private ownership was maintained.

1.4 International securities markets

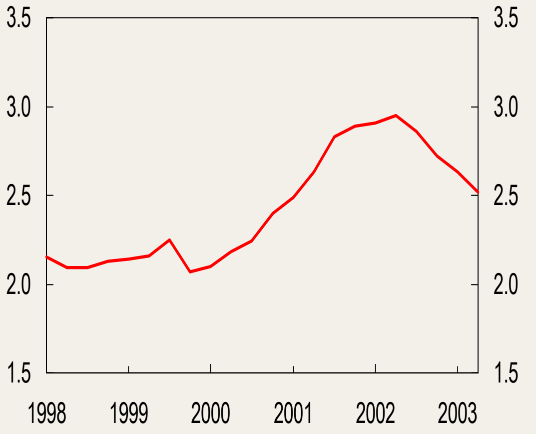
Rally in stock markets

Equity prices have risen substantially since this spring in the US, Europe and Japan (see Chart 1.1), although they have fallen again recently in Japan. The broad-based rise primarily reflects an improved economic outlook, partly as a result of record-low interest rates in many countries. Very low interest rates have also resulted in lower returns on alternative investments. The gains in stock markets improve financial institutions' balance sheets and enterprises' access to new funding and potential growth. Following a lengthy decline in equity prices and improved corporate earnings, the valuation of equities is now more normal. In the US market, the P/E ratio is back to the level prevailing in 1997 (see Chart 1.8).

Increased investor confidence in US enterprises?

Since spring 2003, investors have required a steadily lower excess return in relation to safe government bonds in order to buy bonds issued by US enterprises (see Chart 1.9). There may be several explanations for this. First, investors' risk aversion may be lower. Second, investors may adapt to new information more quickly than credit rating agencies. When there are more optimistic expectations concerning economic developments, the market may for a period consider some borrowers to be less risky than implied by their credit rating. As a result, the yield spread for a given credit rating may narrow during an economic upturn, even though investors' risk aversion and borrowers' credit ratings are unchanged. Third, it is conceivable that in a

Chart 1.7 Non-performing loans in US banks. Percentage of total lending



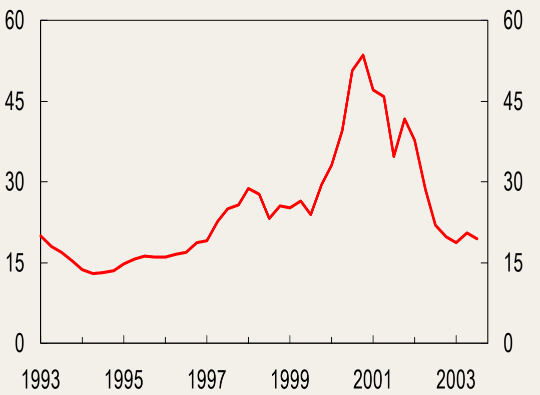
Source: Board of Governors of the Federal Reserve

Table 1.1 Non-performing loans in private Japanese commercial banks. Per cent

	Market share[1]	1998	1999	2000	2001	2002	2003
"City banks" [2]	28,0	4,8	5,2	5,0	5,4	9,4	8,0
Regional	20,8	4,1	5,0	5,9	7,3	8,0	8,1
Other	7,9	9,0	10,3	8,8	8,5	9,5	6,6

[1] Percentage of total lending in Japan, private and public sectors
[2] Large, internationally active banks without regional connection
Sources: IMF and Financial Services Agency

Chart 1.8 Relationship between price and future earnings[1] for companies in the S&P 500 index



[1] Annual earnings one year ahead from the price date. Actual earnings to the end of 2003 Q2, after that estimated earnings
Sources: Standard and Poor's and Norges Bank

market with very low interest rates investors do not behave entirely rationally and purchase more risky bonds in order to achieve a higher return.

Improved conditions for emerging economies

Both low interest rates in industrial countries and lower risk aversion may have led to a lower risk premium required by investors to invest in emerging economies (see Chart 1.10). Several countries have succeeded in issuing bonds containing clauses that make it easier to achieve a coordination of creditors in the event of any debt restructuring. Issuers have not had to pay extra premiums to have these clauses included.

Since the moratorium on government debt in 1998, Russia has experienced a very swift economic upturn. Equity prices for Russian companies have almost doubled since the beginning of the year. In October, the country's debt was upgraded to investment grade. Since many investors in government securities apply this credit rating as a minimum requirement in order to invest, Russia may see a further improvement in its funding possibilities in the period ahead. At the end of October, the head of Russia's largest oil company was arrested, charged with corruption and tax evasion. The Russian authorities seized 44% of the shares in the company. The event contributed to an increase in the risk premium on Russian debt.

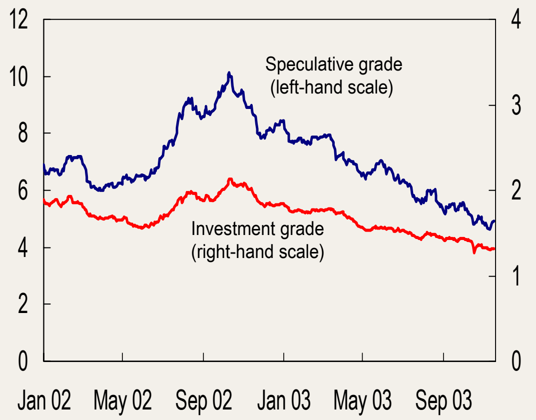
1.5 Securities markets in Norway

Rise in prices and lower credit risk premiums

Historically low interest rates and a rally in international stock markets have contributed to a sharp rise in prices in the Norwegian stock market since the previous report (see Chart 1.11). Over the past six months, the Norwegian stock market has risen considerably more than international stock markets. In earlier periods of substantial price movements the effects have also been greater in the Norwegian market than in other countries.

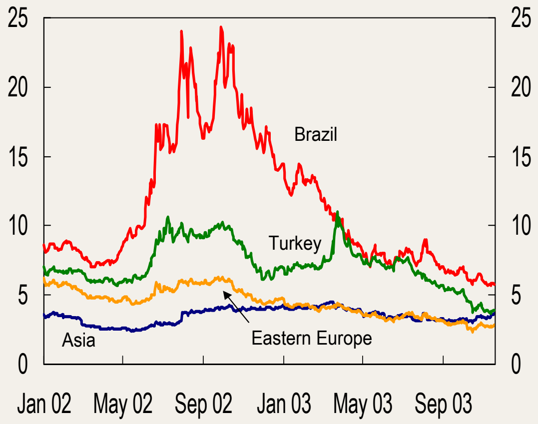
The bank index showed weaker developments than other sub-indices this summer, but has since risen rapidly. The rise partly reflects investors' favourable response to third-quarter results in many banks as well as the Norwegian Competition Authority's decision to approve the merger between DnB and Gjensidige NOR on certain conditions. Other market indicators also show that investors consider banks' financial position to be favourable (see box on p. 16 for a discussion of the indicators). The risk premium on bonds issued by Norwegian banks has been declining in recent months (see Chart 1.12). Developments in the probability of default based on market data for Norwegian commercial and savings banks show the same picture (see Chart 1.13). The probability of default among the weakest banks has been falling over the past two years, while the median bank has exhibited stable developments. The volatility of Norwegian bank shares has been sharply reduced since the spring (see Chart 1.14).

Chart 1.9 Yield spread between US corporate bonds with various credit ratings and government bonds. Percentage points



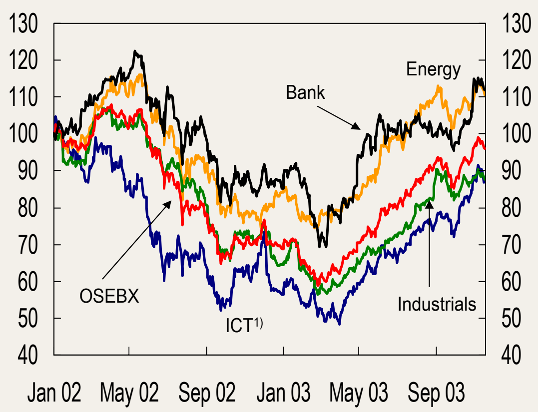
Source: EcoWin

Chart 1.10 Yield spreads between government debt of emerging economies and US government bonds. Percentage points



Source: EcoWin

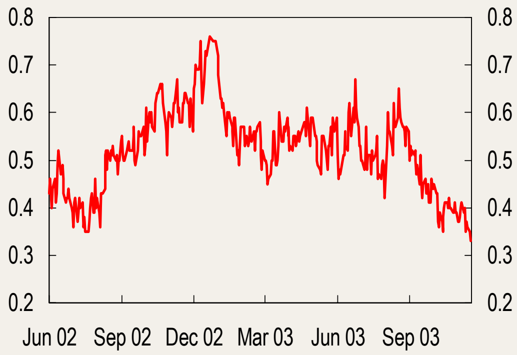
Chart 1.11 Sub-indices on the Oslo Stock Exchange Indexed, 02.01.02 = 100



1) Weighted average of the telecom and IT indices

Source: EcoWin

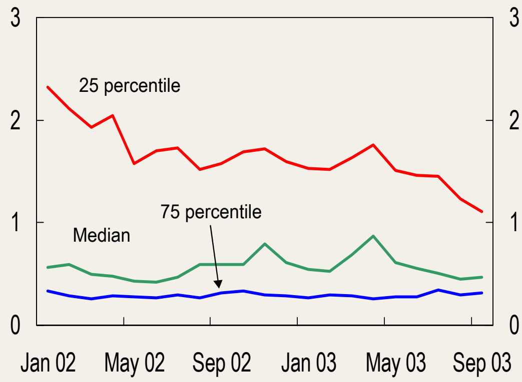
Chart 1.12 Yield spread between bonds issued by Norwegian banks[1)] and Norwegian government bonds. Percentage points. 3-year duration



1) The series also includes three mortgage companies

Sources: Ecowin, Oslo Stock Exchange and Norges Bank

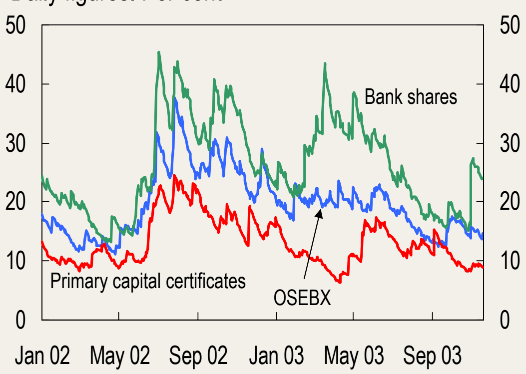
Chart 1.13 Probability of default for Norwegian commercial and savings banks[1)]. Per cent



1) Probability of default within 1 year.

Source: Moody's KMV

Chart 1.14 Volatility of Norwegian bank shares, primary capital certificates and the total market. 100-day moving windows, weighted exponentially. Daily figures. Per cent



Sources: EcoWin and Norges Bank

High turnover in several markets

In the first three quarters of 2003, turnover in both equity and bond markets was higher than in the same period last year. The volume of bonds traded on the Oslo Stock Exchange was 27% above the level in the same period in 2002. In particular, turnover has been high in the government bond market. High demand for long-term fixed income instruments as a result of the fall in short-term interest rates through the spring and summer contributed to this.

The rise in prices and higher turnover in the stock market have resulted in increased activity in the derivatives market. Permission for insurance companies and mutual funds to use derivatives has probably also been a factor. Turnover in exchange-traded option contracts has been increasing since May 2003, and in September this year the number of open positions in the option market was at its highest level since March 2001.

Fluctuations in the foreign exchange market in recent years have resulted in higher demand from enterprises for long-term currency hedging products, such as options, futures and currency swaps. Prices for such derivatives have fallen somewhat, but there are wide price differences between the various products and between customers.

Fall in issuance of private bonds

The issuance of private bonds has fallen in the first three quarters of 2003 compared with the same period last year. Both commercial banks and private non-financial enterprises have reduced their issuance of bonds in the Norwegian market. Savings banks, however, have increased their borrowing by 38% in the period, and so far this year have been the largest issuer in the Norwegian market. Savings banks and commercial banks have issued two thirds and half, respectively, of their bond debt in Norway. Increased issurance of government bonds contributed to a total issue volume in the Norwegian bond market that was 14% higher in the first three quarters of 2003 than in the same period last year.

In the stock market, the issue volume was lower in 2003 than in 2002 up to the end of the third quarter, but picked up in October. The conversion of debt to equity in companies with debt problems accounts for a considerable portion of the share issues.

Higher new purchases in mutual funds

Net new purchases of units in Norwegian-registered mutual funds were relatively high in September, at NOK 1.8bn, after showing negative figures in July and August. Equity funds pushed down this figure despite low money market rates and a rising stock market. During the third quarter, there has nevertheless been a pronounced increase in net new purchases in equity funds.

Market-based indicators of banks' financial position

Securities markets can provide useful and current information on banks' financial position. Indicators based on market data reflect market participants' expectations concerning future developments, and they may be updated often. Market indicators of banks' financial position may be based on market data both for banks directly and for enterprises in banks' credit portfolios.

The spread between the yield on bonds issued by banks and the yield on government bonds (risk-free interest rate) is an indicator of banks' financial position. When investors are of the view that a bank's financial position has deteriorated, they will require increased compensation for buying the bond, and the yield spread widens. The downside risk will probably be better reflected in the bond market than in other markets as bond owners do not have access to potential gains as a result of increased risk-taking in banks. The yield spread may, however, contain a liquidity premium. Changes in the yield spread may therefore reflect changes in liquidity instead of a change in the assessment of the bank's financial position. It is difficult to quantify this liquidity premium.

New information is often incorporated more swiftly in the equity market than in the bond market. This is because turnover and the turnover rate are normally higher in the equity market. **Data on banks' share prices** have for a long time been used as an indicator of risk in banks. One problem associated with this indicator is that the share price should reflect the discounted value of all future earnings, so that the share price can vary considerably even if the credit risk does not change. An alternative indicator is the **return on portfolios of bank shares**. A study of Swedish bank shares in the period prior to, during and after the banking crisis in Sweden in 1990-1992 found a significant difference in the cumulative return between shares in banks that had to have government support during the banking crisis and banks that coped without government support.[1] The difference was significant up to three years prior to the crisis. Similar results have been found in studies conducted, for example, in the US.

Volatility in the return on bank shares may provide valuable information on risk in banks. Since shares in a bank may be looked upon as claims on the bank's assets, volatility in the equity return may provide information on investors' assessment of the risk associated with the bank's assets. Increased risk on the asset side will result in increased volatility in the equity return. Studies of the banking crises in the Nordic countries show that up to ten years prior to the crisis one observed significantly higher volatility in the equity return in crisis-hit banks compared with banks that avoided a crisis.

Implied volatility from equity options can also be used as a risk indicator. Implied volatility is the market's estimate for the volatility of a share in the period up to the option's expiry date. Increased uncertainty about the share's price movement will be reflected in higher implied volatility. Options with different exercise prices but the same maturity can provide further information about this uncertainty. Different implied volatilities for different exercise prices can provide a picture of the direction of the uncertainty concerning the share's price movements.[2]

Option theory can provide information on the risk in banks in other ways as well. The share capital of a bank may be looked upon as a call option on the bank's assets. The option provides payment to shareholders if the market value of the bank's assets is higher than the bank's liabilities on the option's expiry date.[3] Since one can observe the value of liabilities, as well as the market value and volatility of the share capital, it is possible with the help of option pricing models to derive the assets' market value and volatility. These variables are an indication of expected changes in the value of assets and the uncertainty associated with this change in value. Against this background, it is possible to estimate the **probability that the bank will default on its obligations**.[4]

[1] Blåvarg and Persson (2003): "The use of Market Indicators in Financial Stability Analysis", *Penning och Valutapolitik* 2/03, Sveriges Riksbank.
[2] Syrdal (2002): "A study of implied risk-neutral density functions in the Norwegian option market", *Working Paper* 13/02, Norges Bank.
[3] Merton (1974): "On the pricing of Corporate Debt: The Risk Structure of Interest Rates", *Journal of Finance*, Vol. 29, No. 2.
[4] See box in *Financial Stability* 2/2002 for a further discussion of this method.

2 Macroeconomic developments, households and enterprises

Table 2.1 Macroeconomic variables. Percentage change on previous year unless otherwise stated

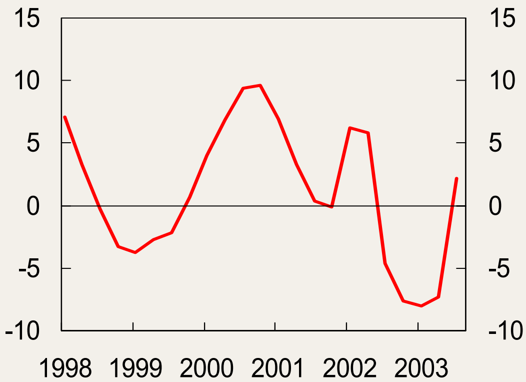
		Projection Inflation Report 3/03[1]					
	2002	2003		2004		2005	
Private consumption	3,6	3¼	(½)	5	(1¾)	3½	(½)
Public consumption	3,2	1	(¼)	2	(0)	1½	(-½)
Gross investment							
Mainland Norway	-4,6	-5	(-1)	1	(½)	4½	(2½)
Traditional exports	1,3	1	(4)	2	(3)	3¼	(1¼)
Imports	1,7	2	(1)	5¼	(4)	2½	(-1)
Mainland GDP	1,3	¾	(-½)	3	(1)	2¾	(½)
GDP trading partners [2]		1¼	(-¼)	2¼	(0)	2¾	(¼)
LFS unemployment (rate)	3,9	4½	(0)	4¾	(0)	4½	(-¼)

[1] Figures in brackets indicate change in percentage points relative to projections in Inflation Report 1/03 with unchanged sight deposit rate and exchange rate. Projections in IR 3/03 are with forward interest rate and forward exchange rate

[2] Weighted total with Norwegian exports used as weighting factor

Sources: Statistics Norway and Norges Bank

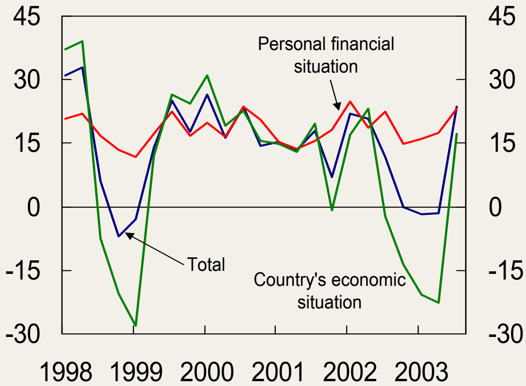
Chart 2.1 Business sentiment indicator for manufacturing. Seasonally adjusted diffusion index[1)]



[1)] A value of less than 0 implies that the majority of industrial leaders expects a weaker outlook in the next quarter.

Sources: Statistics Norway and Norges Bank

Chart 2.2 Consumer confidence indicator[1)]. Unadjusted figures



[1)] Provides an expression of the share with a positive assessment of the current situation and outlook for the future less the share with a negative assessment

Kilde: Norsk Gallup Institutt AS

2.1 The macroeconomic environment

Recent developments suggest that growth in the Norwegian economy is picking up. Seasonally adjusted mainland GDP growth was 0.3% in the second quarter of this year, while growth was marginally negative in the two preceding quarters (preliminary figures). The growth projections, as presented in the October *Inflation Report*, have been revised upwards somewhat since the May *Financial Stability* report (see Table 2.1). There are also signs of higher global growth.

Norges Bank's key rate has been reduced by 2.5 percentage points since the May report and by 4.5 percentage points since December 2002. The interest rate level is low from a historical perspective and price inflation is subdued. The narrowing of the interest rate differential between Norway and other countries has contributed to the depreciation of the krone (see Chart 1.4) and has improved competitiveness in the enterprise sector.

High cost inflation over several years and low global demand has adversely affected developments in the manufacturing sector. As a result, industries that supply services to the manufacturing sector have experienced a period of sluggish activity. In addition, the airline industry and the ICT sector have been restructuring. Enterprises that supply goods and services to households are enjoying solid growth, however. LFS unemployment has increased since the May report, but remained unchanged from the second to the third quarter of this year, at 4.6% seasonally adjusted. Industrial leaders' expectations concerning economic developments improved in the third quarter of this year (see Chart 2.1).

Gross capital formation for mainland Norway continued to fall in the second quarter of this year. Service industries accounted for most of the fall. Manufacturing investment, which showed a marked contraction in the first quarter, showed a seasonally adjusted increase in the second quarter. Petroleum and pipeline investment expanded by 6.5% between the first and second quarter. Oil prices have edged down since the uncertainty surrounding the war in Iraq came to an end. In a historical context, oil prices remain high.

Household demand is on the rise, and private consumption rose by a seasonally adjusted 1.3% between the first and second quarter. Households are more optimistic about the future (see Chart 2.2). In particular, optimism concerning the national economy has picked up considerably from the low level prevailing earlier this year.

Developments in the Norwegian economy ahead partly depend on the strength and sustainability of the international upturn and developments in the krone exchange rate. There is a large measure of uncertainty associated with the rapid and pronounced reduction in interest rates. Private consumption is expected to be the driving force behind the economic upturn. This may in turn lead to higher employment. As capacity utilisation increases, business investment is expected to pick up.

Growth in total credit and domestic credit has slowed somewhat since the previous report. Credit from foreign sources, which has fallen so far in 2003, is still contracting. In the statistics, credit from foreign sources only comprises credit to non-financial enterprises. Low growth in credit to enterprises and a weaker krone are the main factors behind decelerating growth in credit from foreign sources. In spite of somewhat lower credit growth, credit to mainland Norway as a percentage of mainland GDP is at a historically high level (see Chart 3). High house prices and a two-track economy, with strong household income growth on the one hand and weak corporate earnings on the other, have led to a marked divergence in credit developments between these sectors (see Chart 2.3).

2.2 Households

High debt growth in the household sector

Debt accumulation by the household sector has continued at a rapid rate. Twelve-month growth in household domestic debt has been about 10-11% over the past three years, and was 10.2% in September this year (see Chart 2.3). Twelve-month growth in household foreign-currency debt from domestic sources has slowed this year from the high growth rates recorded in 2002 when the wide interest differential between Norway and other countries and the strong krone generated considerable interest in such loans.

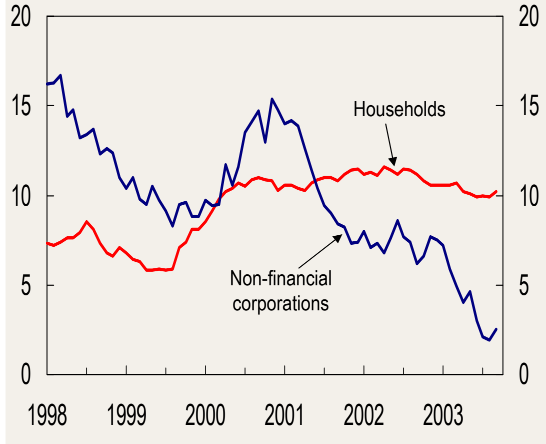
Unchanged net financial wealth

Household gross financial assets increased in the second quarter of 2003 compared with the same quarter of 2002 (see Chart 2.4 and Table 2.2). Bank deposits and the value of equity holdings and insurance claims showed the strongest increase. Insurance claims are generally illiquid and cannot be drawn upon if households encounter payment problems. The liquid portion of their financial assets, gross financial assets less insurance claims, also increased. Household gross debt expanded at about the same pace as gross financial assets, leaving net financial assets virtually unchanged.

House prices on the rise again

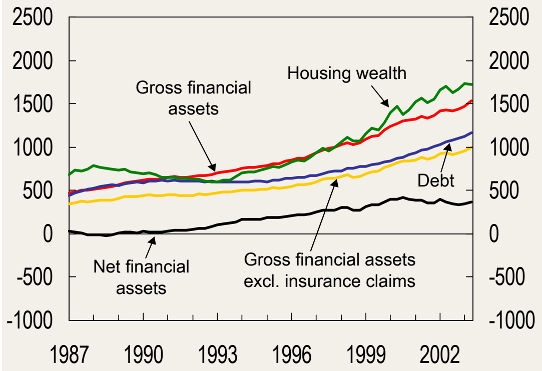
Higher housing wealth in the second quarter of this year compared with the same period one year earlier led to a an increase in total household net assets in the same period. After falling somewhat through the spring, house prices have shown a rising tendency again since the summer, reflecting the interest rate cuts through the year. Seasonally adjusted, monthly house price inflation has been positive since June and was 1.5% from

Chart 2.3 12-month growth in credit from domestic sources, by debtor. Per cent



Source: Norges Bank

Chart 2.4 Household financial assets, debt, net financial assets[1] and housing wealth. Billions of NOK



[1] Break in the statistics for all time series except housing wealth in 1995 Q4

Source: Norges Bank

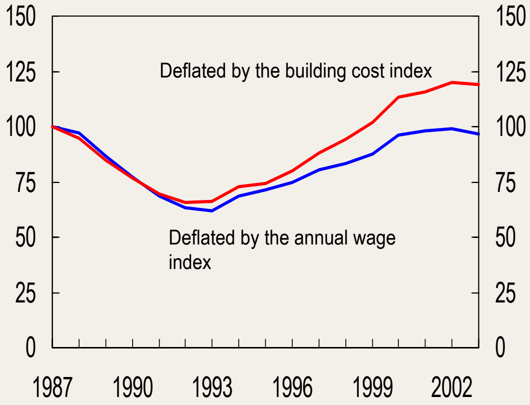
Table 2.2 Gross financial wealth, gross debt and housing wealth of households. In billions of NOK

	jun 02	mar 03	jun 03
Bonds and short-term paper	23	25	25
Equities and primary capital certificates	155	162	171
Mutual funds	77	63	72
Insurance claims	495	517	529
Bank deposits	484	500	530
Other	191	206	204
Gross financial assets	**1 426**	**1 474**	**1 530**
- Gross debt	1061	1125	1 163
Net financial assets	**365**	**349**	**367**
+ Housing[1]	1 704	1 730	1 721
Total net assets	**2 069**	**2 079**	**2 089**
Memorandum:			
Gross financial wealth			
excl. insurance claims	930	956	1 001

[1] There is substantial uncertainty related to the housing wealth estimates

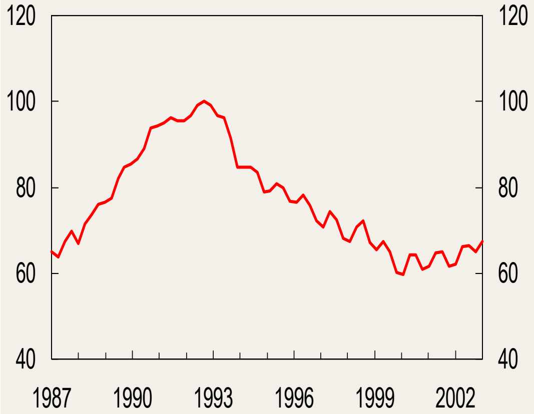
Source: Norges Bank

Chart 2.5 House prices deflated by the building cost index and the annual wage index. Index, 1987=100



Sources: Statistics Norway and Norges Bank

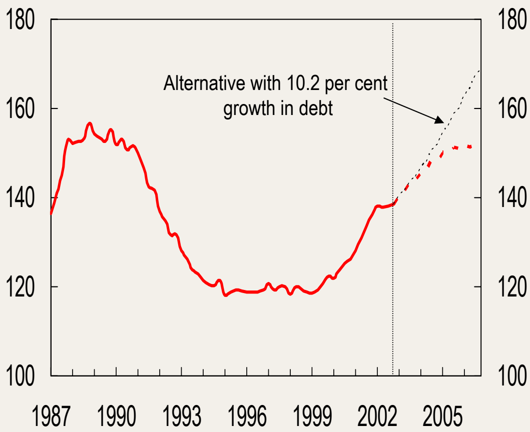
Chart 2.6 Households' total debt[1)] as a percentage of the value of housing wealth



[1)] Break in the time series for total debt in 1995 Q4

Source: Norges Bank

Chart 2.7 Household debt burden[1)]



[1)] Loan debt as a percentage of disposable income

Source: Norges Bank

September to October. The twelve-month rate of increase in house prices was 4.1% in October.

Turnover in the housing market was higher this year than in 2002. However, it takes longer to sell a dwelling. One explanation may be that dwellings that have been advertised for a long period are finally sold and therefore included in the turnover statistics. The number of households planning to move appears to be rising. The number of households planning to move in the coming three months was stable through last year and fell somewhat in the first six months of 2003. At the beginning of August, this indicator rose by about 80% compared with the beginning of April of this year, and reached its highest level since 1999. This indicates that turnover in the housing market may continue to rise ahead.

House price inflation and debt growth

The sharp rise in the value of dwellings in recent years is one of the main factors behind the marked growth in household debt. House prices have risen at a brisk pace since 1995 (see box p 12). Deflated by the building cost index, house prices are about 20% higher than the previous peak in 1987 (see Chart 2.5). Deflated by annual wage growth, house prices are marginally lower than in 1987.

In the May report, we pointed out that with the past rise in house prices, household debt may continue to rise even after a levelling off in house prices. Since only a share of the housing stock changes hands each year, dwellings will be sold at higher prices since they were last sold for a long period. As long as the loan-to-asset value ratio increases when a dwelling is sold and turnover is high, this will make a positive contribution to credit growth. Households' debt/income ratio, debt in relation to housing wealth, has increased somewhat (see Chart 2.6) but is nevertheless lower than it was at the beginning of the 1990s.

House price expectations have a considerable influence on debt accumulation. Some households may have postponed house purchase in anticipation of lower house prices. The fall in interest rates, combined with the recent rise in house prices and expectations of a further price rise, may lead to increased activity in the housing market. This may amplify the rise in house prices and lead to an acceleration in both household debt and housing wealth, making the sector more vulnerable to a fall in house prices. The extent to which households will have to make adjustments in response to such a situation will depend on their loan-to-asset value ratio (see Chapter 3) and their debt and interest burden.

Increase in fixed interest mortgages

Historically, fixed interest mortgages have been relatively limited in Norway. However, figures from the largest banks and the Banking, Insurance and Securities Commission show that the portion of fixed interest mortgages is rising. A survey conducted by the Savings Banks' Association indicates that fixed interest mortgages account for 20% of the stock of loans to households.[1] Fixed interest mortgages may reflect households' preference for predictable interest expenses. Fixed interest mortgages reduce households' vulnerability to a rise in interest rates. At the same time, their interest expenses will not decline when floating interest rates fall.

Rising debt burden, but falling interest burden

The household debt burden, loan debt in relation to disposable income, increased in the first half of 2003 (see Chart 2.7). The debt burden of Norwegian households has risen markedly over the past years and is high in a Nordic and international context (see Chart 2.8). However, if household debt is measured as a percentage of financial assets and housing wealth, the picture is fairly similar to that of the other Nordic countries (see Chart 2.9). Danish households have a high level of financial assets, while Norwegian households have a high level of housing wealth.

Households' interest burden, i.e. interest expenses after tax in relation to disposable income plus interest expenses, has declined this year (see Chart 2.10). The sharp fall in interest rates this year has contributed to the decline in interest expenses in spite of the high rate of debt accumulation. The interest burden fell by 1 percentage point from the fourth quarter of 2002 to the third quarter of 2003. This has eased households' debt servicing.

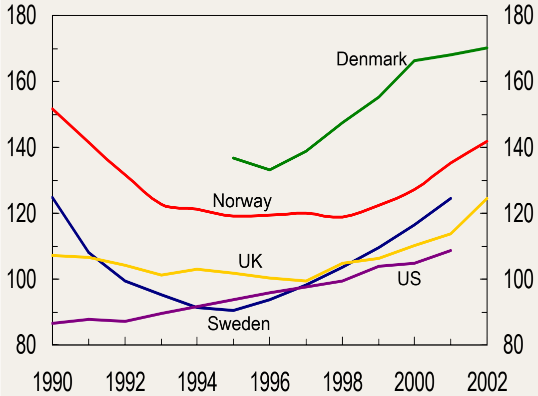
Debt is rising for households with a high interest burden

As mentioned earlier, there are wide differences in the interest burden of various groups of households. The income and wealth survey conducted by Statistics Norway for 2001 shows that households with an interest burden of over 20% account for a growing share of household debt. While households with a high interest burden accounted for 24% of household debt in 1998, their share increased to 40% in 2001. The largest increase of about 10 percentage points took place from 2000 to 2001.

The breakdown of debt with a high interest burden on income deciles has also changed. Households with high income (decile 7-9) account for a larger proportion of debt with an interest burden of more than 20%. However, there has been a marked increase in debt with a high interest burden for low- and middle-income households (decile 1-6). If we assume that the debt breakdown by interest burden and income decile has remained unchanged from 2001 to the first half of 2003, NOK 159bn of debt will be attributable to households with a high interest burden and an income after tax of less than NOK 321 000 (decile 1-6) (see Chart 2.11). The comparable figure for 1998 was NOK 65bn.

In the May report, we pointed out that households with a high interest burden and low and middle income (decile 1-6) had

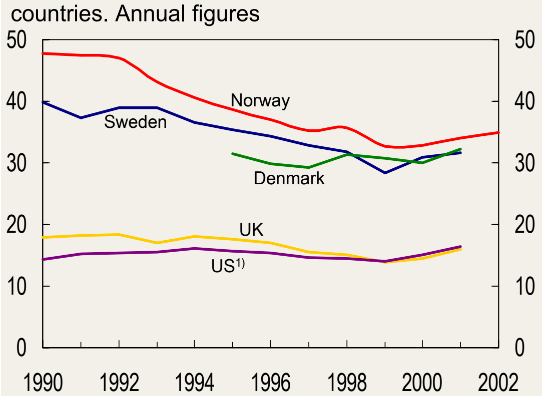
Chart 2.8 Household debt burden[1)] in selected countries. Annual figures



[1)] Loan debt as a percentage of disposable income

Sources: OECD, Bank of England, Sveriges Riksbank and Norges Bank

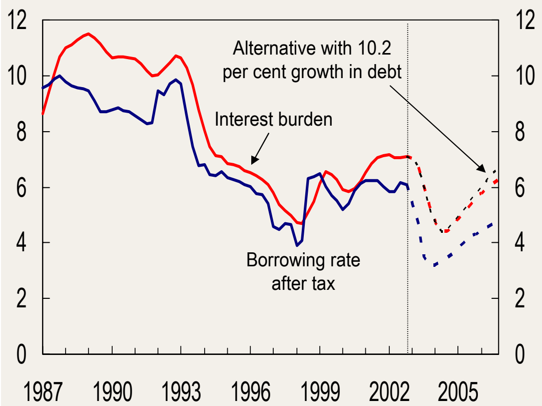
Chart 2.9 Household debt as a percentage of gross financial assets and housing wealth in selected countries. Annual figures



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

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

Chart 2.10 Household interest burden[1)] and borrowing rate after tax

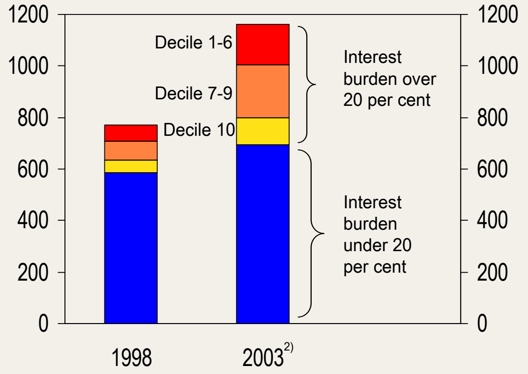


[1)] Interest expenses after tax as a percentage of disposable income plus interest expenses

Source: Norges Bank

[1] The survey is based on a selection of the large savings and commercial banks and the Norwegian State Housing Bank. The selection represents 60% of the combined total assets of banks and state lending institutions.

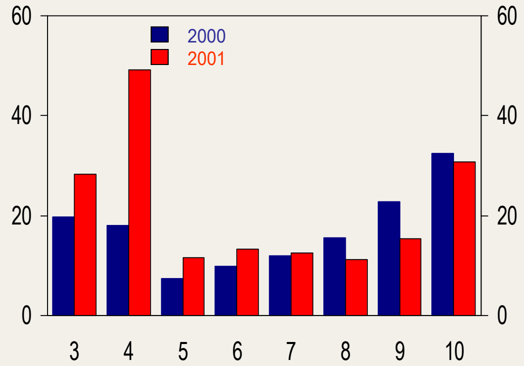
Chart 2.11 Debt in households with various degrees of interest burden[1)]. Billions of NOK



1) Debt in households with an interest burden under 20 per cent and debt in households with an interest burden over 20 per cent, by income (deciles)
2) Estimates, first half year 2003

Sources: Statistics Norway and Norges Bank

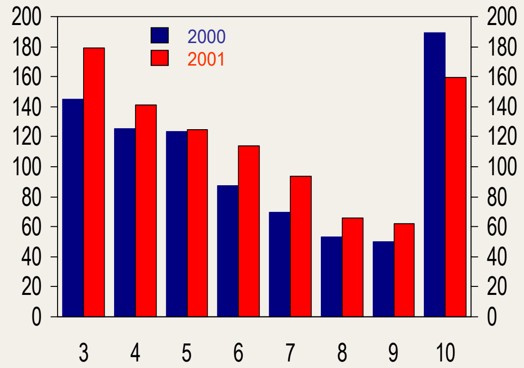
Chart 2.12 Gross financial capital (excl. insurance claims) as a percentage of debt. Households with an interest burden[1)] over 20 per cent. By income decile



1) Interest expenses as a percentage of disposable income

Source: Statistics Norway

Chart 2.13 Gross financial capital (excl. insurance claims) as a percentage of debt. Households with an interest burden[1)] under 20 per cent. By income decile



1) Interest expenses as a percentage of disposable income

Source: Statistics Norway

limited financial reserves as measured by gross financial capital in relation to debt. As a result, these households were particularly vulnerable to debt servicing problems. The figures for 2001 indicate that their situation has improved (decile 1-6)[2] (see Chart 2.12). The improvement may also be partly attributable to shifts between the different income deciles between 2000 and 2001[3]. Financial reserves increased for all groups (with an interest burden under and over 20%) except for those with high income (see Chart 2.12 and 2.13). Bonds and equities account for a larger share of financial wealth among households with high income than for the other groups. The reduction in financial buffers for these households probably reflects the fall in equity prices between 2000 and 2001.

Developments ahead

Growth in household debt has been high for a long period. The projections for the next three years assume a gradual deceleration of debt growth, to the same level as growth in disposable income at end-2006. The projections are based on the technical assumption that interest rates will move in line with money market expectations. This implies that the debt burden will increase to a good 150% of disposable income in 2006 (see Chart 2.7). If debt continues to expand at the current rate, while disposable income remains at the same level as in the first alternative, the debt burden could increase to about 170% in just over three years. This is higher than the peak during the banking crisis at the beginning of the 1990s.

In the alternative with gradually decelerating credit growth, the interest burden will slow initially as a result of lower interest rates (see Chart 2.10). As the interest rate increases in line with the forward interest rate, households' debt burden will rise, but will still be lower than the current level. In the alternative with high debt growth, debt is accumulated faster and is higher than in the first alternative. Interest expenses show a corresponding increase. At the beginning of the period, there is little difference between the interest burdens in the two alternatives. After the increase in interest rates in 2004, the debt burden becomes heavier. The interest burden therefore increases more than in the first alternative.

The marked interest rate reductions this year have made it easier in the short term for households to service their debt. The low interest rates are also contributing to higher employment and thus more favourable developments in disposable income. However, low interest rates may induce households to increase their borrowing from an already high level. When interest rates rise again, interest expenses will increase and the interest burden will become heavier. A consolidation in the household sector may have a negative impact on the enterprise sector (see box). If debt accumulation continues at the same rate, households, and in the next round enterprises, will become more vulnerable to negative economic disturbances.

2 Figures for income deciles 1 and 2 are not quoted owing to insufficient observations.
3 Large recorded losses on sales of equities, low dividend payments and reduced self-employment income resulted in both lower income and reduced financial wealth for some groups in 2001. As a result, a number of households fell into a lower income decile in 2001 than in 2000. At the same time, these households have relatively high financial wealth compared with the other households in the income decile. This may have contributed to an increase in average financial wealth and financial buffers in some income deciles. Developments from 2000 to 2001 in deciles 3-6 in particular may be due to a shift in households from one decile to another.

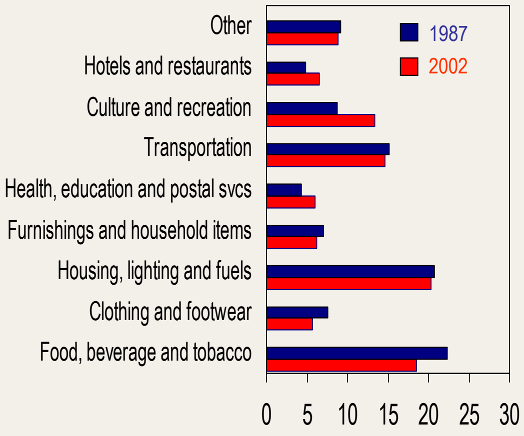
Effects of a fall in household consumption on the enterprise sector

Historically, losses on loans to households have been low compared with losses on loans to enterprises, partly owing to solid collateral for loans to households. At the same time, changes in household consumption may affect enterprises' performance, and thereby their debt servicing capacity. In this way, changes in household consumption may affect banks' losses on loans to enterprises. The household debt burden has increased in recent years, making them more vulnerable to increases in interest rates or in unemployment. Households may therefore be compelled to curb consumption in order to service debt.

A decline in consumption will have different effects on different industries. Industries that largely produce goods and services for households are relatively dependent on developments in household consumption. Other industries are more dependent on demand for capital goods, semi-manufactured goods and commodities from other enterprises. The vulnerability of enterprises to a fall in domestic household consumption also depends on export-oriented they are. Over time there has been a shift in the composition of household consumption, from goods to service consumption (see Chart 1). The various types of good and services will be affected to different degrees by a fall in consumption. Although their share of household consumption is falling, the industrial groupings housing, light and fuel, and food, beverages and tobacco are still the most important.

At the beginning of the last banking crisis, household consumption fell. Goods consumption was particularly strongly affected, with negative growth rates in the period 1987-1989. The composition of household consumption and the historical experiences of 1987-1989 indicate that industries that manufacture consumer goods, together with wholesale and retail trade, building and construction, services and transport and communications, are most strongly affected by a decline in household consumption.

Chart 1 Household consumption by purpose
Percentage of household consumption



Source: Statistics Norway

In order to analyse the impact of a change in consumption on risk in enterprises, we have sorted the enterprises in the various goods and service groupings according to an assessment of their vulnerability to changes in consumption. The whole building and construction sector has been assigned to the consumer group housing, light and fuel. The debt of enterprises that are dependent on consumption accounts for 16% of total enterprise sector debt. Enterprises dependent on the consumption groups wholesale and retail trade, transport, and housing, light and fuel have the largest share of the debt of consumption-dependent enterprises (see Table 1).

Debt-weighted bankruptcy probability is a measure of expected loss per krone of debt as a result of bankruptcy. It is assumed here that the whole debt is lost. At end-2002, the grouping hotels and restaurants had the highest debt-weighted bankruptcy probability. Enterprises dependent on demand for transport and consumer goods had the lowest debt-weighted bankruptcy probability.

Table 1 Bankruptcy probability for consumption-dependent enterprises. Per cent

	Key figures in 2002		Projections for 2003 for a fall in household consumption[4]	
Industrial grouping	Share of debt[2]	Debt-weighted bankruptcy probability[3]	Increase in debt-weighted bankruptcy probability	Increase in bankruptcy probability for 75 percentile
Consumer goods[1]	12,3	0,9	1,0	4,3
Dwelling, light and fuel	15,9	1,3	1,4	3,4
Furniture and household articles	4,7	1,0	3,5	9,4
Transport	16,0	0,6	4,7	8,7
Hotel and restaurant services	7,5	2,9	2,7	9,8
Retail trade	43,6	1,1	7,4	17,6
Total	100,0	1,2	4,5	11,3

[1] Includes the groupings food, drink and tobacco products, and clothing and footwear
[2] Long-term debt and bank overdraft facility in joint stock companies. Debt incl. in the table accounts for 16% of total debt in joint stock companies excluding financial and oil/gas industries and public sector
[3] Bankruptcy probabilities are calculated using Norges Bank's bankruptcy prediction model
[4] Projections based on a 2.7% fall in consumption compared with the baseline scenario in *Inflation Report 3/03* . Percentage increase compared with baseline scenario
Source: Norges Bank

We have assessed the effects of a fall in household consumption on debt-weighted bankruptcy probability in enterprises in 2003 compared with the baseline scenario for 2003 in *Inflation Report* 3/2003. Our analysis is based on a 3% fall in household consumption over a year. This is in line with the fall in household consumption in 1988[1]. The decline in consumption is unequally distributed between different goods and services. The increase in risk-weighted bankruptcy probability is greatest for enterprises in distributive trades and transport (Table 1). These are also the groupings with the highest debt. Overall, debt-weighted bankruptcy probability for enterprises dependent on consumption increases by 4.5%.

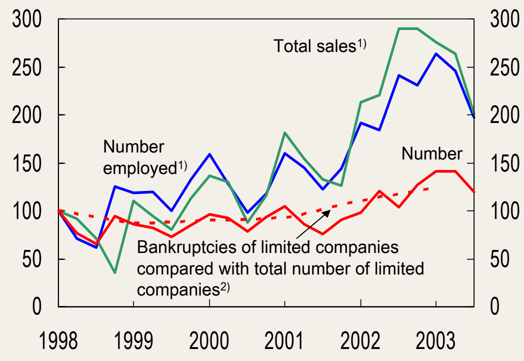
We have also analysed the increase in bankruptcy probability for the most vulnerable enterprises in each grouping, as measured by the change in bankruptcy probability for the 75 percentile enterprise. Bankruptcy probability increases most for enterprises in wholesale and retail trade, hotels and restaurants, and furnishings and household equipment. When consumption-dependent companies are assessed as a whole, the bankruptcy probability of the most vulnerable enterprises increases by 11.3%.

Our analysis shows where losses can be expected to increase in the short term among consumption-dependent enterprises[2]. The increase is greatest for enterprises that had a relatively low debt-weighted bankruptcy probability at end-2002 (wholesale and retail trade and transport). A sharp fall in consumption may also relatively rapidly change the risk picture for groups of enterprises that initially have low risk.

[1]The analysis was performed using Statistics Norway's macroeconomic model MODAG. This model contains a disaggregated description of industrial structure and consumption composition in Norway. Our analysis is based on a 2.7% fall in consumption compared with the baseline scenario. This analysis does not take account of the fact that the introduction of flexible inflation targeting has contributed to a more stable economy.

[2] The results of the calculations depend on the initial level of bankruptcy probabilities and developments in the baseline scenario underlying the calculations. The results therefore cannot be directly applied to future periods in which the financial position of the enterprises and the baseline scenario may have changed.

Chart 2.14 Number of bankruptcies, employees and total sales of bankrupt entities. Quarterly figures. Index. 1st quarter 1998 = 100

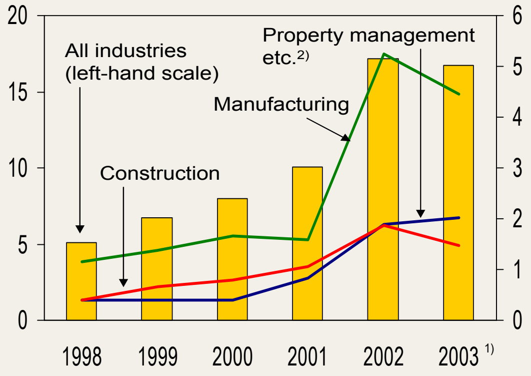


1) Turnover and employment in last normal operating year

2) Figure for 2003 is annualised based on the first three quarters

Sources: Statistics Norway and the Brønnøysund Register Centre

Chart 2.15 Total sales of bankrupt enterprises, total and for selected industries. Annual figures. In billions of NOK



1) Annualised on the basis of the first three quarters of 2003

2) Property management, commercial services and rental activities

Source: Statistics Norway

2.3 The corporate sector

Bankruptcy figures show signs of improvement

Sluggish developments in the Norwegian economy through 2002 and into 2003 contributed to a sharp rise in the number of bankruptcies (see Chart 2.14). In the first three quarters of 2003, 25% more bankruptcies were reported than in the same period in 2002. However, the number of bankruptcies fell from the second to the third quarter of this year. Many small entities with a low turnover have gone bankrupt. The third quarter of 2003 was the fourth consecutive quarter with a fall in the combined market value of entities that went bankrupt.

If the number of bankruptcies among limited companies is compared with the total number of limited companies, the rise in bankruptcies has slowed. The number of limited companies in the Register of Business Enterprises increased by 24% from 1995 to end-2002. The number of newly registered companies was highest in 1998, at just over 15 000 new companies, but has subsequently fallen, to just under 12 000 in 2002.

Measured by the total sales of the bankrupt enterprises, the percentage rise from the first three quarters of 2002 to the same period in 2003 was highest for the fishing and property management industries. Of the major industries, only property management shows an annualised increase compared with 2002 (see Chart 2.15). The total sales of small unincorporated firms that went bankrupt increased almost fivefold from the first three quarters of 2002 to the corresponding period in 2003, but still only accounted for 4% of the total sales of all bankrupt entities.

Lower interest and debt burden

Figures for interest and debt in relation to cash surplus are important indicators of enterprises' debt servicing capacity. The cash surplus derives from ordinary operations and financial assets (capital income).

Debt and interest burdens have fallen by 20% and 33%, respectively, from 2002 to 2003 (projection), after rising since 1995 (see Chart 2.16). The reduction in interest rates has contributed to a substantial fall in both variables. At the same time, the increase in enterprise debt is low. If developments in the Norwegian economy are in line with the baseline scenario in *Inflation Report* 3/2003, the interest and debt burden will continue to fall in 2004.

Improved corporate profitability in 2002

Since the May report we have received annual reports for 2002 for limited companies. Overall, profitability improved from 2001 to 2002. Operating margins increased (see Annex Table 1). Pre-tax returns on total assets and equity rose, but are still low compared with the last ten years (see Chart 2.17). Average estimated interest on debt increased, but by less than the return on total assets, thereby contributing to a higher pre-tax return on equity

Profitability in some industries deteriorated from 2001 to 2002 (Annex Table 1). Profitability in fish farming was very weak in 2002, with a negative operating margin, largely as a result of low salmon prices due to overproduction. Operating margins for telecommunications and IT were also negative in 2002. Profitability in the shipbuilding industry, measured in terms of return on total capital, deteriorated in 2002. However, profitability for large industries such as manufacturing, wholesale and retail trade and commercial services was positive from 2001 to 2002.

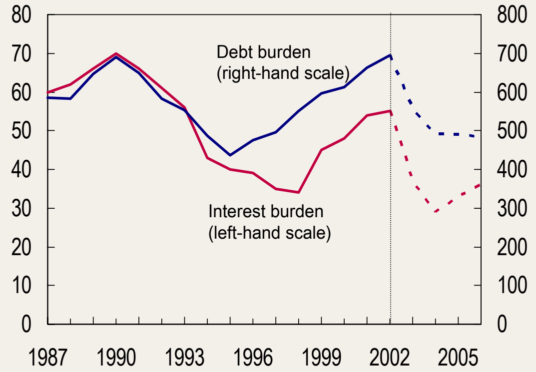
Cash surplus as a percentage of outstanding bank debt is a measure of debt servicing capacity. In 2002 this ratio showed a negative tendency for a number of industries (Annex Table 1). The situation in fish farming and IT, with a cash deficit in 2002, was the main source of concern.

The results for the first three quarters of 2003 for a selection of listed enterprises indicate that profitability in the enterprise sector is showing continued improvement.[4]

Stable equity ratio despite record high dividend level

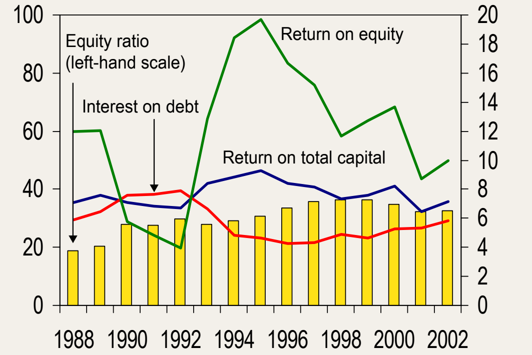
The equity ratio of enterprises as a whole edged up marginally from 2001 to 2002 (Annex Table 2), but is lower than in the period 1996 – 2000 (Chart 2.17). Equity ratios were influenced by a record high dividend level in 2002. Allocations to dividends as a percentage of equity and divi-

Chart 2.16 Debt and interest burden of non-financial enterprises excluding petroleum and shipping. Per cent of cash surplus[1)] excluding interest expenses[2)]



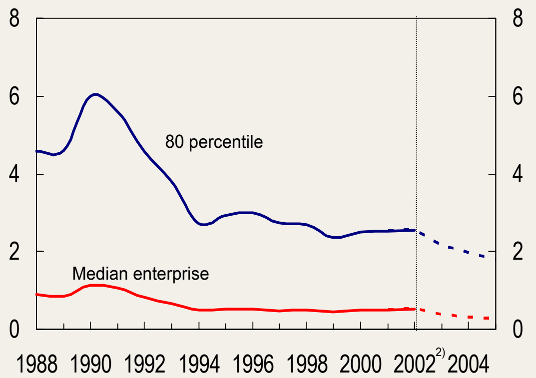
[1)] Cash surplus = Value added - labour costs + net capital income
[2)] Annual figures, estimates from 2003
Sources: Statistics Norway and Norges Bank

Chart 2.17 Key figures[1)] for the corporate sector[2)]. Annual figures. Per cent



[1)] Return figures are based on pre-tax profit/loss on ordinary activities. Interest on debt is calculated on the basis of debt and interest costs in the accounts
[2)] Limited companies excluding enterprises in the oil and gas industry, financial industry and public sector
Source: Norges Bank

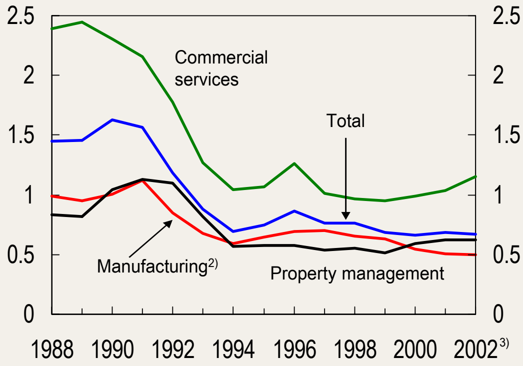
Chart 2.18 Predicted probability of bankruptcy.[1)] Per cent



[1)] Limited companies excluding enterprises in the oil and gas industry, financial industry and public sector
[2)] Level of bankruptcy probability has been adjusted to reflect missing accounts in 2002
Source: Norges Bank

[4] The Oslo Stock Exchange is dominated by export-oriented enterprises, and therefore differs somewhat from the industry composition of all Norwegian enterprises.

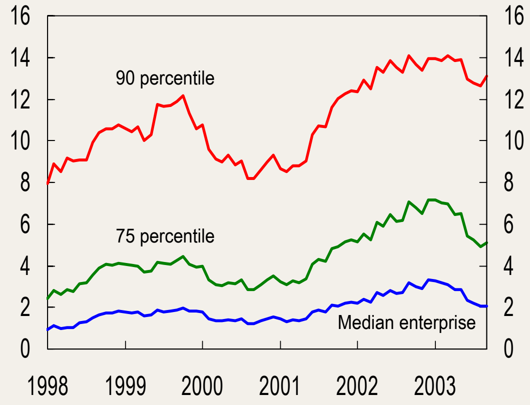
Chart 2.19 Risk-weighted debt[1)] as a per cent of total debt. Per cent



1) Risk-weighted debt = probability of bankruptcy multiplied by long-term debt and overdraft facitlity
2) Excluding shipbuilding and mining
3) Adjusted for missing accounts in 2002

Source: Norges Bank

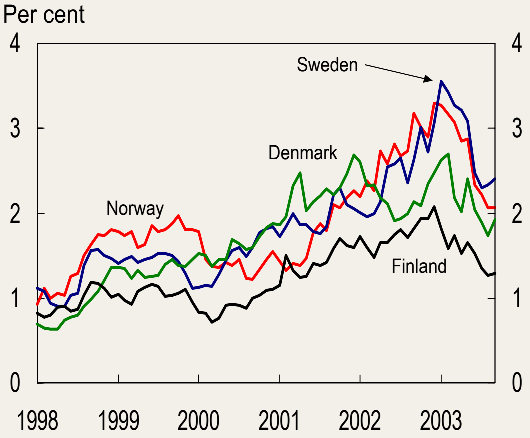
Chart 2.20 Probability of default for large unlisted enterprises[1)]. Monthly figures. Per cent



1) Non-financial, unlisted enterprises with a turnover of more than NOK 70 million. Probability of default within one year

Source: Moody's KMV

Chart 2.21 Probability of default for large unlisted enterprises. Median observation. Monthly figures. Per cent



Source: Moody's KMV

dends rose from 4% in 2000 to just over 7% in 2002. Dividend income was liable to tax in 2000, but this tax was abolished in 2001. The high dividend level in 2002 may be due to owners' fear that tax on dividends will be reintroduced.

Bankruptcy probabilities and risk-weighted debt

Norges Bank's bankruptcy prediction model predicts the probability of an enterprise going bankrupt within three years. Bankruptcy probabilities at end-2002 were at approximately the same level as in 2000 and 2001 for both the most vulnerable enterprises and the median enterprise (see Chart 2.18).

Bankruptcy probabilities are predicted on the basis of enterprises' accounts for 2002, and therefore do not take account of developments so far in 2003. The substantial reduction in interest rates in the course of 2003 is having a positive effect on enterprises. We have predicted bankruptcy probabilities on the basis of Norges Banks' projections for economic developments. Our projections indicate that bankruptcy probabilities will fall in the period 2003-2005.

In particular, enterprises with a high level of debt financing are noticing the direct effect of lower interest rates. However, a low interest rate does not necessarily preclude payment problems. To be able to service their debt, many enterprises are also dependent on improved underlying earnings. It may take some time before the risk for these enterprises falls.

Risk-weighted debt (bankruptcy probability multiplied by debt) can be used to explain financial institutions' losses one year a head in time[5]. Risk-weighted debt as a percentage of total debt expresses expected loss per krone of debt in the event of bankruptcy and no dividend. For enterprises as a whole, this ratio remained approximately unchanged in 2002 compared with the previous year (see Chart 2.19). The ratio increased for commercial services. In isolation, a reduction in bankruptcy probabilities after 2002 will contribute to reducing risk-weighted debt.

Default probabilities decline

According to Moody's KMV model, the probability of large, unlisted enterprises defaulting on their debt obligations is somewhat lower now than in the spring (see Chart 2.20). The fall has been largest for the 75 percentile enterprise (the median of the 50% weakest enterprises). The main reason for the lower default probabilities is the rise in equity prices, which according to the KMV model contributes to increasing the value of enterprises' assets.

The default probability for the median enterprise in all the large Nordic countries is lower than it was this spring (see Chart 2.21). The decline has been most pronounced in Norway and Sweden, which are also the countries with the highest default probabilities.

5 See for example Frøyland and Larsen: "How vulnerable are financial institutions to macroeconomic changes?" An analysis based on stress testing", *Economic Bulletin* 3/2002

Continued uncertainty associated with property companies

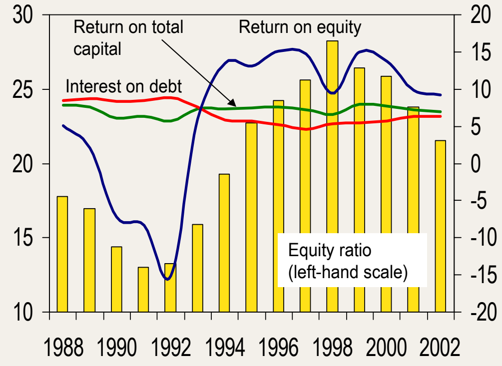
Property companies have higher debt financing than other enterprises, and the property industry is also the largest recipient of bank loans (Annex Table 1). In 2002, the increase in estimated interest for property companies coincided with a fall in return on total assets (see Chart 2.22). This contributed to a reduction in the pre-tax return on equity. Return on equity has been falling since 1999. The fall in interest rates this year has contributed to reducing the interest burden and thereby boosting the debt servicing capacity of property companies. Property companies with a large share of floating rate loans or a short lock-in period for fixed rate loans have benefited most from the fall in interest rates. Figures for listed property companies indicate that the interest rate lock-in period varies widely across companies. The average lock-in period for these companies varies from 1 to 5 years.

Property companies are affected by developments in various markets. Developments in the market for rental of office buildings are the main cause for concern. In February 2003, the percentage of vacant office space in Oslo, Asker and Bærum was about 10%, an increase of 5 percentage points on the previous year according to Eiendomsspar's annual survey. This high vacancy rate appears to have remained steady. The value of office buildings has moved on a negative trend, and rental prices for office premises have continued to fall (see Chart 2.23). The effect of falling rental prices depends on the duration of the rental contracts. Only expiring contracts will be renewed at a lower rental price. However, existing rental contracts may also be renegotiated to reflect lower rental prices. Property companies in the hotel sector are exposed to a fall in the number of overnight stays. This number fell by 4% in the first 9 months of 2003 compared with the same period in 2002.

During the first 9 months of 2003, the area of completed premises and building starts for service sectors decreased by 23% and 13%, respectively, compared with the same period in 2002. Growth in the supply of commercial property is therefore declining, which in isolation may contribute to curbing the fall in rental prices and property values.

Share prices for listed property companies have moved on a positive trend since the May report (see Chart 2.24). However, the rise in prices is weaker than the benchmark index (OSEBX) on the Oslo Stock Exchange. In recent years, share prices for listed property companies have fluctuated less than the OSEBX. Listed property companies are more active than the property business as a whole in renting out retail premises, a market segment that has developed favourably.

Chart 2.22 Key figures[1)] for property companies[2)] overall. Per cent

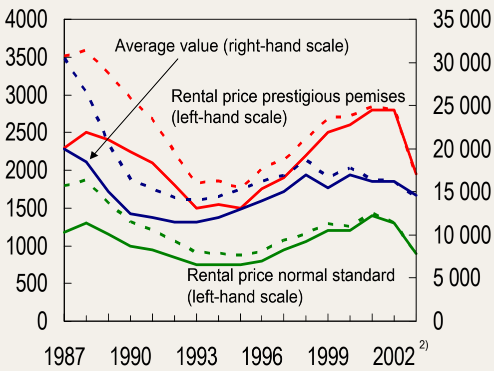


1) Return figures are based on pre-tax profit/loss on ordinary activities. Interest on debt is calculated on the basis of debt and interest costs in the accounts

2) Limited companies with debt in the property management sector

Source: Norges Bank

Chart 2.23 Rental price for and value of office premises in central Oslo. Price per square meter[1)]

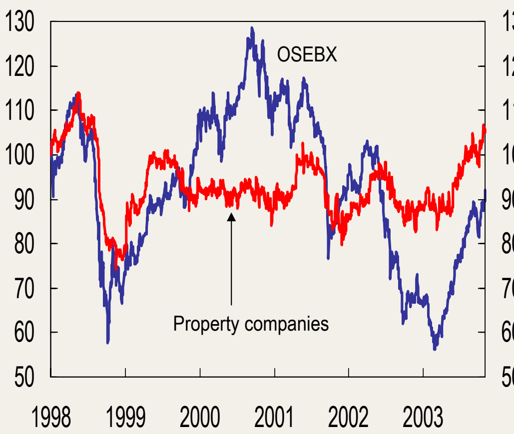


1) Solid lines show nominal prices, dotted lines show amounts in 2002 kroner

2) Last observation: average value January 2003, rental prices per November 2003

Sources: OPAK and Dagens Næringsliv

Chart 2.24 Share prices for listed property companies. Index, 01.01.98 = 100



Source: EcoWin

Developments ahead

The fall in interest rates in 2003 has substantially reduced the debt and interest burden of the enterprise sector. As a result, many enterprises can service their debt even with low operating revenues. With increased growth in the Norwegian economy, enterprises' underlying earnings will also improve.

The weak profitability of property companies, coupled with the substantial debt in this sector, is cause for concern. Our estimate for expected loss per krone of debt in this sector in 2002 is approximately unchanged from 2001 to 2002 (Chart 2.19). The estimate for expected loss per krone of debt in the sector commercial services, which represents an important share of the demand side for property companies, rose in 2002. On the other hand, the decline in interest rates in 2003 has contributed to reducing enterprises' interest burden, thereby boosting their debt servicing capacity in the short term. On balance we assess the risk associated with parts of the property industry as relatively high, and unchanged from our assessment in the May report.

Enterprises in some industries, such as fish farming and commercial services, are still financially vulnerable. For the enterprise sector as a whole, the estimate for expected loss per krone of debt, based on accounts for 2002, remained roughly unchanged. The fall in interest rates has contributed to strengthening enterprise profitability in 2003. Although financial vulnerability varies across industries, on balance we assess overall risk as moderate, and somewhat lower than six months ago, if we disregard certain segments of the property industry.

3 | Financial institutions

3.1 Developments in banks' results and financial strength

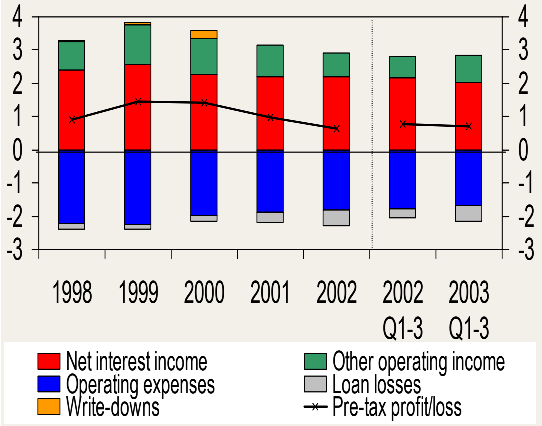
Banks' results have deteriorated in recent years. In the first three quarters of 2003, pre-tax profits were just over 0.7% of average total assets (ATA) (see Chart 3.1). Although many banks have improved their results compared with the same period last year, lower profits for commercial banks due to higher loan losses resulted in a slight decline in results for banks as a whole. From the second to the third quarter of 2003, banks' loan losses fell, however, and results improved.

Banks' net interest income has fallen somewhat since 2002 (se Chart 3.1). With an increasing volume of non-performing loans, the share of loans that do not provide interest income has increased (see Chart 3.2). In addition, the sharp decline in interest rates since December 2002 has reduced the accounting advantage of interest-free equity capital. This is primarily important to banks with a high equity ratio.

The interest margin has considerable impact on net interest income. Available interest rate statistics show that the interest margin has fallen slightly in the first half of 2003 compared with the same period last year (see Chart 3.3), resulting in a negative contribution to net interest income. Information in quarterly reports from the major banks indicates that the interest margin will show a further decrease when the statistics for the third quarter are included, as the banks had then reached a minimum level for interest rates on some deposits. The relationship between interest margin and net interest income is not clear-cut, however. The deposit margin has fallen sharply over the past year, while the lending margin has increased. Since the volume of banks' loans is larger than the volume of deposits, the positive effect of an increase in the lending margin is greater than the negative effect of a reduction in the deposit margin. The lending margin has increased partly because a large number of banks have increased their risk pricing of high-risk corporate loans, and partly because it has taken time for the full effect of Norges Bank's interest rate reductions to feed through to banks' lending rates. The first effect will probably be sustained for some time, while the second effect is temporary. The lending margin is therefore likely to fall somewhat in the period ahead, thus contributing to reducing the interest margin and net interest income.

The upswing in securities markets in the second and third quarters of 2003 has reversed the negative developments in banks' income from securities that were recorded in the first quarter. On balance, securities income in the first three quarters of 2003 increased compared with the same period last year. Developments in both equity and bond markets (see Chapter 1) contributed to a rise in capital gains. These

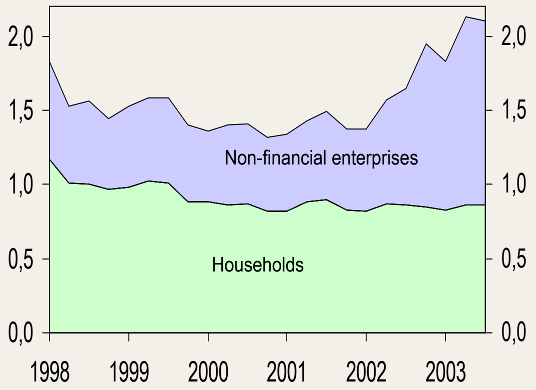
Chart 3.1 Banks'[1)] profits/losses. Percentage of average total assets



[1)] Excluding branches of foreign banks

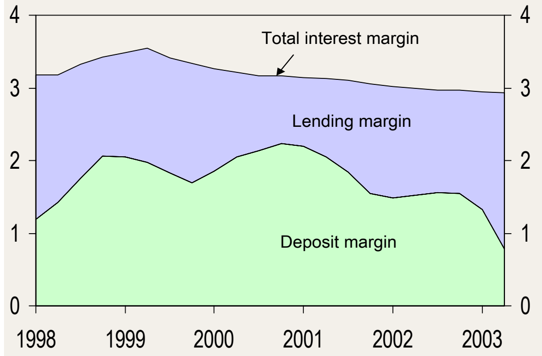
Source: Norges Bank

Chart 3.2 Gross non-performing loans to households and non-financial enterprises. Percentage of gross lending to municipalities, non-financial enterprises and households



Source: Norges Bank

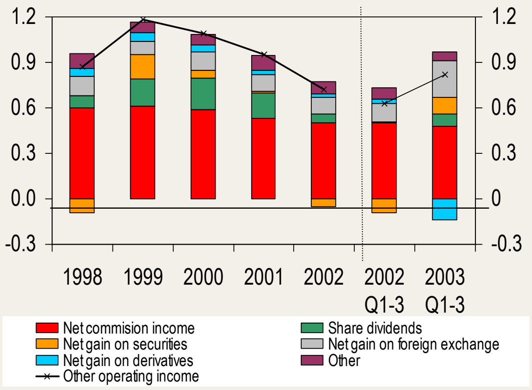
Chart 3.3 Banks' deposit margin, lending margin and total interest margin[1)]. Per cent



[1)] Interest margin is defined as the average of lending rates (excluding non-accrual loans) minus the average of deposit rates. 3-month money market rate (NIBOR) is used to split the interest margin into lending margin and deposit margin. The chart shows a moving average over the last four quarters

Source: Norges Bank

Chart 3.4 Banks'[1)] other operating income. Percentage of average total assets



1) Excluding branches of foreign banks

Source: Norges Bank

Table 3.1 Return on equity in Nordic banking groups. Per cent

	2001	2002	2003 [1)]
Danske Bank	16,2	14,2	14,5
Svenska Handelsbanken	18,8	15,7	15,2
Nordea Bank Sweden	64,3	18,0	
Swedbank	15,5	12,1	15,3
SEB	10,4	10,1	11,6
Den norske Bank	15,8	8,6	10,8
Union Bank of Norway	15,2	9,4	13,7
Nordea Bank Norway	15,8	6,0	5,0
Fokus Bank	-3,5	11,1	7,5

1) First 3 quarters

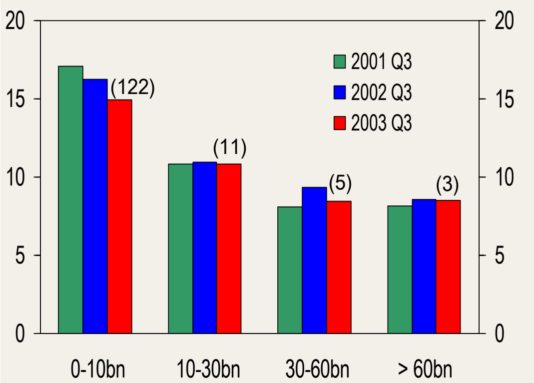
Sources: Bankscope and banks' quarterly reports

Table 3.2 Losses in the eight largest banks. In millions of NOK

	2001	2002	2002 Q1-Q2	2003 Q1-Q2
Actual losses, not covered by previous loss allocations	528	561	162	1223
+ Increased loss allocations on existing loans	637	478	331	611
+ New specified loss allocations	1936	3471	616	2156
- Reversal of spec. loss alloc.	-578	-753	-334	-939
+ Increase in inspec. loss alloc.	227	92	38	43
+ Other adjustments	4	-27	-28	-27
- Recoveries of loans previously written off	-387	-456	-219	-148
= Loan losses	2367	3367	565	2919

Source: Norges Bank

Chart 3.5 Average (unweighted) core capital ratio in banks[1)] by total assets



1) Excluding branches of foreign banks. Nordlandsbanken and DnB have not been merged in this chart. The figures in brackets indicate the number of banks in the different intervals at the end of the third quarter 2003

Source: Norges Bank

developments had an effect at both parent company level (see Chart 3.4) and at group level via ownership in life insurance companies (see section 3.2).

Reduced costs in relation to ATA have in isolation contributed to an improvement in results in recent years (see Chart 3.1). Cost reductions have been driven by technological changes and competition in the Norwegian and Nordic bank markets. Both Danske Bank and Svenska Handelsbanken have, for example, recorded better returns on equity than the largest Norwegian banks since 2001 (see Table 3.1).

Banks' loan losses were just under 0.5% of ATA in the first three quarters of 2003, almost double the figure from the same period last year. This increase may be due to an abrupt reduction in credit quality for some exposures through 2002. Both the number of gross non-performing loans in the corporate sector (see Chart 3.2) and new specified loss provisions have increased (see Table 3.2). There has also been a marked increase in new recorded losses.

Developments in the fisheries and aquaculture industries have been particularly weak. DnB, Nordea Bank Norge and some medium-sized banks have incurred substantial losses on loans to these industries. In addition, loss provisions related to business loans in service industries and manufacturing have continued to edge up for a number of large banks compared with last year. Although credit risk in relation to loans to commercial property companies was considered to have increased in the last *Financial Stability* report, losses on these loans have not increased. One reason for this is probably this year's decline in interest rates. Some small banks have experienced high loan losses as a result of sluggish developments in parts of the business sector and as a result of a combination of strong growth in the past and inadequate risk management. Savings banks that have concentrated their activities on households have, however, recorded low loan losses.

In spite of a deterioration in banks' overall results in the first three quarters of 2003 compared with the same period last year, the vast majority of banks have maintained a Tier 1 capital ratio well above the statutory 4% minimum. At the end of the third quarter, the Tier 1 capital ratio for the three largest banks was on average just below 8.5% (see Chart 3.5), while the figure for other commercial banks was 9.6% and for savings banks 11.3%. There has, on average, only been a slight reduction in Tier 1 capital ratio since the end of the third quarter of 2002. The Tier 1 capital ratio has fallen for small banks in particular, but is still substantially higher than for larger banks. A number of savings banks have strengthened their Tier 1 capital ratio by issuing preferred capital securities, a hybrid instrument that has features in common with both debt and equity capital. Market-based indicators of banks' financial position have shown positive developments since the May *Financial Stability* report (see Chapter 1).

Merger of DnB and Gjensidige NOR - effect on financial stability?

Den norske Bank and Gjensidige NOR, the two largest financial groups in Norway, have applied to the authorities for permission to form the financial group DnB NOR ASA (see Table 3 in the Annex). They are the two largest financial groups in Norway (see Table 4 in the Annex). On 27 August this year, Norges Bank informed the Banking, Insurance and Securities Commission that financial stability considerations are not a major obstacle to the merger.

A merger between DnB and Gjensidige NOR will mean that a larger share of the overall risk associated with the provision of credit and other financial services to Norwegian businesses and households will be concentrated in one financial conglomerate. If DnB NOR were to be hit by a financial crisis, the consequences for the financial system would be more far-reaching than if one of the groups was hit by a crisis today. At the same time, increased size will give room for cost savings, diversification and improved risk management which can contribute to ensuring stable earnings and satisfactory financial strength. Whether a merger will improve the stability of the financial system will depend on the realisation of such improvements and in general on the new group's strategic decisions. A merger will necessitate close supervision of DnB NOR's operations, in particular their choice of risk profile and risk management systems.

There may be expectations that large, complex financial institutions will be bailed out by the authorities in the event of financial problems. This may result in inadequate monitoring of the institutions' operations and insufficient risk awareness on the part of both lenders and credit rating agencies. Norges Bank pointed out in its statement that irrespective of how a bank crisis is handled – through public administration or other means – the owners will have to count on losing their subscribed capital and the management may be replaced. This is true regardless of the complexity and size of the bank.

The fact that the government is a major owner might, however, be a complicating factor in the handling of a crisis. The government has a number of responsibilities and takes a number of decisions that influence the development and soundness of banks, both in its capacity as supervisory and competition regulating authority and in economic policy generally. Conflicts may arise between the interests the government must take account of as owner, and the government's other responsibilities. The government did not have ownership interests in Norwegian banks before the banking crisis. Extensive government involvement in banks could detract from the government's ability to act in the event that the position of banks should again become critical, since it must be assumed that, as owner, the government would bear a significant share of the responsibility for the situation.

In its statement, Norges Bank wrote that competition in most markets for banking services will remain satisfactory after the merger, and pointed to the substantial and growing competition from abroad. However, the merger may reduce competition in the market for lending to small and medium-sized enterprises in rural areas, where the number of established banks may be limited. At the same time, local knowledge will often be required about the individual firm, and customer relations will restrict mobility between banks.

Nordic agreement on the handling of financial crises

On 11 June 2003 the Nordic central bank governors signed an agreement on the handling of financial crises. The agreement concerns situations where a serious problem arises in a bank that is resident in a Nordic country and has a subsidiary in at least one other Nordic country.

The agreement covers a number of practical factors. It establishes that the central bank that first identifies a potential crisis may convene a meeting of a "crisis management group" consisting of persons at high levels in the Nordic central banks. It also indicates which central bank should assume the leading role, and describes the contacts that must be made with the supervisory authorities, the Ministry of Finance, the management of the bank in question and other parties. The agreement also specifies what information about the bank in question must be procured and analysed. Moreover, the agreement prepares the way for coordination of the information that the central banks will issue to the general public in the event of such a crisis.

The agreement can be found on Norges Bank's website:
http://www.norges-bank.no/finansiell_stabilitet/nordisk-mou.pdf

Types of risk

Credit risk: the risk of losses due to the inability of a counterparty to meet his obligations. In connection with a loan, credit risk is the risk of the borrower failing to fulfil the conditions of the loan covenant.

Market risk: the risk of losses due to changes in interest rates, exchange rates or share prices.

Liquidity risk: the risk of substantial extra expenses due to the inability of a counterparty to fulfil his obligations at the right time.

Counterparty risk: the risk of a counterparty failing to fulfil his obligations. An institution may have a number of different transactions with the same counterparty, and counterparty risk concerns the overall exposure. Counterparty risk comprises credit risk and liquidity risk.

Table 3.3 Balance sheet structure in Norwegian banks[1)]. Percentage distribution

	2001	2002	2003 Q3
Cash and deposits	4,2	4,9	4,7
Securities (trading book)	8,7	8,7	8,9
Gross lending to households, municipalities and non-financial enterprises	73,9	73,4	72,5
Other lending	9,4	9,6	9,8
- Total loss allocations	-1,2	-1,4	-1,5
Other assets	5,0	4,7	5,6
Total assets	**100,0**	**100,0**	**100,0**
Customer deposits	50,0	50,2	47,5
Deposits/loans from domestic fin. inst.	3,8	3,7	4,2
Deposits/loans from foreign fin. inst.	7,7	9,4	8,6
Deposits/loans from Norges Bank	0,9	0,4	0,3
Other deposits/loans	2,4	2,5	2,3
Notes and short-term paper	5,7	5,3	4,1
Bond debt	15,9	14,9	17,6
Other liabilities	3,3	4,3	6,2
Subordinated loan capital	2,6	2,3	2,5
Equity capital	7,8	7,1	6,8
Total equity and liabilities	**100,0**	**100,0**	**100,0**
Memorandum:			
Total assets (NOK bn)	1 338,2	1 439,2	1 541,3

[1)] Excluding branches of foreign banks

Source: Norges Bank

Table 3.4 Banks' gross lending by type and sector. In billions of NOK. As at 2003 Q3

	Non-financial corporations	Households	Municipalities
Lending with property as collateral	23	638	0
Other payment loans	287	106	2
House-building loans	4	4	0
Other building loans	10	2	0
Bank overdraft facilities etc.	49	24	2
Total lending to households, municipalities and non-financial enterprises	**375**	**781**	**4**
Memorandum:			
Foreign exchange lending	70	22	0

Source: Norges Bank

3.2 Risk outlook for banks

Banks are exposed to a number of types of risk. This section presents an assessment of banks' credit, market, liquidity and counterparty risk. Loans to the public (households, non-financial enterprises and municipalities) accounted for about 70% of banks' total assets at the end of the third quarter 2003 (see Table 3.3), making credit risk the primary source of risk for banks. Market risk is low in banks, as a relatively small share of banks' assets is invested in securities. Liquidity risk will partly depend on how large a share of long-term loans and other illiquid assets is based on long-term financing. Banks may also have drawing rights etc that are not recorded on the balance sheet, but that have an impact on liquidity risk. Counterparty risk includes exposures that are balance-sheet or off-balance-sheet items.

Credit risk associated with loans to the household sector

Loans to households account for two-thirds of gross loans to the public, and can therefore be a potential source of considerable credit risk to Norwegian banks (see Table 3.4). This risk is nonetheless limited for two reasons. First, the vast majority of loans are mortgage-backed loans. Unless house prices fall sharply, losses due to default will be limited. Second, for households, debt is usually backed by all their personal wealth and income, and banks can therefore recover a large share of the non-performing loans over time. This also means that recorded losses on loans to households have been very small in spite of the fact that these loans have comprised about a third of the volume of non-performing loans.

The risk of losses on loans to households in the period ahead will partly depend on the loan-to-asset-value ratio and developments in house prices. Loans with a high loan-to-asset-ratio in particular involve a risk for banks. The Banking, Securities and Insurance Commission's annual mortgage survey in March[6] showed that the share of loans (in value) with a loan-to-asset-value ratio above 80% has declined slightly since 2002 (see Table 3.5). Despite this, the share of loans with a high loan to asset value ratio accounts for a third of the portfolio. The share of loans with a loan to asset value ratio of more than 100% fell slightly from 2002 to 2003, following a marked increase in 2001 and 2002. At the same time, there has been an increase in the number of loans with a loan to asset value ratio of above 100% without additional collateral.

In the short term, the decline in interest rates in 2003 has made it easier for households to service their debt and reduced the likelihood of a fall in house prices. This lowers the risk of higher losses on loans to households in the short term. If the sharp increase in loans to households continues (see Chart 3.6), debt servicing problems may increase in the longer term. Many banks have for some time focused on households as

[6] Since 1994, the Banking, Insurance and Securities Commission has been conducting surveys of banks' practice with respect to mortgage-backed loans. In the 2003 survey, 20 savings banks and 11 commercial banks were requested to review the first 100 mortgage-backed loans after 1 March 2003.

a strategic priority area because loans to households are regarded as less risky than loans to non-financial enterprises. The introduction of new capital adequacy regulations (Basel II), scheduled for 2007, will entail reduced capital requirements for housing loans. Competition in the banking market will probably result in reduced margins in connection with housing loans due to lower costs. This may further stimulate household debt,

Credit risk associated with loans to non-financial enterprises

Loans to non-financial enterprises accounted for 32% of banks' gross lending to the public. This sector normally makes the strongest contribution to loan losses. The marked increase in defaults in the corporate sector in the past two years is reflected in an increase in loan losses. One reason for this is that collateral for corporate loans is usually far less secure than for household loans. The value of loan collateral in the corporate sector will often be closely linked to profitability in the individual enterprise and the individual industry. In private limited companies, the owners also have limited liability, preventing a bank from transferring a company's liabilities to the owners.

Banks are exposed to developments in many different sectors. Banks' exposure is greatest in the property management sector. For DnB, Gjensidige NOR and Nordea Bank combined, loans to this sector accounted for 30% of corporate loans at the end of the third quarter of 2003 (see Chart 3.7)[7], an increase of 3 percentage points since the end of 2001. Figures up to the end of 2002 also show that the banking sector overall has increased its exposure to the property management sector. At the same time, some of banks' largest single loans are extended to property companies. The outlook for the commercial property sector therefore has a considerable influence on banks' future earnings. So far this year, the three largest banks' loan losses in this sector have been below the average for corporate loans (see Chart 3.8). The credit risk associated with loans to parts of the property industry, however, is still considered to be relatively high (see Chapter 2).

Service industries accounted for almost 18% of corporate lending in the three largest banks at the end of the third quarter of 2003. Losses on loans to this sector have increased markedly in recent years. On the other hand, the three largest banks have to some extent reduced the share of loans to this sector,

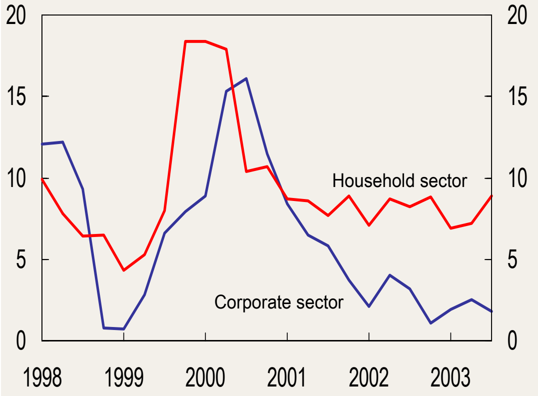
Loans to manufacturing accounted for 10% of the three largest banks' corporate loans. Losses on loans to manufacturing have been higher than the average for the business sector in

Table 3.5 Housing loans to households by loan-to-asset value ratio (shares according to value). Per cent

	2001	2002	2003
Up to 60%	35,6	38,1	40,9
60-80%	34,4	29,4	29,0
80-100%	22,6	21,9	20,5
Over 100%	7,4	10,5	9,5

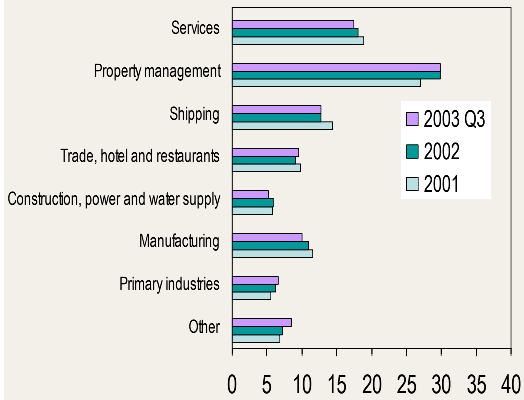
Source: The Banking, Insurance and Securities Commission's housing loan survey

Chart 3.6 Twelve month growth in banks'[1)] lending to the household and corporate sectors[2)]. Per cent



[1)] Excluding branches of foreign banks
[2)] Corrections have not been made for exchange rate fluctuations
Source: Norges Bank

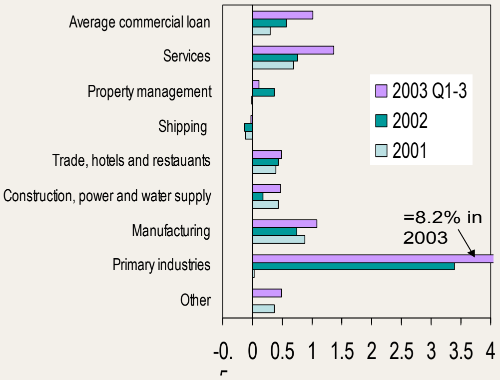
Chart 3.7 Distribution of commercial loans[1)] in DnB, Gjensidige NOR and Nordea Bank Norge. Per cent



[1)] Commercial loans comprise both lending to non-financial enterprises and households which are self-employed
Source: Banks' annual and quarter reports (group data)

[7] We consider loans from the three largest banks broken down by industry, since we only have figures up to the end of 2002 for all banks.

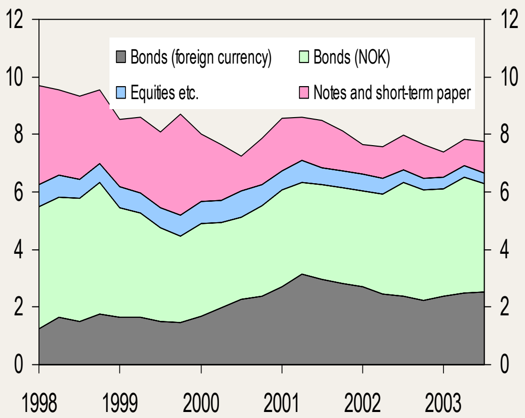
Chart 3.8 Loan losses (excl. changes in unspecified losses) as a percentage of gross lending to different industry sectors[1]. DnB, Gjensidige NOR and Nordea Bank Norge



[1] Commercial loans comprise both lending to non-financial enterprises and households which are self-employed

Source: Banks' annual and quarter reports (group data)

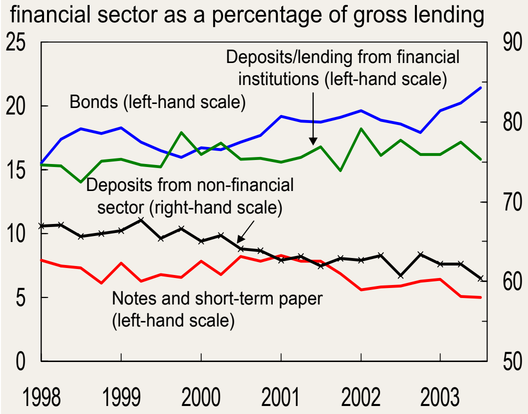
Chart 3.9 Banks'[1] trading book by item. Percentage of total assets



[1] Excluding branches of foreign banks

Source: Norges Bank

Chart 3.10 Banks'[1] financing in the form of bonds, notes and short-term paper, deposits/loans from financial institutions and deposits from the non-financial sector as a percentage of gross lending



[1] Excluding branches of foreign banks

Source: Norges Bank

recent years. Manufacturing enterprises are heavily exposed to competition from foreign companies. Future profitability and debt servicing capacity in manufacturing enterprises will therefore partly depend on developments in the global economy and the krone exchange rate.

Loans to the primary industries, including aquaculture and fisheries, accounted for just under 7% of the three largest banks' corporate loans at the end of the third quarter. Financial problems in the aquaculture and fisheries industries have accounted for a substantial share of the loan losses in DnB, Nordea Bank Norge and some small and medium-sized banks. Banks' overall lending to this sector is on a relatively small scale. The potential for losses is therefore limited.

Overall, credit risk associated with loans to sectors other than the property management sector is considered moderate and lower in relation to the previous *Financial Stability* report (see Chapter 2). The share of banks' total loans to these sectors has been reduced in recent years.

Market risk

Since banks have invested a relatively small share of their assets in securities classified as trading book, their market risk is low (see Chart 3.9). For banks, this securities portfolio mainly comprises bonds. These securities are not used in active trading to any extent, and are largely used as collateral for loans from Norges Bank. In addition to assets on the balance sheet, derivative contracts will determine banks' market risk. In spite of substantial changes in interest rates and foreign exchange rates, and in equity and bond prices in recent years, changes in other operating income have been relatively modest (see Chart 3.4). The most important source of market risk for Norwegian banks is connected with ownership of life insurance companies, see discussion below.[8]

Liquidity risk

Because banks' lending is long term, while their own financing is largely short term, they are exposed to liquidity risk. The certificate and interbank markets can be associated with high risk because shifting market conditions and changes in risk assessments can rapidly increase refinancing costs. Even though customer deposits can be withdrawn at short notice, they are regarded as a stable source of financing, in particular because of the deposit guarantee of NOK 2m per depositor per bank.

The deposit-to-loan ratio (deposits from the non-financial sector as a percentage of lending) has fallen since the end of 2002 (see Chart 3.10). The drop in interest rate levels has probably contributed to these developments in that bank savings have become less attractive compared with other forms of saving. The lower deposit-to-loan ratio has on average

[8] See also Syversten: "Measuring market risk in Norwegian financial institutions", *Economic Bulletin* 3/2003, for a more detailed analysis of market risk in Norwegian financial institutions.

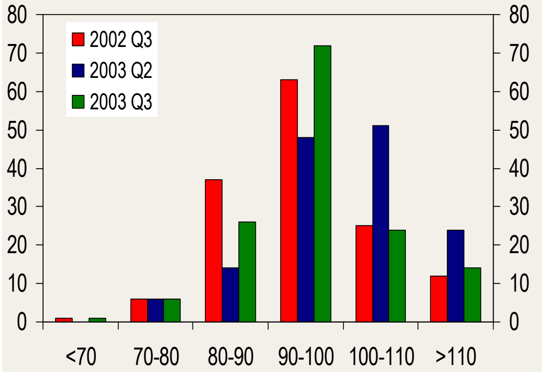
been financed by higher bond debt. Certificate debt has fallen measured as a percentage of gross lending. The fall in the deposit-to-loan ratio has thus only affected liquidity risk to a limited extent.

Banks' funding structures vary widely. Liquidity risk can be assessed by comparing banks' stable financing with their illiquid assets (see Chart 3.11). A value of 100 indicates that banks have balanced illiquid assets with stable sources of funding. A reduction in this ratio indicates higher liquidity risk. Possible drawing facilities available to banks are not taken into account.

The number of banks with a value on the liquidity indicator of over 100 increased sharply in autumn 2002 and in the first quarter of 2003. These developments were amplified in the second quarter. The liquidity indicator has subsequently been reduced for a large number of banks, however, and primarily for the group classified as other savings banks (see Chart 3.12). These banks have maintained solid lending growth even though the growth in deposits from the non-financial sector has been low or negative from the second to the third quarter of 2003. For the category other commercial banks, however, the liquidity indicator has been rising sharply since autumn 2002. For a number of commercial banks, more costly financing may have been an important reason for the sharp fall in their lending growth and its increasingly negative trend since autumn 2002. Increased focus on monitoring and risk pricing of banks by their creditors since autumn 2002 have contributed to this. In addition, small banks have had to pay a higher premium as a result of creditors' increasing emphasis on the size of the borrower. Some commercial banks have offered high interest rates on deposits in order to attract deposits as other types of financing have fallen due. The deposit guarantee has made it attractive for depositors to deposit their money in banks regarded by other actors as risky. The liquidity indicator for the two largest banks has also increased in 2003 from an already high level. The liquidity indicator for Nordea Bank Norge and Fokus Bank as a group has been sharply reduced in recent years.

The relationship between the level of the liquidity indicator and actual liquidity risk is not clear cut. Financing using short maturity instruments may still be long-term in character. Interbank financing from a foreign parent company may, for example, be regarded as far more stable than other types of interbank financing. Nordea Bank Norges and Fokus Bank have as a group considerably increased their short-term foreign debt over the past 2-3 years (see Chart 3.12). The liquidity risk in these banks cannot be assessed without including the financial strength and liquidity of the Nordea group and Danske Bank. These are both solid financial conglomerates with a Moody's rating for financial strength that is at least as good as ratings for Norwegian

Chart 3.11 Number of banks[1)] by level of liquidity indicator[2)]

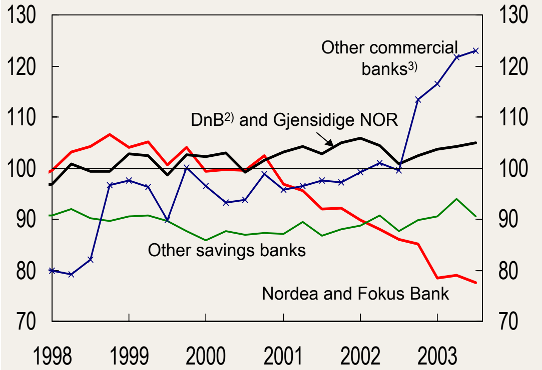


[1)] Excluding branches of foreign banks

[2)] Stable financing (customer deposits, equities and bonds) as a percentage of illiquid assets (lending and other long-term assets)

Source: Norges Bank

Chart 3.12 Developments in banks'[1)] liquidity indicator[2)]



[1)] Excluding branches of foreign banks

[2)] Nordlandsbanken is included in DnB from 31.12.02

[3)] The increase in the fourth quarter 1998 is due to the transfer of the loan portfolio from BN-bank to BN-kreditt

Source: Norges Bank

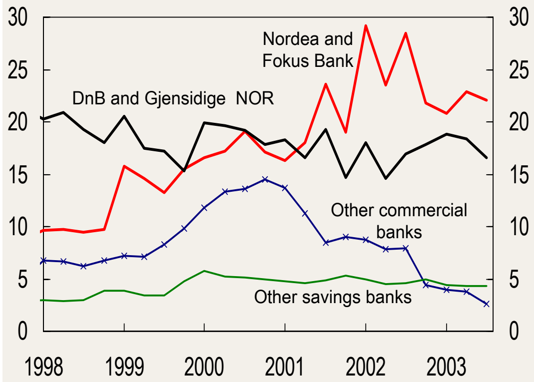
Table 3.6 Moody's rating[1)] for large Nordic banking groups as at 2003 Q3

	Financial strength	Short-term	Long-term
Danske Bank	B+	P1	Aa2
Svenska Handelsbanken	B+	P1	Aa2
Nordea Bank Sweden	B	P1	Aa3
Swedbank	B	P1	Aa3
SEB	B-	P1	A1
Den norske Bank	B	P1	Aa3
Union Bank of Norway	B	P1	Aa3
Nordea Bank Norway	B-	P1	Aa3
Fokus Bank	C-	P1	Aa3

[1)] Rating scale for financial strength: A+, A, A-, B+, B, B-, C+, C, C-,...
Short-term: P1, P2,... Long-term: Aaa, Aa1, Aa2, Aa3, A1, A2,...

Source: Bankscope

Chart 3.13 Banks'[1)] short-term foreign debt[2)] as a percentage of gross lending



[1)] Excluding branches of foreign banks
[2)] Deposits and loans from other financial institutions and notes and short-term paper

Source: Norges Bank

banks (see Table 3.6). The marked fall in the liquidity indicator overall for Nordea Bank Norges and Fokus Bank in the past few years does not therefore necessarily indicate higher liquidity risk. Liquidity risk in Norwegian branches of foreign banks is solely dependent on the liquidity risk in the foreign banks. This applies to, for example, Skandinaviska Enskilda Banken AB and Svenska Handelsbanken AB, which are two of the six largest banks in Norway in terms of total assets.

For banks that are not closely allied with or part of a foreign financial group, short-term foreign financing may involve a liquidity risk that is particularly high. Foreign creditors may have a lower threshold than Norwegian creditors for withdrawing financing if uncertainty about Norwegian banks' financial strength increases. The fall in the share of foreign financing this year for the category other commercial banks, and to some extent other savings banks, has therefore in isolation contributed to lower liquidity risk for these two groups (see Chart 3.13). The share of short-term financing from abroad has traditionally been larger for the two largest banks than for smaller banks, ranging between 15 and 20% of gross loans since the end of 1997.

Overall, the liquidity risk for banks is regarded as relatively low and somewhat lower compared with the May report. On the positive side, short-term foreign debt has fallen in all categories of bank. The risk picture is very mixed, however. Liquidity risk has probably been reduced in the category other commercial banks and in the two largest banks, while it may have risen in the category other savings banks. There is considerable uncertainty with regard to liquidity risk in the period ahead. With the current low interest rate level, the deposit-to-loan ratio will probably continue to edge down in most banks. Liquidity risk will depend on how banks adjust to these developments. For some banks, relatively costly financing will probably continue to limit lending growth. When the rules concerning asset-backed bonds is introduced, banks may find it attractive to transfer loans to mortgage companies, which may reduce banks' liquidity risk.

Counterparty risk

Norges Bank is making a survey in collaboration with the Banking, Insurance and Securities Commission of Norwegian banks' counterparty exposures. The survey shows the level of exposure of the nine largest Norwegian banks to their fifteen largest counterparties. The exposures are in the form of derivatives, securities, unsecured deposits, loans, guarantees and foreign exchange transactions for which settlement has not been confirmed. One of the aims of the survey is to assess the liquidity and credit risk associated with banks' unsecured, short-term exposures. It also provides a basis for assessing the risk of direct contagion of liquidity or solidity problems between the banks included in the survey. It has been decided to conduct a survey at the end of the first quarter every year from now on.

The largest exposures for the banks in the survey, by a clear margin, are exposures in connection with foreign exchange settlement transactions (see Chart 3.14). Most of these exposures are to foreign financial institutions with a high rating or large Norwegian banks (see Chart 3.15). The size of the exposures nonetheless indicates that banks' risk in connection with foreign exchange settlement can be considerable. Banks' exposure to foreign exchange settlement risk will, however, be reduced significantly as a result of the inclusion of the krone in the international currency settlement system CLS on 8 September 2003 (see separate box).

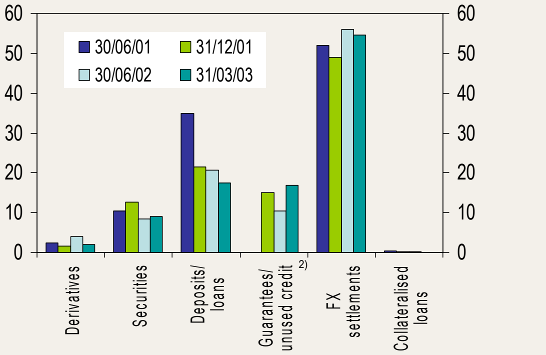
A bank's capacity to bear losses will depend on its Tier 1 capital ratio. Chart 3.16 shows what the effect on banks' Tier 1 capital ratios would have been if the largest, second largest or third largest counterparty in isolation had failed to honour their obligations. At the time of the last measurement, one bank would have failed to meet the statutory requirement of a 4% Tier 1 capital ratio if the largest counterparty had defaulted. Six other banks would have had a Tier 1 capital ratio of between 4 and 7%.

Overall, the survey shows that few of the exposures are so large that they would result in serious solvency problems for banks should a large counterparty be unable to settle. A relatively limited share of the exposures are to large Norwegian banks (see Chart 3.16). This indicates that the risk of spreading liquidity and solvency problems from one Norwegian bank to others is also limited, particularly after the krone was included in the CLS.

Overall assessment of the risk outlook for banks

Credit risk associated with households is relatively low and reduced in the short term. Credit risk associated with segments of the property industry is relatively high and unchanged, while credit risk associated with loans to other industries as a whole is moderate and somewhat lower than in the May *Financial Stability* report. Other risks – market risk, liquidity risk and counterparty risk – are considered to be somewhat lower or unchanged since May. On balance, the risk outlook for banks has therefore improved somewhat since the last *Financial Stability* report. High household debt growth increases households' vulnerability to negative financial disturbances. If high debt growth in the household sector continues, it may over time give rise to higher loan losses.

Chart 3.14 Exposures to large counterparties by different types of exposure at four reporting times.[1)]

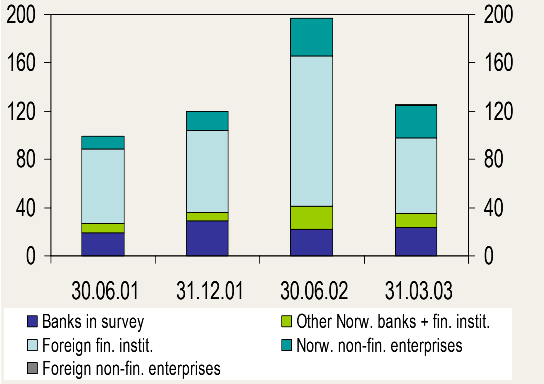


[1)] One bank is omitted in connection with reporting 30.06.01. Nordlandsbanken is included in DnB figures 31.03.03

[2)] Guarantees and unutilised lines of credit were not included 30.06.01, but in some cases may be included under deposits/lending

Sources: Banking, Insurance and Securities Commission and Norges Bank

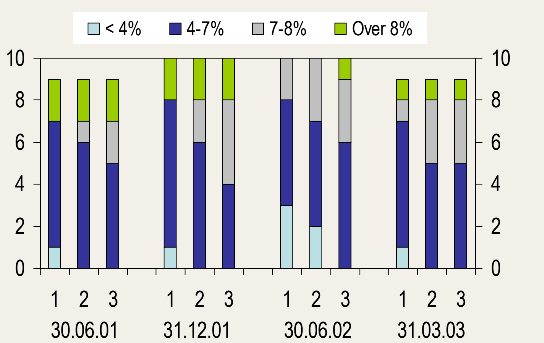
Chart 3.15 Institutional grouping of the 15 largest counterparty exposures for banks[1)]. In billions of NOK



[1)] One bank is omitted in connection with reporting 30.06.01. Nordlandsbanken is included in the DnB figures for 31.03.03

Sources: Banking, Insurance and Securities Commission and Norges Bank

Chart 3.16 The effect on core capital ratio for the individual banks[1)] when the three largest counterparty exposures are lost separately[2)]. Distribution of banks by core capital ratio after loss. Number



[1)] One bank is omitted in connection with reporting 30.06.01. Nordlandsbanken is included in the DnB figures for 31.03.03

[2)] It is assumed that there is no dividend from the estate

Sources: Banking, Insurance and Securities Commission and Norges Bank

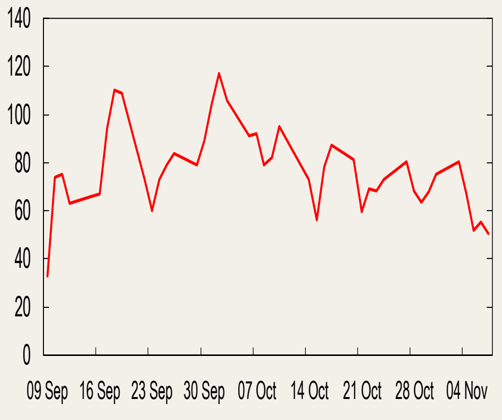
Inclusion of the Norwegian krone in CLS

An increasing number of foreign exchange transactions in the last few years have led to increased exposures in connection with banks' foreign exchange settlements. Until recently, banks have settled their foreign exchange commitments in national settlement systems. This has implied a risk for banks, since they normally deliver foreign currency that has been sold before receipt of the purchased foreign currency has been confirmed. To limit foreign exchange settlement risk, a group of major banks has established the international foreign exchange settlement system CLS. CLS links together the national settlement systems and has made it possible to ensure that a bank does not receive the foreign currency that has been purchased before it has delivered the foreign currency that has been sold. Thus, most of the banks' credit risk associated with foreign exchange settlement is eliminated. CLS commenced ordinary operations on 14 October 2002 and included seven currencies (AUD, CAD, CHF, EUR, GBP, JPY and USD). The Norwegian, Swedish and Danish currencies were included in CLS from 8 September 2003, while the Singapore dollar was included from 10 September.

Some Norwegian banks with extensive activity in the foreign exchange market became participants in CLS in the first half of 2003. These banks have thus been able to reduce the foreign exchange settlement risk associated with currencies other than the krone before the krone was included on 8 September. However, more than half of the foreign exchange transactions at Norwegian banks involve the purchase or sale of Norwegian krone. Most of the exposures could therefore not be eliminated before the krone was included in CLS. Chart 1 shows that participants in CLS quickly implemented CLS for transactions that include the krone and this has considerably reduced Norwegian banks' exposures. A study at the end of September indicates that exposures have been reduced by some 30-40% compared with exposures before the implementation of CLS. Exposures will probably be reduced further as more Norwegian banks become participants in CLS and as currently participating banks increase their use. A new study will be conducted in the spring of 2004.

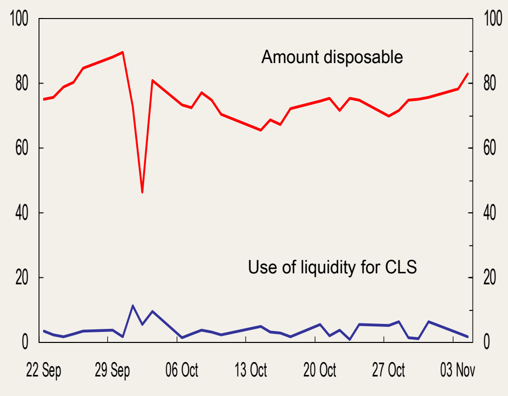
CLS will use reported transactions to calculate the net payments to be made in each currency by each bank. Settlement assumes that both parties have made sufficient payments at the right time. In cooperation with the banking industry, Norges Bank has made provisions to ensure that the liquidity in NBO (Norges Bank's Settlement System) is adequate to allow banks participating in the CLS settlement in Norwegian krone to meet their commitments. One of the measures has been to change the time of settlements in NBO so that the liquidity will be available for CLS in the most critical period. So far, the liquidity in NBO has been ample in relation to completion of CLS settlements (see Chart 2). Banks' liquidity in NBO can vary considerably through the year, however, and payment commitments to CLS may increase. The possibility of a liquidity shortage can therefore not be precluded. With such situations in mind, the central banks in Norway, Sweden and Denmark have developed a solution for the effective transfer of liquidity between the three currencies. The solution is called the Scandinavian Cash Pool and is based on the premise that one bank may use a deposit in one central bank as collateral for a loan in another central bank.

Chart 1 Daily turnover of NOK in CLS. Autumn 2003. In billions of NOK



Source: CLS

Chart 2 Disposable funds in NBO for large and medium-sized banks and maximum use of liquidity in NBO for CLS settlements. In billions of NOK



Source: Norges Bank

3.3 Other financial institutions

Norwegian banks are an integral part of alliances or financial groups that also comprise other types of financial institution (see Tables 3 and 4 in the Annex). Developments in other financial institutions may therefore have an impact on banks. Developments in mortgage companies, finance companies and life insurance companies are assessed below. The most important developments for many banking groups are those in the life insurance sector.

Mortgage companies

Mortgage companies provide long-term mortgage loans to enterprises, municipalities and to some extent to individuals. Many mortgage companies have specialised in providing loans to commercial property companies. The value of property and the financial position of property companies therefore have a considerable influence on mortgage companies' credit risk. The bond market is an important source of financing, but many mortgage companies are also financed by loans from their owners (see Table 3.7).

Mortgage companies will probably become more important in the Norwegian financial industry when the regulations concerning asset-backed securities are introduced. It will then be possible to transfer some of the banks' loans to mortgage companies and finance them by issuing bonds.[9] The scope of this practice will depend on the attractiveness of the regulations. Fokus Bank (Fokus Kreditt), Gjensidige NOR (Sparebankenes Kredittselskap) og Nordea Bank Norge (Norgeskreditt) are examples of banks that own mortgage companies. Eiendomskreditt is owned by the Terra Group and Kommunalbanken is owned by the government and KLP. For the last twelve months to the end of the third quarter 2003, mortgage companies' credit growth was 18 percent. Twelve-month growth has been rising for more than a year.

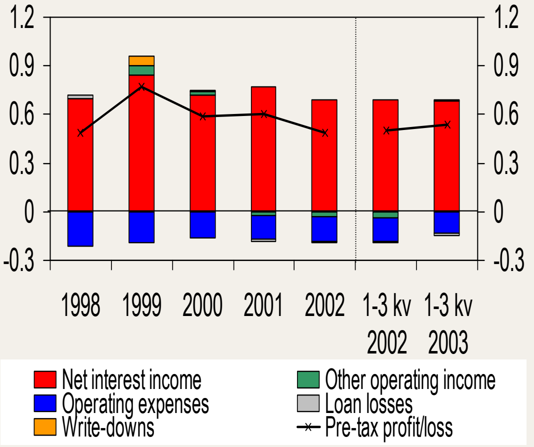
Mortgage companies' profits improved somewhat in the first nine months of 2003 compared with the same period of 2002 (see Chart 3.17). Pre-tax profits amounted to a little more than 0.5% of ATA this year. Net interest income was approximately unchanged compared with the same period last year, but other non-interest income rose as a result of capital gains on securities. Loan losses have doubled, but from a low level. Loan losses amounted to 0.2% of ATA in the first three quarters of 2003. The core capital ratio averaged 10.0% at the end of the third quarter of 2003.

Table 3.7 Balance sheet structure in mortgage companies
Percentage distribution

	2001	2002	2003 Q3
Cash and deposits	1,8	1,3	1,2
Securities (trading book)	16,8	19,1	19,3
Gross lending:			
Repayment loans	81,3	78,9	78,0
- Loan loss provisions	0,0	0,0	-0,1
Other assets	0,2	0,9	1,7
Total assets	**100,0**	**100,0**	**100,0**
Notes and short-term paper	9,2	10,8	9,1
Bond debt	56,2	53,8	53,5
Loans	25,8	28,3	30,7
Other liabilities	1,8	1,8	1,7
Subordinated loan capital	2,3	1,3	1,2
Equity capital	4,7	4,3	4,2
Total equity and liabilities	**100,0**	**100,0**	**100,0**
Memorandum:			
Total assets (NOK bn)	251,4	278,8	310,7

Source: Norges Bank

Chart 3.17 Mortgage companies' profits/losses. Percentage of average total assets



Source: Norges Bank

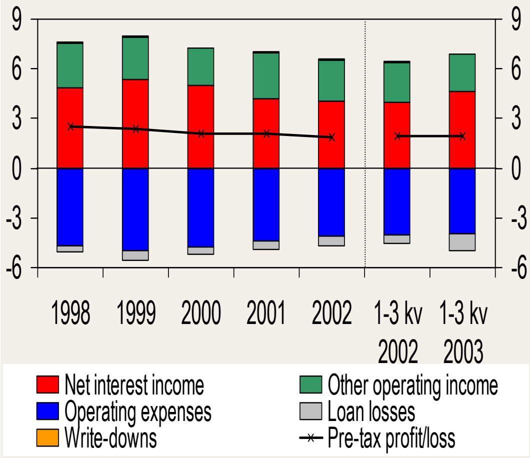
[9] With asset-backed securities, the owners of the securities are given a lien on part of the credit institutions' assets. In its consultative statement of 30.09.02 to the Ministry of Finance, Norges Banks recommended that the regulations be changed so that these securities receive preferential treatment as compared with other bonds. This would mean higher investment limits for insurance companies and mutual funds and lower risk weighting in connection with capital adequacy rules and rules concerning large exposures. Preferential treatment will make it more attractive to invest in asset-backed securities and will thus reduce the financing costs for mortgage companies that have been established to issue securities of this kind.

Table 3.8 Balance sheet structure in finance companies. Percentage distribution

	2001	2002	2003 Q3
Cash and deposits	2,5	2,0	2,6
Securities (trading book)	0,2	0,2	0,1
Gross lending:			
Discount credit, bank overdraft facility, operating credit, user credit	19,5	20,8	21,6
Other building loans	0,0	0,1	0,1
Repayment loans	32,2	33,4	34,1
Loan financing	43,3	42,1	40,0
- Loan loss provisions	-1,7	-1,9	-2,0
Other assets	4,0	3,4	3,4
Total assets	**100,0**	**100,0**	**100,0**
Notes and short-term paper	0,7	0,7	0,0
Bond debt	0,1	0,0	0,0
Loans	83,3	80,6	81,1
Other liabilities	6,6	8,4	9,1
Subordinated loan capital	1,0	1,1	1,1
Equity capital	8,2	9,0	8,6
Total equity and liabilities	**100,0**	**100,0**	**100,0**
Memorandum:			
Total assets (NOK bn)	88,8	90,7	96,6

Source: Norges Bank

Chart 3.18 Finance companies' profits/losses. Percentage of average total assets



Source: Norges Bank

Table 3.9 Balance sheet structure in life insurance companies.[1)] Selected assets as percentages of total assets

	2002 Q3	2003 Q3
Buildings and real property	10,4	9,9
Investment in permanent ownership etc.	32,6	42,8
- of which equities and units	0,2	0,4
- of which bonds held until maturity	26,5	37,0
- of which lending	5,8	5,5
Other financial assets	51,2	42,7
-of which equities and units	8,6	10,0
- of which bonds	29,9	22,1
- of which short-term paper	10,1	8,5
Total assets	**100,0**	**100,0**
Memorandum:		
Total assets (NOK bn)	405,9	441,4

1) Excluding unit-linked companies offering unit-linked policies

Source: Banking, Insurance and Securities Commission

Finance companies

Finance companies offer short-term loans, factoring and leasing for many different purposes (see Table 3.8). Finance companies are, to a greater extent than mortgage companies, part of financial groups that include banks, but they account for a small portion of these groups' total assets. The finance companies' owners are also their most important source of financing. For the last twelve months to the end of the third quarter 2003, finance companies' credit growth was 8%.

Finance companies' pre-tax profits amounted to a little more than 1.9% of ATA in the first three quarters of 2003 (see Chart 3.18). Profits have remained at the same level as last year despite a sharp increase in loan losses, which amounted to a mere 1% of ATA in the first three quarters of 2003. Finance companies' losses are on average considerably higher than those incurred by banks and mortgage companies. This is because collateral is not always required and the risk is generally higher. Relatively high losses are offset by high net interest income, which rose, compared to 2002, to 4.6% of ATA. At the end of the third quarter of 2003, the core capital ratio declined, compared with 2002, to 8.3%.

Life insurance companies

Life insurance companies have strengthened their earnings in 2003, primarily reflecting positive developments in securities markets. This has also improved banking groups' returns on equity stakes in these companies. This is the case for both DnB (Vital) and Gjensidige NOR (Sparebankforsikring). Similarly, the loss on shareholdings in Sparebank 1 Gruppen AS this year has been lower than in 2002 for banks participating in the Sparebank-1 alliance.

Life insurance companies' buffer capital[10] has increased sharply as a result of higher earnings and amounted to 4.3% of total assets at the end of the third quarter 2003. By comparison, buffer capital totalled 2.0% of total assets at the end of the third quarter of 2002.

10 Buffer capital is calculated as the sum of tier 1 capital over and above the minimum requirement, additional provisions with an upper limit of one year's interest rate guarantee and the adjustment fund.

Economic shocks, monetary policy and financial stability

Changes in the interest rate level will have an effect on financial institutions' losses in the short term. If the economy is exposed to shocks, a relatively large change in the interest rate may be necessary to achieve the inflation target. If interest rates rise sharply, for example, the interest burden will rise both in the enterprise and household sectors. Debt servicing capacity is reduced and losses increase. The opposite occurs if interest rates are reduced.

In two examples, we have estimated the losses in financial institutions if there had been a demand or supply side shock in 2001.[1] Losses are compared with estimated losses based on the assumptions in the baseline scenario in I*nflation Report 4/2000*, and not with actual losses.

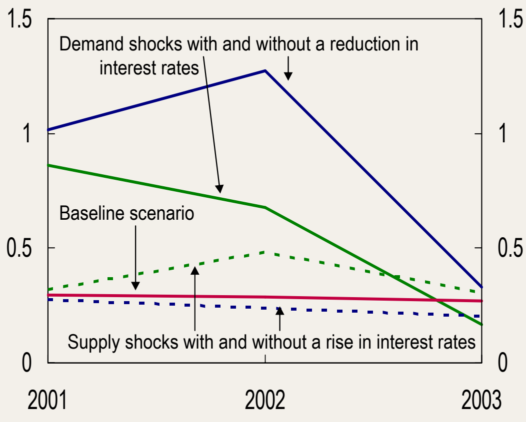
In our example with the demand shock, we have assumed that public demand falls by 6 percentage points compared with the baseline scenario. Such a reduction might, for example, be connected with a sharp decline in petroleum revenues. The result would be increased unemployment and a reduction in sales revenues for enterprises. Property prices would most likely fall.

Without a monetary policy response, estimated losses would increase to more than 1.5% of lending. According to the baseline scenario, estimated losses were approximately 0.25%. We have used the Taylor rule[2] to determine the monetary policy response. If the interest rate is reduced in accordance with the Taylor rule, economic activity would pick up. Unemployment would decline, demand would be stimulated and the negative trend in the property market would be dampened. In this situation, monetary policy that is in line with the Taylor rule would bring inflation closer to the target and reduce losses in financial institutions.

If the rise in labour costs is 4 percentage points higher than in the baseline scenario (supply side shock), household disposable income would increase in the short term, which would contribute to higher demand in the sheltered sector and increased pressures in the housing market. Without a monetary policy response, financial institutions' losses would be reduced in the short term compared with the baseline scenario. The interest rate would be increased to mitigate higher inflation and would lead to slightly higher losses in the short term. If the buffer capital in the financial sector is adequate to absorb the increased losses, there would not even in this case be a conflict between the objective of monetary policy and financial stability in the short term. In 2001, financial institutions' buffer capital was adequate to absorb the losses that followed the interest rate increases. While loan losses increase somewhat in the short term, higher interest rates may help to prevent the build-up of financial imbalances. This could reduce loan losses in the long term.[3]

When the economy is exposed to shocks, monetary policy may in principle be used to bring inflation back to target relatively quickly. Monetary policy that uses somewhat more time to bring inflation back to target, flexible inflation targeting, will normally have less impact on demand, output and interest rates. Such a policy will also foster financial stability.

Chart 1 Financial institutions losses in the event of various shocks, with and without a change in interest rates. Percentage of debt



Source: Norges Bank

[1] The method of calculation is described in Frøyland and Larsen: "How vulnerable are financial institutions to macroeconomic changes? An analysis based on stress testing", *Economic Bulletin* 3/02, Norges Bank.
[2] The rule is described in Taylor: "Discretion versus policy rules in practice", *Carnegie-Rochester Conference Series on Public Policy 39.* According to the rule, the interest rate is equal to a function of the neutral real interest rate and the deviation between the actual level and the equilibrium level of inflation and output.
[3] For more detailed discussion, see Gjedrem; "Financial stability, asset prices and monetary policy", address at the Centre for Monetary Economics/BI Norwegian School of Management, 3 June 2003.

Annex: Statistics

Table 1 Key figures for limited companies in selected industries. Per cent

	Share of debt to banks[1]		Operating margin[2]		Return on total assets[3]		Cash surplus/ debt to banks[4]		Predicted bankruptcy probability[5] Median		Predicted bankruptcy probability[5] 80 percentile		Risk-weighted debt as a percentage of debt[6]	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
Hunting, agriculture and forestry	0,2	0,2	3,7	4,7	7,1	8,2	23,9	28,8	0,7	0,7	4,1	4,1	3,0	2,2
Fishing	2,1	2,3	11,5	8,6	7,7	8,2	14,1	9,9	1,3	1,2	6,5	5,6	1,9	1,7
Fish-farming	2,3	2,3	1,5	-8,5	4,9	-3,4	10,7	-3,8	1,1	1,5	4,4	5,3	1,5	1,9
Mining	1,2	1,2	11,4	10,6	10,5	14,2	22,4	26,8	0,4	0,4	2,0	2,0	0,6	0,5
Shipbuilding	0,9	0,9	2,5	2,7	12,0	6,8	59,4	19,8	0,7	0,6	2,7	2,6	0,5	0,5
Other manufacturing	12,3	11,3	8,3	8,6	10,3	10,9	26,4	27,4	0,5	0,5	2,6	2,6	0,5	0,5
Utilities	3,2	2,2	2,3	24,7	3,0	6,5	30,6	44,9	0,2	0,2	0,7	0,9	0,1	0,0
Construction	3,3	3,9	3,9	4,3	8,3	9,5	25,4	28,2	0,5	0,6	2,7	2,8	1,5	1,4
Wholesale and retail trade	12,1	10,8	2,3	3,0	7,4	9,0	18,8	24,9	0,7	0,7	3,5	3,4	1,3	1,3
Hotels and restaurants	1,8	1,9	0,9	2,6	2,8	4,9	7,6	9,1	2,1	1,9	12,9	12,0	3,8	3,3
Shipping	16,2	16,2	9,8	2,0	7,6	8,0	20,5	29,5	0,4	0,4	1,5	1,4	0,3	0,3
Other transport	3,5	3,1	0,5	4,1	2,4	6,7	23,0	31,5	0,4	0,4	1,9	1,8	0,6	0,6
Telecoms	0,8	0,8	1,8	-2,6	-0,8	-1,3	35,2	4,3	0,9	0,8	4,3	3,9	0,3	0,4
IT	0,3	0,3	-5,4	-1,5	-6,1	-1,2	-36,9	-5,3	0,8	0,7	3,7	3,7	2,0	2,0
Commercial services	6,2	6,9	1,9	2,7	5,0	5,1	15,2	13,1	0,4	0,4	1,8	2,0	1,0	1,1
Travel and tourism	0,3	0,4	3,0	2,5	9,0	8,1	18,5	13,5	0,5	0,6	2,4	2,6	1,5	1,3
Property management	33,2	35,2	34,0	32,1	7,7	7,4	5,8	6,1	0,3	0,3	1,1	1,1	0,6	0,6
Total	100,0	100,0	4,8	5,4	6,5	7,5	16,1	17,6	0,5	0,5	2,5	2,5	0,7	0,7

1) The industry's share of the total bank debt of the selected industries

2) Operating results as a percentage of turnover

3) Total return before tax and interest on debt as a percentage of total assets at year-end

4) Only enterprises with bank debt. Cash surplus calculated as result for ordinary activities before tax + depreciation and write-down

5) Predicted bankruptcy probability as a percentage from Norges Bank's bankruptcy prediction model. Adjusted for accounts for 2002 that are not available

6) Risk-weighted debt (total bankruptcy prob. x debt) per industry as a percentage of industry's debt (other long-term debt and bank overdraft). Adjusted for accounts for 2002 that are not available

Source: Norges Bank

Table 2 Balance sheet for corporate sector[1)]

	NOK billions		Per cent of total assets	
	2001	2002[2)]	2001	2002
Intangible assets	84	79	3,6	3,6
Fixed assets	740	733	31,8	33,0
Financial fixed assets	593	605	25,5	27,3
Total fixed assets	**1 417**	**1 417**	**60,9**	**63,9**
Inventories	146	137	6,3	6,2
Current receivables	531	440	22,8	19,8
Bank deposits, cash and current investments	233	223	10,0	10,1
Total current assets	**910**	**800**	**39,1**	**36,1**
Total assets	**2 328**	**2 217**	**100,0**	**100,0**
Paid-in capital	410	438	17,6	19,8
Retained earnings	346	287	14,9	12,9
Total equity	**756**	**725**	**32,5**	**32,7**
Provisions	83	85	3,6	3,8
Other long-term debt	705	721	30,3	32,5
Total long-term debt	**788**	**806**	**33,8**	**36,4**
Current liabilities	**784**	**686**	**33,7**	**30,9**
Total equity and liabilities	**2 328**	**2 217**	**100,0**	**100,0**

[1)] Limited companies excl. enterprises in the oil and gas industry, financial industry and public sector.

[2)] Some annual accounts for 2002 are not yet available

Source: Norges Bank

Table 3 Total assets in Norwegian financial groups by line of business[1) as at 30 June 2003. Per cent

	Banks	Finance companies	Mortgage companies	Life insurance	Total group
DnB	82,6	3,8	0,0	13,6	100,0
Union Bank of Norway	67,9	7,5	5,2	19,5	100,0
Nordea Norge	90,0	2,0	8,0	0,0	100,0
Sparebank 1 alliance	94,1	1,2	0,0	4,7	100,0
Terra alliance	97,3	0,8	1,9	0,0	100,0
Storebrand	19,0	0,0	0,0	81,0	100,0
Fokus	71,8	0,0	28,2	0,0	100,0

[1)] 'Total group' is equivalent to the combined total assets in the various lines of business in the table. The table does not show an exhaustive list of the activities of Norwegian financial groups. For example, unit-linked insurance, securities funds and asset management have been excluded

Source: Norges Bank

Table 4 Norwegian financial groups' market shares[1)] in various lines of business as at 30 June 2003. Per cent

	Banks	Finance companies	Mortgage companies	Life insurance	Total group
DnB	26,5	21,5	0,0	17,0	21,5
Union Bank of Norway	14,2	27,6	6,1	16,0	14,1
Nordea Norge	14,4	5,6	7,2	0,0	10,7
Sparebank 1 alliance	13,8	3,1	0,0	2,7	9,9
Terra alliance	6,6	1,0	0,7	0,0	4,6
Storebrand	1,6	0,0	0,0	25,9	5,5
Fokus	3,3	0,0	7,3	0,0	3,1
Total financial groups	80,4	58,9	21,2	61,6	69,3

[1)] Market shares are based on total assets in the various lines of business. Total groups corresponds to the combined total assets of the various lines of business in the table. The table does not show an exhaustive list of the activities in Norwegian financial groups.
For example, unit-linked insurance, securities funds and asset management have been excluded

Source: Norges Bank

Table 5 Structure of the Norwegian financial industry. As at 30 September 2003

	Number	Lending (NOK bn)	Total assets (NOK bn)	Core capital ratio (%)	Capital adequacy (%)
Commercial banks	14	522,9	813,4	8,3	11,4
Savings banks	130	594,7	728,0	10,6	12,9
Mortgage companies	11	198,7	310,6	10,0	12,5
Finance companies	51	89,5	96,2	8,3	9,7
Life insurance companies	13	23,6	461,3	10,3	15,7
Non-life insurance companies	52	1,1	103,9		
Branches of foreign banks	8	58,6	157,7		
Memorandum:			(NOK bn)		
Market value of equities, Oslo Stock Exchange			573,3		
Outstanding domestic bonds and short-term paper debt			666,0		
Issued by public sector and state-owned companies			334,1		
Issued by banks			194,8		
Issued by other financial institutions			69,9		
Issued by other private enterprises			46,8		
Issued by non-residents			20,4		
GDP Norway, 2002			1520,7		
GDP Mainland Norway, 2002			1207,1		

Sources: Norges Bank, Oslo Stock Exchange and Statistics Norway

Table 6 Results in Norwegian banks[1)]

	2001		2002		2002 Q1-Q3		2003 Q1-Q3	
	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA
Net interest income	28,90	2,21	30,72	2,19	22,64	2,17	22,89	2,03
Other operating income	11,95	0,91	10,21	0,73	6,62	0,63	9,29	0,82
commission income	6,98	0,53	7,09	0,51	5,27	0,50	5,47	0,48
securities, FX and derivatives	3,66	0,28	1,95	0,14	0,68	0,07	3,14	0,28
Other operating expenses	24,76	1,89	25,49	1,82	18,56	1,78	18,81	1,67
personnel expenses	12,90	0,98	13,26	0,95	9,77	0,94	10,13	0,90
Pre-tax operating profit before losses	**16,09**	**1,23**	**15,45**	**1,10**	**10,71**	**1,02**	**13,37**	**1,18**
Losses on loans and guarantees	3,62	0,28	6,66	0,47	2,73	0,26	5,45	0,48
Pre-tax operating profit	**12,24**	**0,93**	**8,92**	**0,64**	**8,07**	**0,77**	**8,02**	**0,71**
Profit after taxes	10,90	0,83	6,26	0,45	5,60	0,54	6,20	0,55
Core capital ratio (%)	9,69		9,60		9,54		9,37	

[1)] Parent banks, all commercial and savings banks. Foreign branches are not included

Source: Norges Bank

Financial Stability 1/2003

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