NORGES BANK

Financial Stability

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Financial Stability 1/08

NORGES BANK

Norges Bank

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Norges Bank's reports on financial stability

Financial stability implies that the financial system is robust to disturbances in the economy and can channel capital, execute payments and redistribute risk in a satisfactory manner.

Pursuant to the Norges Bank Act and the Payment Systems Act, Norges Bank shall contribute to a robust and efficient financial system. Norges Bank therefore monitors financial institutions, securities markets and payment systems in order to detect any trends that may weaken the stability of the financial system. Should a situation arise in which financial stability is threatened, Norges Bank and other authorities will, if necessary, implement measures to strengthen the financial system.

Experience shows that the foundation for financial instability is laid during periods of strong debt growth and asset price inflation. Banks play a key role in credit provision and payment services – and they differ from other financial institutions in that they rely on customer deposits for funding. Banks are thus important to financial stability. The *Financial Stability* report therefore focuses on the prospects for banks' earnings and financial strength and the risk factors to which banks are exposed.

The report is published twice a year. The main conclusions of the report are summarised in a submission to the Ministry of Finance. The submission is discussed at a meeting of Norges Bank's Executive Board. Norges Bank's annual *Report on Payment Systems* provides a broader overview of developments in the Norwegian payment system.

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This report is based on information in the period to 30 May 2008

Editorial

Financial turbulence

The global credit crisis illustrates how quickly the environment for financial institutions can change. The turbulence that began in segments of the US mortgage market has spread to global money and credit markets. This has quickly resulted in widening spreads between government bonds and bonds with credit risk (risk premiums).

Risk premiums in money and credit markets were very low up to summer 2007, and perhaps lower than warranted. Since the financial turbulence began, markets have been marked by uncertainty, abrupt shifts and high premiums. Risk premiums in credit markets have declined since the peak in March. Premiums in money markets are still high. It is too early to say that the financial turbulence is over. The turbulence may persist and new waves of turmoil may emerge. And even if the turmoil should abate, risk premiums cannot be expected to return to their pre-turmoil level. Households and enterprises must be prepared for the possibility that borrowing will be more expensive.

Central banks have adjusted their lending facilities in order to curb financial turbulence. By supplying liquidity with longer maturities, increasing the number of permitted counterparties and accepting a broader range of collateral for loans, central banks have contributed to more stable financial markets.

The financial turmoil is also having a broad impact on Norwegian operators. Borrowing has become more expensive for financial institutions, enterprises, households and public entities. Many have suffered losses on financial investments.

The turbulence in money and credit markets has made it more difficult for banks to obtain funding. Norwegian banks, however, employ a broad range of funding sources. This reduces their vulnerability. Nonetheless, banks' liquidity management has been more demanding than normal recently, and may present new challenges if the turbulence in money and credit markets persists. There is little investment in high-risk bonds, which has limited banks' capital losses. Strong growth in the Norwegian economy has resulted in low loan losses. Overall, Norwegian banks have so far fared well through the turbulence and better than many foreign banks. After several years of strong results, banks are well equipped to cope with a period of lower earnings.

Jan F. Qvigstad

Summary

Outlook for financial stability in Norway

There is still considerable turbulence in global money and credit markets. In the wake of the crisis in some segments of the US housing market, banks became uncertain about their own and other banks' liquidity requirements. Interest rates on interbank loans increased. Risk premiums on money market loans remain high.

The uncertainty has contributed to a broad-based repricing of risk. Risk premiums in credit markets, which were very low up to last summer, rose sharply until mid-March. Credit premiums have since fallen back slightly. The reversal came when the Federal Reserve announced that it would implement measures to prevent the bankruptcy of the investment bank Bear Stearns.

Many foreign banks have recorded substantial loan losses and unrealised capital losses on bond holdings. As a result, they have had to raise new equity in order to maintain capital adequacy. Combined with more expensive funding, these losses have led to tighter credit standards both in the US and in Europe. Tighter credit standards in banks and more expensive funding in credit markets have curbed corporate and household demand. This will in isolation curb economic growth.

Even though there have been signs of improvement in credit markets, it is uncertain how long the turbulence will persist. The situation in money markets is still abnormal. If there are no more major negative surprises, confidence may be restored in the interbank market, and risk appetite can then increase. In turn, this will result in lower risk premiums in credit markets and make it easier for banks to obtain funding. Lower risk premiums will also reduce unrealised capital losses on bonds.

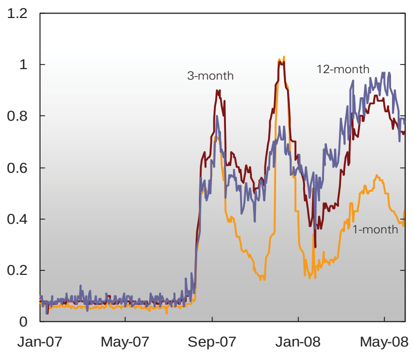
If developments follow this path, banks' need for tighter credit standards will be reduced, making it easier and cheaper for enterprises and households to obtain funding. On the other hand, negative news about losses in financial institutions would rapidly further erode confidence. This would prolong the period of turbulence, as would a deterioration in the situation in the US housing market.

The environment has also become more demanding for Norwegian banks. Nonethless, the outlook for the financial system in Norway is still satisfactory. After several years of high earnings, banks are well equipped to cope with a period of international turbulence and weaker results.

Norwegian banks are feeling the impact of the turbulence in money and credit markets in two ways:

First, funding costs have increased. Premiums paid by banks for long-term funding have risen considerably. As a result, banks have to a greater extent used short-term loans. But short-term money market funding has also become more expensive. More expensive market funding

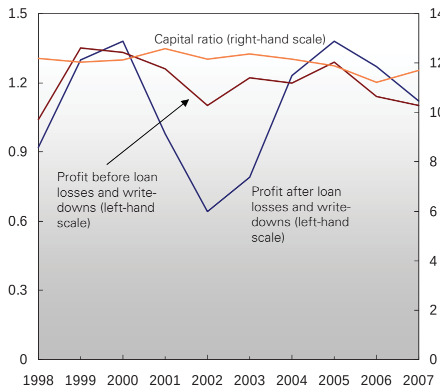
Chart 1 Spread between money market rates with different maturities and expected key policy rate[1]. Average for the US, the euro area and the UK. Percentage points. Daily figures. 1 Jan 07 – 29 May 08



[1] The expected key rate is represented by the Overnight Indexed Swap (OIS)

Sources: Bloomberg and Norges Bank

Chart 2 Banks' capital ratio and pre-tax profit as a percentage of average total assets.[1] Annual figures. 1998 – 2007



[1] Excluding branches of foreign banks in Norway

Source: Norges Bank

has led to intensified competition for customer deposits. Interest rates on deposits have increased. Thus, all forms of debt financing have become more costly.

Second, banks have had to record unrealised capital losses on bonds. The fall in bond prices is less serious for Norwegian banks than for many international banks. Bonds account for a limited share of Norwegian banks' assets. In addition, Norwegian banks have not been directly exposed to losses in the US subprime mortgage market, which resulted in substantial losses in foreign banks.

After falling for many years, banks' interest margins (lending rates minus deposit rates) have stabilised over the past year. Lending rates, however, have not kept up with money market rates, which have risen more than Norges Bank's key policy rate. Lending margins (the difference between lending rates and money market rates) are now very low. If the difference between the key rate and money market rates does not diminish, banks will probably raise lending rates. In addition, slower growth in the Norwegian and global economies may imply higher credit risk premiums in the period ahead. However, it will take time for all the loans to be fully repriced.

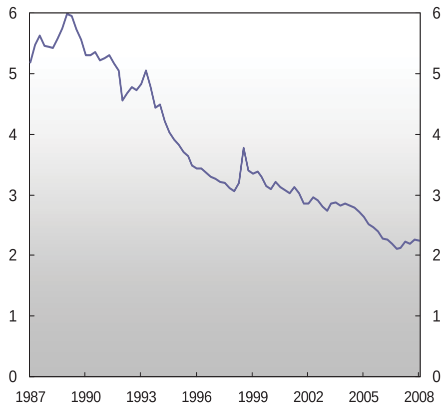
Increased competition for deposits will probably contribute to reducing the difference between deposit rates and money market rates (deposit margins). The financial turbulence may thereby affect both lending and deposit margins. In addition, household loan growth will probably moderate due to higher interest rates, a high level of debt in many households and slower house price inflation. It is also uncertain how long strong growth in lending to the business sector can persist. As a result, growth in banks' net interest income will probably be slower.

Banks' loan customers are financially sound. Corporate earnings have been high for a long period. Due to slower growth in the Norwegian and global economies, corporate earnings ahead will be more moderate. Higher funding and labour costs are having the same effect, and will reduce enterprises' debt-servicing capacity. The commercial property market has previously reflected considerable optimism and sharply rising prices. Commercial property prices have fluctuated widely and in pace with capacity utilisation in the economy. Lower economic activity will reduce property companies' earnings.

Households' overall financial position is sound. Income growth is holding up, and unemployment is low. However, household saving has been low, and debt is still expanding rapidly. House price inflation slowed in autumn 2007 after several years of sharp increases. Higher interest rates and high debt in many households may reduce their debt-servicing capacity.

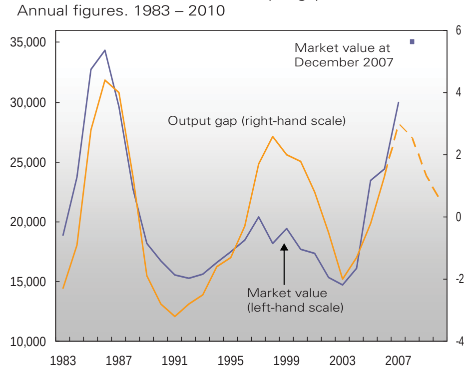
With somewhat lower household and corporate debt-servicing capacity, banks' loan losses will probably increase somewhat in the years ahead, albeit from unusually low levels. Along with lower growth in net interest income,

Chart 3 Banks' interest margin. Percentage points. Quarterly figures. 87 Q1 – 08 Q1



Source: Statistics Norway

Chart 4 Market value for offices in Oslo[1]. Price per square metre at constant 2007 NOK. Output gap[2]. Per cent. Annual figures. 1983 – 2010



[1] Average value for high-standard offices in central Oslo. Value as at June.
[2] Projections for 2007 – 2010

Sources: OPAK and Norges Bank

this will probably result in lower profits as a percentage of total assets than in 2004–2007, which was a very favourable period for banks.

Risk outlook

The risk of financial instability in Norway seems on balance to have increased since the previous report. This is primarily due to developments in global money and credit markets and uncertainty about the effects on domestic and global activity. We will focus on four developments in particular:

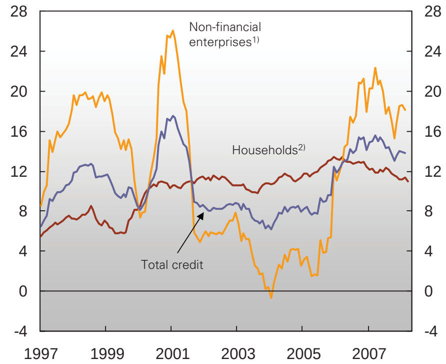
Market turmoil challenges banks' liquidity management. Short-term loans account for a substantial share of banks' funding, and must be rolled over regularly. The scale of short-term funding has increased somewhat in the past year due to limited access to long-term funding, which increases liquidity risk.

The problems in the US housing market and the ensuing turmoil in money and credit markets, along with tighter bank credit standards, increase the uncertainty about global economic developments. A global downturn might lead to lower earnings in Norwegian firms and higher losses in Norwegian banks.

Household debt is still growing rapidly. Low saving and uncertainty in the housing market entails a risk of an abrupt rise in the saving ratio. A sudden change in household expectations about their own financial position ahead may also lead to a change in saving behaviour, which will reduce corporate earnings.

Banks have sizeable loans to the property industry. Market prices for commercial property have risen substantially in the past few years, partly based on expectations of continued solid growth in rental income. If these expectations are not met, property companies' profitability may be reduced. The optimism and the rise in prices in the commercial property market seem, however, to have abated since 2007. Banks have become more reluctant to lend to the property industry. Combined with any weaker developments in the housing market, this may also reduce activity and earnings in the construction industry.

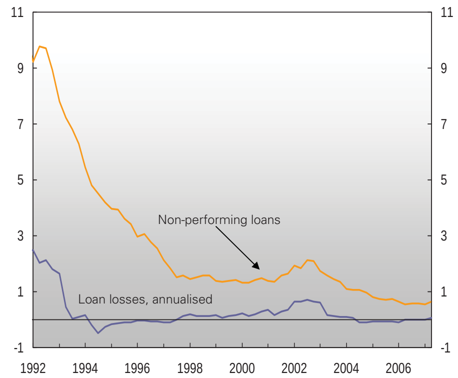
Chart 5 12-month growth in credit to mainland Norway. Per cent. Jan 1997 – Mar 2008



[1] All foreign credit to mainland Norway is assumed granted to enterprises
[2] Household domestic credit

Source: Statistics Norway

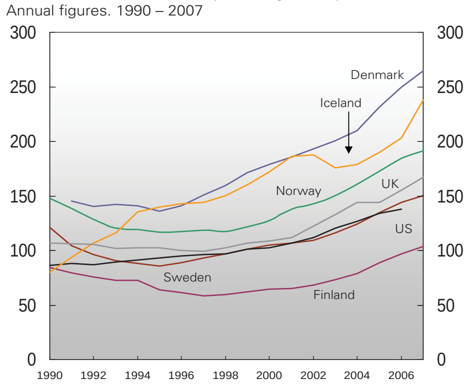
Chart 6 Banks' gross stock of non-performing loans and reported loan losses[1]. Percentage of gross lending. Quarterly figures. 92 Q1 – 08 Q1



[1] Excluding branches of foreign banks in Norway

Source: Norges Bank

Chart 7 Household debt as a percentage of disposable income. Annual figures. 1990 – 2007

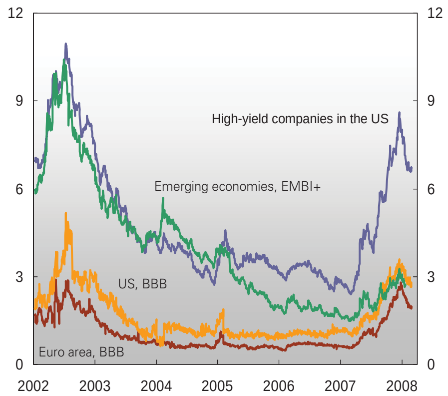


[1] The figures are not necessarily comparable because of different definitions and institutional arrangements

Sources: OECD, Sveriges Riksbank, Danmarks Nationalbank, Sedlabanki Island, Finlands Bank and Norges Bank

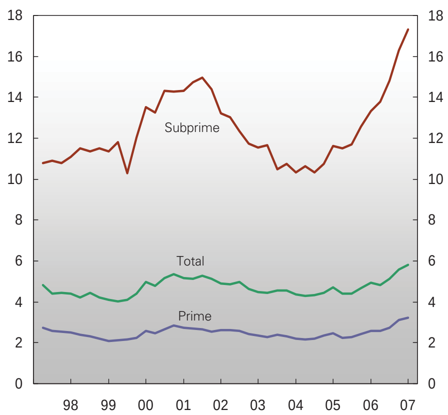
1 International banks and financial markets

Chart 1.1 Credit spreads between government bonds in the US and Europe. Percentage points. Daily figures. 10 Apr 02 – 29 May 08



Source: Reuters EcoWin

Chart 1.2 Default rates on US mortgages. Per cent of lending. Quarterly figures. 98 Q1 – 07 Q4



Source: Bloomberg

The global economy is still feeling the impact of the problems that arose in the US housing market. Although we have seen some signs of improvement in financial market conditions in recent months, the global financial outlook has deteriorated since the previous report (*Financial Stability* 2/07).

Subprime mortgages

The global economy has for many years been characterised by high liquidity growth, low interest rates, low losses and strong risk appetite. This is reflected in the narrow spreads between high-risk and safe investments up to summer 2007 (see Chart 1.1).

In investors' search for yield, available capital found its way to both prime and subprime segments of the US housing market. The subprime loan market, for borrowers with low creditworthiness, has grown strongly during recent years. With these loans, interest rates are often low at the beginning of the loan term, rising to an agreed higher rate at a later stage. Subprime loans were based on expectations of increasing house prices. If house prices increased, borrowers could refinance their loans and consequently maintain their ability to repay their debt. However, in 2006 house prices in the US started to decline, and it became difficult for borrowers to refinance. As a result, defaults increased sharply (see Chart 1.2).

Contagion effects

A large share of mortgages is collected in portfolios and used as collateral for bonds sold to investors all over the world. With increasing default rates, market prices for these bonds declined. In addition, the resale of large volumes of mortgages in the form of complex securities has given rise to a very high degree of uncertainty as to the distribution and size of subprime-related losses. This has contributed to a broad-based repricing of risk. Investors now require higher returns for other types of securities as well. There has been a marked rise in credit premiums compared with government bonds since summer 2007 (see Chart 1.1).

Major international banks have suffered substantial losses as the value of their securities holdings has declined. Banks and a number of financial institutions operate with minimum requirements regarding the debt-to-equity ratio. Rebalancing this ratio after large losses can be achieved by reducing lending volumes, raising new equity or repaying debt. In order to repay debt, one alternative is to dispose of securities. This solution has probably put further downward pressure on prices for a broad range of securities, with subsequent losses for other banks and investors.

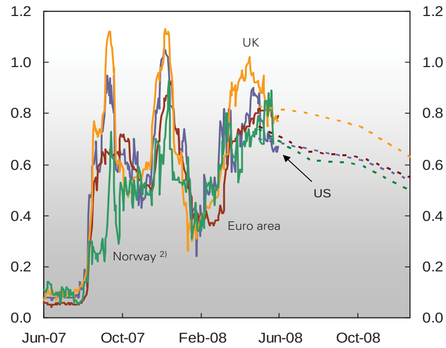
Banks have long been uncertain about their own and other banks' financial position. The interest rate banks have to pay on money market loans is still high compared with expected key policy rates (see Chart 1.3).

Credit market conditions improved in mid-March when the Federal Reserve announced that it would implement measures to prevent the bankruptcy of the investment bank Bear Stearns (see box on page 54). These measures allayed fears that the turbulence might lead to a serious systemic crisis.

Banks' losses in the billions

In total, the largest banks have so far announced writedowns and loan losses in the order of USD 382bn since summer 2007. Securities portfolios have to be marked to market[1], and most of the losses are due to unrealised capital losses on bonds and complex securities. A number of banks have raised new equity (see Chart 1.4), which to a certain extent has been provided by sovereign wealth funds in Asia and the Middle East.

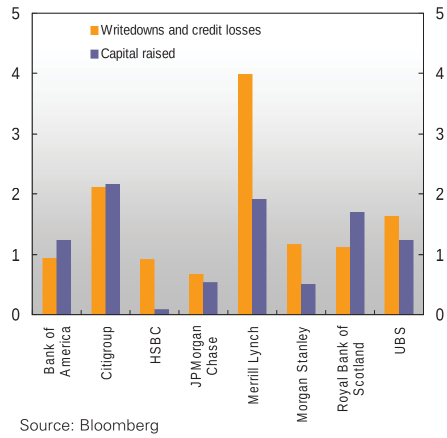
Chart 1.3 Spread between money market rate and expected key policy rate. 3-month maturity. Percentage points. Daily figures. Historical (from 1 June 07) and forecasts (at 29 May 08)



1) Expected key rates are measured by Overnight Indexed Swaps (OIS)
2) Norges Bank's projection

Sources: Bloomberg, Reuters and Norges Bank

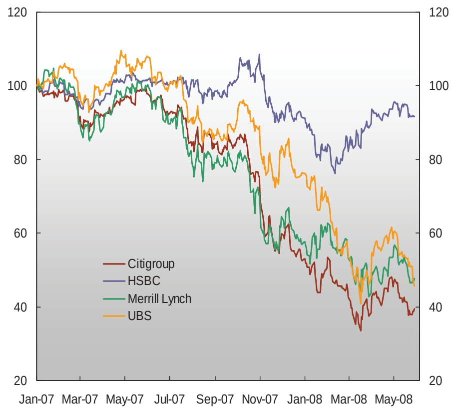
Chart 1.4 Writedowns and credit losses together with capital raised for selected international banks. Jan 07 – 29 May 08



Source: Bloomberg

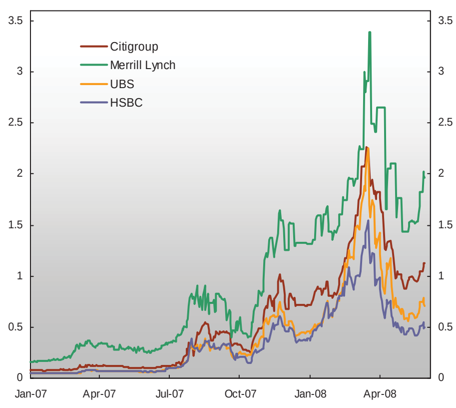
1 In accordance with International Financial Reporting Standards (IFRS)

Chart 1.5 Share prices for selected international banks. 1 Jan 07 = 100. Daily figures. 1 Jan 07 – 29 May 08



Source: Bloomberg

Chart 1.6 CDS prices for selected US and European banks. Basis points. Daily figures. 1 Jan 07 – 29 May 08



Source: Bloomberg

The International Monetary Fund (IMF) estimated in April that losses in the over 23-trillion-dollar US credit market may come to USD 945bn. Global banks are expected to shoulder about half of the losses. Analyses from the Bank of England[2], however, indicate that the losses may be smaller, pointing out that it may be difficult to use a mark-to-market approach to valuing illiquid securities. For example, with low trading volumes of subprime-related securities, the market price may be considerably lower than implied by the underlying mortgage payments.

Share prices for many large banks fell considerably up to mid-March, and in some instances prices for bank bond insurance rose sharply in the same period (see Charts 1.4 and 1.5).

Loans sold to own special purpose vehicles

Credit risk is spread among more investors when mortgages are securitised. Many banks were nevertheless heavily affected by the problems with subprime mortgages, as they had resold bad mortgages to special purpose vehicles (SPVs) they had set up themselves.

The SPVs obtained funding by issuing securities with these loans as collateral. These securities were then bought by, for example, other SPVs which in turn issued new securities with the original securities as collateral. Hence, the original mortgages could be packaged with other securities and resold as new securities several times. Banks often bought the most risky securities themselves since finding interested external investors for these papers often proved difficult.

Some of the mortgage-backed securities were also bought by a third type of SPV the banks set up, so-called structured investment vehicles (SIVs). These SIVs financed purchases of long-term bonds with a fairly high interest rate through the sale of short-term paper with a lower interest rate. These SIVs achieved favourable conditions on their funding, since the bonds they owned usually had a high credit rating, and because liquidity was secured

2 Financial Stability Report, April 2008.

through credit lines to the bank that had set up the SIVs in the first place. Due to shortcomings in the capital adequacy framework, banks were not required to set aside capital for these lines of credit as long as they were not drawn upon.

Because of the problems in the housing market, investors lost confidence in the securities owned by the investment firms, and became less willing to invest in the securities they issued. This created liquidity problems for the investment firms which made them draw upon their lines of credit to the bank. To avoid extensive fire sales of the investment firms' assets, banks brought the investment firm back onto their own balance sheet. Thus the problems spread from the SPVs to the banks that had set them up.

Shortcomings in credit rating system

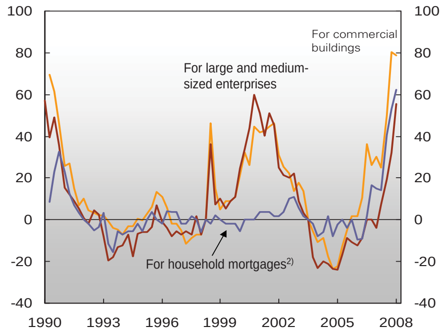
The aim of high earnings has been pursued at the expense of credit ratings. Some lending institutions based their business on reselling mortgages to large banks to be used as collateral for securities. A large share of subprime loans were in addition intermediated by brokers operating on a commission basis. The origination and distribution of loans reduced incentives for brokers to thoroughly assess credit risk to avoid losses. The rating agencies probably also have insufficient experience in rating complex mortgage securities.

Some US companies have specialised in guaranteeing the timely repayment of bond principal and interest. These monoline insurers have been given top ratings by the rating agencies but have in the wake of the turmoil been at risk of being downgraded. Poorer ratings reflect reduced confidence in the ability of these companies to cover future insurance claims. Any downgrading may lead to a further fall in market prices for bonds as the quality of the insurance would be considered poorer. At the beginning of the year, the companies had insured bonds worth about USD 2.4 trillion. Share prices for the two largest insurers have fallen markedly over the past year (see Chart 1.7).

Chart 1.7 Share prices for the biggest bond insurers. USD. 1 Jan 07 – 29 May 08

Source: Bloomberg

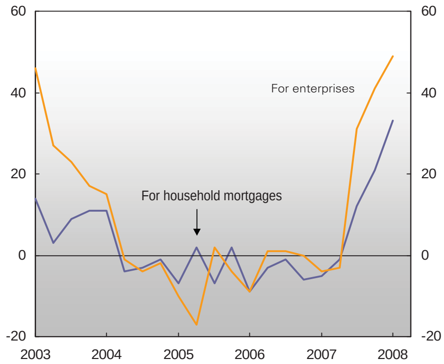
Chart 1.8 Surveys on bank lending practices. US. Net share of banks that have tightened their credit standards.[1] Per cent. Quarterly figures. 90 Q1 – 08 Q1



[1] Difference between the share of banks that have tightened and the share of banks that have eased their credit standards.
[2] Up to and including 06 Q1, the figures apply to all household mortgages. Thereafter, the figures apply to prime mortgages.

Source: US Federal Reserve

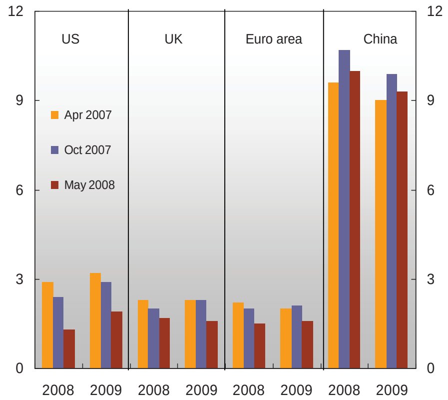
Chart 1.9 Surveys on bank lending practices. Euro area. Net share of banks that will tighten their credit standards.[1] Per cent. Quarterly figures. 03 Q1 – 08 Q1



[1] Difference between the share of banks that will tighten and the share of banks that will ease their credit standards.

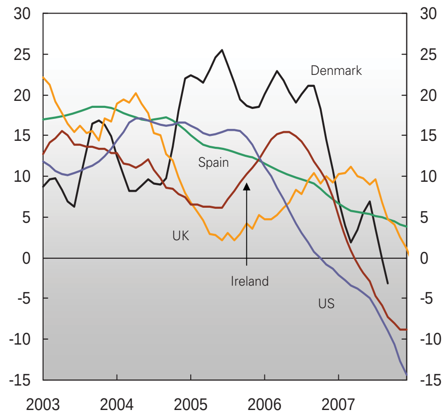
Source: European Central Bank

Chart 1.10 GDP growth. Forecasts for 2008 at different points in time. Increase on previous year in per cent.



Source: Consensus Economics

Chart 1.11 House prices in US and Europe. 12-month rise. Per cent. Monthly figures. Apr 03 – May 08



Source: Reuters EcoWin

Weaker growth outlook

It has become more expensive for banks and enterprises to raise loans by issuing securities. Banks have to compensate for higher borrowing costs through higher rates on lending to enterprises and households. Surveys conducted in the US, the euro area and the UK indicate that banks have tightened credit standards (see Charts 1.8 and 1.9). Profitable projects may thus be postponed because enterprises are not able to obtain funding.

There are divergent trends in the global economy, but there are prospects for lower economic growth (see Chart 1.10) Housing markets have cooled in the US and a number of other countries (see Chart 1.11). The rise in energy and food prices is another contributing factor. Reduced demand from the US and Europe will probably contribute to lower growth in a number of emerging market economies as well. On the other hand, higher consumption and higher investment in, for example, China may have a curbing effect on any decline in global economic growth in the years ahead.

2 Norwegian financial institutions

2.1 Banks

Norwegian banks have been affected by the turmoil in global markets through increased funding costs and losses on securities carried at market value. In addition, the mortgage company Eksportfinans ASA has had to raise new equity as a result of unrealised losses on bonds in its liquidity portfolio.

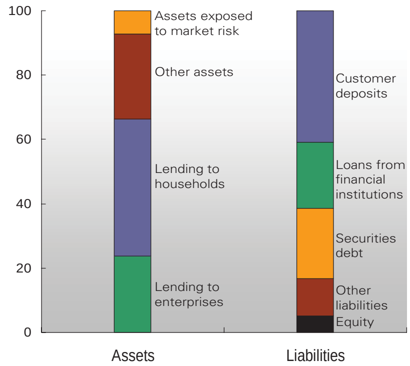
Chart 2.1 shows banks' assets and liabilities. The turmoil in credit and money markets is affecting banks' liabilities, around 40% of which are securities debt and deposits from financial institutions. The turmoil is also affecting banks' assets, around 7% of which are exposed to market fluctuations. Loans to Norwegian households and enterprises account for around two-thirds of banks' assets, so developments in domestic credit risk are of key importance to banks' earnings and financial stability.

Higher funding costs

Deposits from customers are regarded as a stable form of funding and account for the largest share of Norwegian banks' funding (see Chart 2.2). This share has decreased slightly over the last decade. As long as Norwegian banks manage to maintain a high deposit-to-loan ratio, they will have limited exposure to turbulence in money and credit markets.

Non-deposit funding (market funding) has increased as a share of gross lending over the last decade, but fell slightly in the second half of 2007. A higher proportion of market funding makes banks more exposed to turbulence in money and credit markets. Market funding in foreign currency has increased and now accounts for more than half of total market funding.

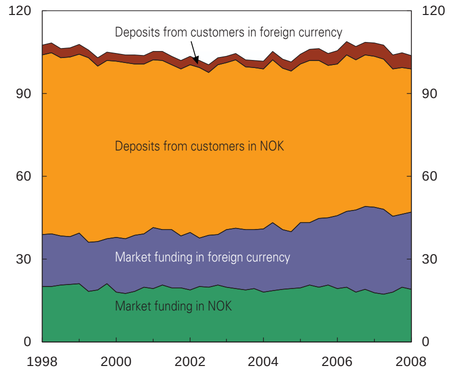
Chart 2.1 Banks'[1] assets and liabilities. Per cent. 31 March 2008



[1] All banks in Norway. Norwegian banks' foreign subsidiaries and branches abroad are not included in the statistical basis

Sources: Statistics Norway and Norges Bank

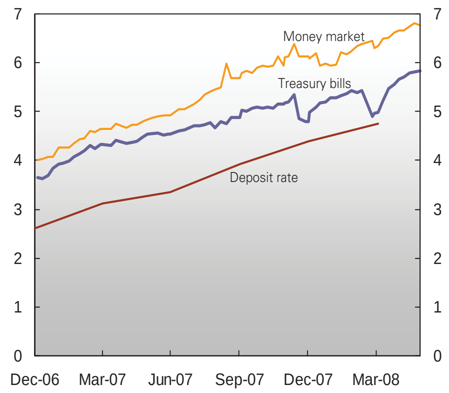
Chart 2.2 Selected funding sources for Norwegian banks[1]. Percentage of gross lending. Quarterly figures. 98 Q1 – 08 Q1



[1] All banks except branches and subsidiaries of foreign banks in Norway

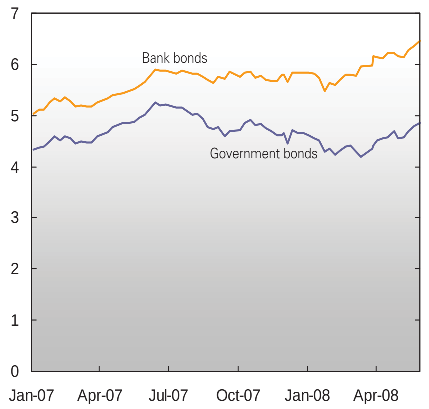
Source: Norges Bank

Chart 2.3 3-month money market (NIBOR) and Treasury bill rates. Weekly figures. Average deposit rate of all banks in Norway. Quarterly figures. 3 Jan 07 – 28 May 08



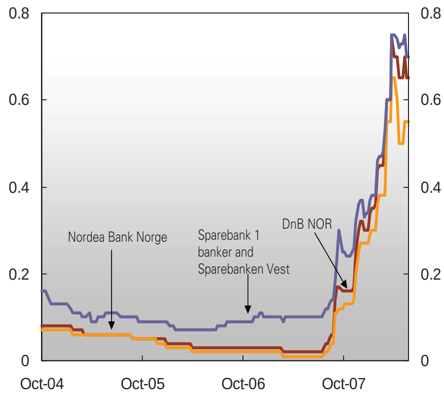
Sources: Norges Bank and Statistics Norway

Chart 2.4 5-year yields on Norwegian government and bank bonds. Weekly figures. 3 Jan 07 – 28 May 08



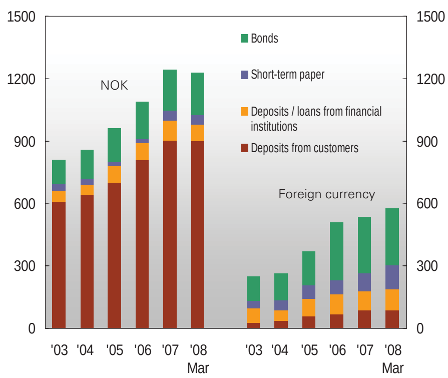
Sources: Norges Bank, Reuters Ecowin and DnB NOR Markets

Chart 2.5 Indicative spreads between the interest rate on 5-year bank bonds and 5-year interest rate swap agreements. Selected banks. Weekly figures. Percentage points. 6 Oct 04 – 28 May 08



Source: DnB NOR Markets

Chart 2.6 Selected funding sources for Norwegian banks[1)]. In billions of NOK. Year-end 2003 – 2007 and March 2008



[1)] All banks except branches and subsidiaries of foreign banks in Norway

Source: Norges Bank

Market funding can be both more expensive and more sensitive to changes in market conditions than customer deposits. Norwegian banks have experienced this during the turmoil since autumn 2007. The spread between yields on Treasury bills and the rates banks pay for borrowing in money markets has widened considerably (see Chart 2.3).

Long-term funding has also grown more expensive since autumn 2007. The spread between yields on government bonds and the rates banks pay for borrowing in bond markets has widened markedly (see Chart 2.4). Banks largely extend long-term loans at floating rates, so they also prefer floating rates on long-term borrowing. When banks issue bonds at fixed rates, they convert the interest payments to floating money market rates using interest rate swaps. The rise in money market rates has therefore made long-term funding more costly.

The mark-up that banks pay above the floating money market rates has also increased. For all of the largest banks in Norway, the five-year bank bond yield has risen substantially more than the five-year fixed swap rate (see Chart 2.5).

The market turmoil has also had an indirect effect on deposit rates. Higher prices for market funding fuel competition for deposits, thereby pushing up deposit rates. Deposit rates have risen more than yields on Treasury bills (see Chart 2.3).

The overall effect of these rate increases on banks' funding costs depends on how important the different sources of funding are, and how long it takes for the rate increases to have their full impact on banks' funding costs. The bond market has gradually become a more important source of funding for Norwegian banks (see Charts 2.6 and 2.7). A growing proportion of residential mortgages are being funded through covered bonds issued by mortgage companies[1]. Since summer 2007, Norwegian banks' mortgage companies have issued covered bonds worth

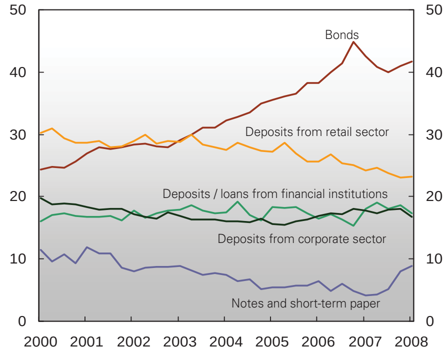
1 For more detail, see box "Covered bonds" in *Financial Stability* 2/2007.

NOK 115bn. 73% of these bonds were issued in foreign currency. Yields are lower on covered bonds than on bank bonds. However, covered bond yields have risen as a result of the market turmoil. The decrease in bond funding in 2007 was probably related to the market turmoil which made it harder and more expensive to procure long-term funding. This has put a damper on banks' plans for new issues.

Short-term market funding as a share of total debt increased slightly in the second half of 2007 (see Chart 2.8). 55% of Norwegian banks' market funding matures within a year. A higher share of short-term market funding is making banks more sensitive to the turmoil in money and credit markets. Loans in the markets that mature during periods of financial turbulence need to be replaced with new market loans. During the financial turmoil, these new loans have had a higher price and often a shorter maturity than the loans they replace. Chart 2.9 shows the proportions of assets and market funding maturing within a year for all Norwegian banks. The banks to the left of the diagonal have more market funding than assets maturing in the next year. A few small banks lie well to the left of the diagonal. These banks will have relatively large funding requirements in the coming year, making them more exposed to the market turmoil. Most banks lie to the right of the diagonal. Taken together, these banks do not have a net funding requirement in the market in the coming year, assuming no new lending. In isolation, this indicator suggests that most banks have good short-term liquidity management.

Retail customer deposits have grown less than gross lending in recent years (see Chart 2.7). The proportion of corporate deposits has been more stable, as enterprises' solid results over a number of years have resulted in surplus liquidity. If enterprises' results and liquidity deteriorate, the proportion of corporate deposits may fall. Customer deposits as a proportion of lending to customers fell at small banks in the first quarter of 2008 (see Chart 2.10). The same applies to DnB NOR. However, there was an increase in the deposit-to-loan ratio at medium-sized banks. The transfer of mortgages to mortgage companies is pushing up deposit-to-loan ratios at DnB NOR and some medium-sized banks.

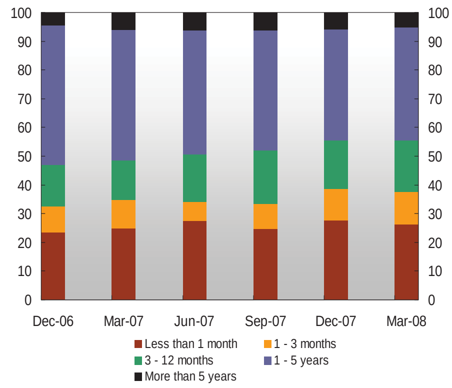
Chart 2.7 Norwegian banks'[1] and mortgage companies' funding sources. Percentage of gross lending. Quarterly figures. 00 Q1 – 08 Q1



[1] All banks except branches and subsidiaries of foreign banks in Norway

Source: Norges Bank

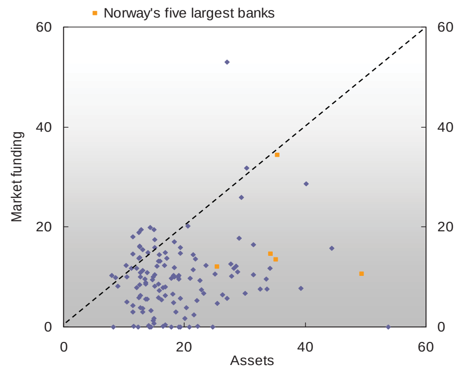
Chart 2.8 Norwegian banks'[1] market funding by maturity. Per cent. 06 Q4 – 08 Q1



[1] All banks except branches and subsidiaries of foreign banks in Norway

Source: Norges Bank

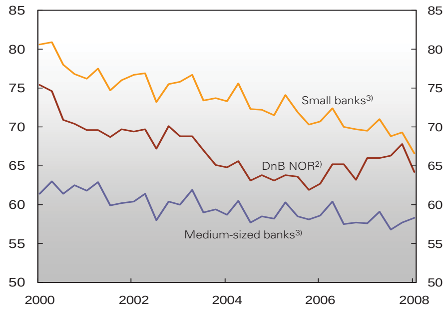
Chart 2.9 Norwegian banks'[1] assets and market funding with maturity of less than 12 months. Per cent of total assets. Mar 2008



[1] All banks except branches and subsidiaries of foreign banks in Norway

Source: Norges Bank

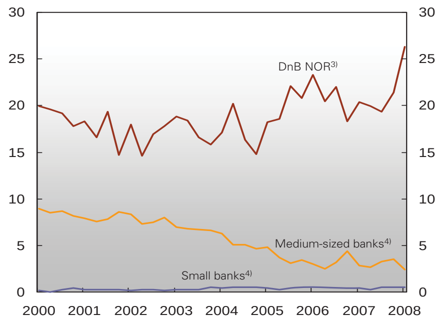
Chart 2.10 Norwegian banks'[1)] share of deposits. Deposits from customers as a percentage of lending to customers. Quarterly figures. 00 Q1 – 08 Q1



[1)] All banks except branches and subsidiaries of foreign banks in Norway
[2)] DnB NOR Bank (excluding branches abroad) and Nordlandsbanken
[3)] The dividing line between small and medium-sized banks is NOK 10bn (measured by assets) at end-2006

Source: Norges Bank

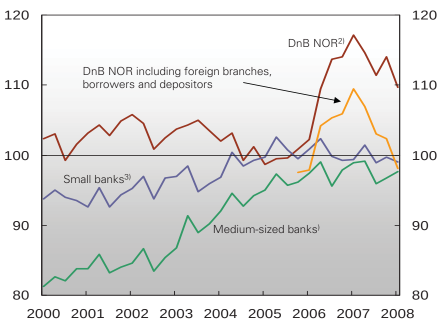
Chart 2.11 Norwegian banks'[1)] short-term foreign debt[2)]. Per cent of gross lending. Quarterly figures. 00 Q1 – 08 Q1



[1)] All banks except branches and subsidiaries of foreign banks in Norway
[2)] Short-term paper, deposits and loans from other financial institutions
[3)] DnB NOR Bank (excluding branches abroad) and Nordlandsbanken
[4)] The dividing line between small and medium-sized banks is NOK 10bn (measured by assets) at end-2006

Source: Norges Bank

Chart 2.12 Norwegian banks'[1)] liquidity indicator (ratio of stable funding sources to illiquid assets). Per cent. Quarterly figures. 00 Q1 – 08 Q1



[1)] All banks except branches and subsidiaries of foreign banks in Norway
[2)] DnB NOR Bank (excluding branches abroad) and Nordlandsbanken
[3)] The dividing line between small and medium-sized banks is NOK 10bn (measured by assets) at end-2006

Source: Norges Bank

The level of short-term foreign funding has decreased in recent years at medium-sized banks (see Chart 2.11). With the exception of DnB NOR, short-term foreign debt accounts for a small share of Norwegian banks' funding. The proportion of short-term foreign debt at DnB NOR increased sharply in the first quarter of 2008. Banks seek to neutralise foreign exchange risk in their foreign borrowing using currency derivatives.

The liquidity indicator[2] shows that there is still a favourable balance between stable funding sources and illiquid assets (see Chart 2.12).

Each year, Kredittilsynet (Financial Supervisory Authority of Norway) and Norges Bank conduct a survey of the largest Norwegian banks' counterparty exposures. The most recent survey was based on figures at 31 March 2008. Few of the exposures were so large that banks' financial strength would be seriously compromised if a major counterparty could not meet its obligations. The greater spread between money market rates and yields on Treasury bills since autumn 2007 may be a sign that banks generally believe counterparty risk to be higher than before.

Norges Bank has launched a regular survey of banks' liquidity position. Banks generally reported a significant deterioration in the supply of funding in March 2008, but a slight improvement in April 2008. Funding beyond one year has become particularly expensive and hard to find. This has made it more challenging for some banks to remain within their internal limits for long-term funding.

2 The liquidity indicator is calculated as the ratio of stable funding sources to illiquid assets. An increase in this ratio indicates a lower risk of liquidity problems. Deposits from households, non-financial enterprises and municipalities, bonds, subordinated loan capital and equity are regarded as stable funding. Illiquid assets include gross lending to households, non-financial enterprises and municipalities, other claims, assets acquired through recovery of claims, and fixed assets. Off-balance sheet items, such as drawing facilities and unused lines of credit, are not included.

Low lending margins

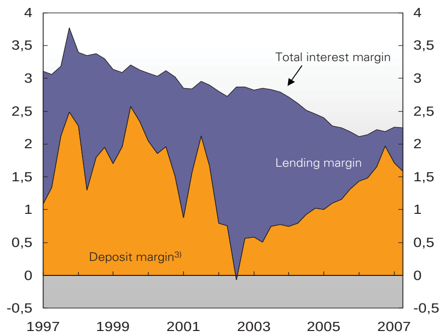
Banks' total interest margin[3] has stabilised in the past year (see Chart 2.13). Margins on loans to households and non-financial enterprises increased during 2007 Q4 and 2008 Q1 (see Chart 2.14), but are still low from a historical perspective. Analyses of banks' lending rates on loans to non-financial enterprises may suggest that lending margins need to be increased further to cover the rise in funding costs and other costs related to lending.

The higher price of market funding may explain the decrease in the deposit margin. Higher prices for market funding are fuelling competition for deposits, thereby pushing up deposit rates.

Continued satisfactory earnings and solid financial strength

Banks' total earnings before tax fell slightly relative to total assets from 2006 to 2007 (see Chart 2.15). Earnings fell further in the first quarter of 2008. Losses on Norwegian banks' bond portfolios during the quarter led to a sharp drop in other operating income. These losses were due to higher credit premiums on corporate bonds. Losses on securities portfolios also led to heavy losses in the insurance arms of financial conglomerates. Norwegian banks have relatively few assets directly exposed to market fluctuations on their own books. Bond portfolios held as a reserve can, in principle, be sold if it is hard to borrow in the markets. It is primarily this portfolio that has dropped in value. Banks' total holdings of bonds, short-term paper and equities held as current assets amounted to 5.9%, 0.6% and 0.6% respectively of their total assets.

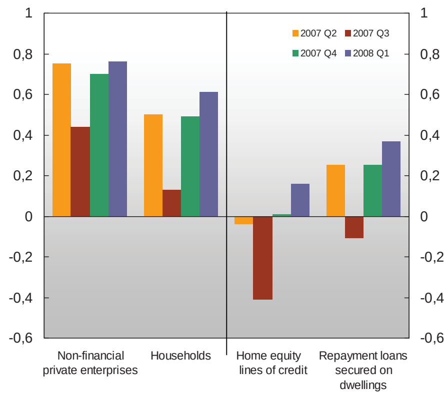
Chart 2.13 Banks'[1)] total interest margin divided into deposit and lending margin[2)]. Percentage points. End of quarter. 97 Q4 – 08 Q1



[1)] All banks in Norway
[2)] Deposit and lending margins are measured against 3-month money market rates

Source: Statistics Norway

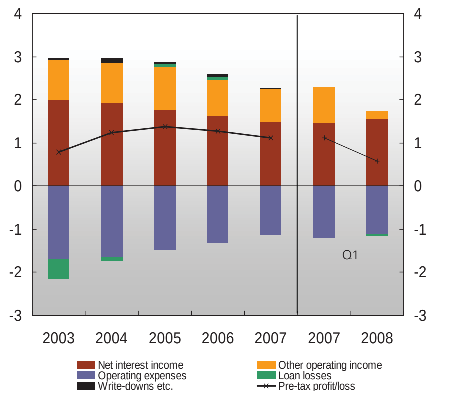
Chart 2.14 Banks'[1)] lending margins. Percentage points. 07 Q2 – 08 Q1



[1)] All banks in Norway

Sources: Statistics Norway and Norges Bank

Chart 2.15 Banks'[1)] profit/loss as a percentage of average total assets. Annual figures 2003 – 2007. 07 Q1 and 08 Q1

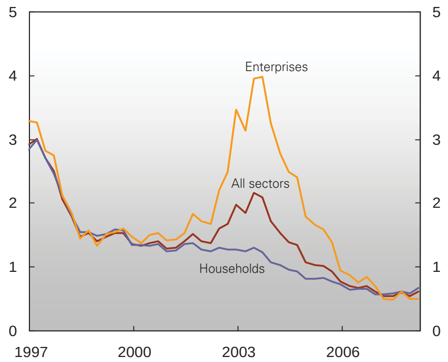


[1)] All banks excluding branches of foreign banks in Norway

Source: Norges Bank

3 The interest margin is defined as the average lending rate minus the average deposit rate. The interest margin shows what banks earn from lending when loans are financed by deposits. The three-month effective money market rate (NIBOR) is used to divide the interest margin into a lending margin and a deposit margin. The lending margin is defined as the lending rate minus the money market rate, whereas the deposit margin is the money market rate minus the deposit rate. The lending rate in the statistics is annualised, but does not include arrangement fees and instalment charges (commission on lines of credit are included). The lending rate is therefore not entirely an effective rate. As a result, the estimated lending margin and total interest margin are somewhat underestimated.

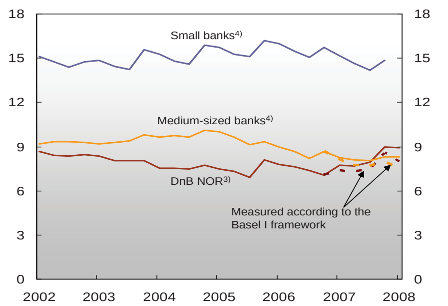
Chart 2.16 Banks'[1)] gross stock of non-performing loans. Percentage of gross lending to sector. Quarterly figures. 97 Q1 – 08 Q1



[1)] All banks in Norway

Source: Norges Bank

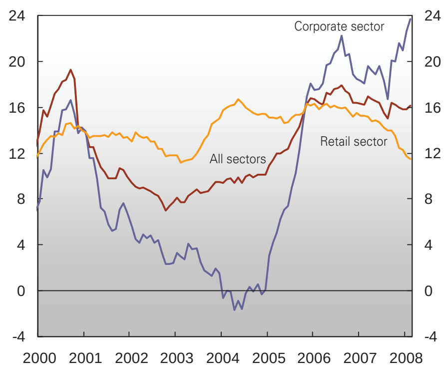
Chart 2.17 Banks'[1)] Tier 1 capital ratio[2)]. Per cent. Quarterly figures. 02 Q1 – 08 Q1



[1)] All banks excluding branches of foreign banks in Norway
[2)] In 2007 Q1 eight banks reported according to Basel II. As from 2008 Q1 all banks are required to report according to Basel II. The 2008 Q1 figures are based on official first-quarter reports
[3)] DnB NOR Bank (excluding branches abroad) and Nordlandsbanken
[4)] The dividing line between small and medium-sized banks is NOK 10bn (measured by assets) at end-2006

Source: Norges Bank and Kredittilsynet

Chart 2.18 Growth in banks' and mortgage companies'[1)] lending. 12-month growth. Per cent. Monthly figures. Jan 00 – Apr 08



[1)] All banks and mortgage companies in Norway

Source: Norges Bank

The price of funding has increased, but this had little impact on banks' net interest income in 2007 and the first quarter of 2008 because it is taking time for the increase to fully feed through to banks' interest expenses. Increased funding costs have to a large extent been passed on to borrowers through higher lending rates.

Loan losses are still very low. Favourable developments in household and corporate finances have led to a marked drop in non-performing loans as a share of total lending to municipalities, non-financial institutions and households since the second quarter of 2003. The share is very low for both enterprises and households (see Chart 2.16).

The financial strength of Norwegian banks is solid. The capital adequacy ratio fell slightly at both DnB NOR and medium-sized banks in the first quarter of 2008 (see Chart 2.17). In isolation, the high lending growth of recent years has eroded capital adequacy. The transition to new capital adequacy rules in 2007 has led to lower risk weights for the bulk of banks' lending, which is helping to underpin capital adequacy.

Return on equity for the largest Norwegian banks is somewhat lower than for other Nordic financial conglomerates (see Annex 3, Table 7). The turmoil in money and credit markets appears to have put a slight damper on analysts' earnings expectations. With the exception of Sparebanken Vest, expectations for 2008 earnings at medium-sized savings banks have been revised down. The same applies to DnB NOR. This may be why bank shares have underperformed the benchmark index since the beginning of the year.

Continued strong lending growth

Banks' and mortgage companies' lending growth has been high for several years (see Chart 2.18). This strong lending growth means that the potential for future loan losses is increasing.

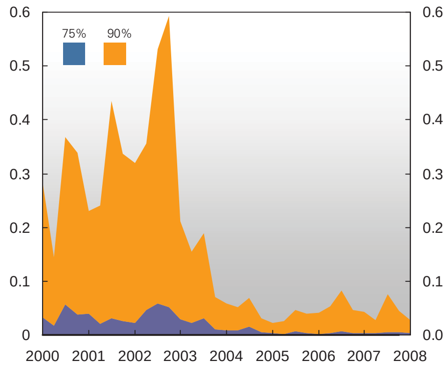
Loans to the retail market account for 54% of combined bank and mortgage company lending to households, non-financial enterprises and municipalities. 91% of these loans are mortgage loans (including home equity lines of credit). Experience shows that the risk of default on mortgage loans is low. A high proportion of mortgage loans means that the value of banks' collateral will vary with fluctuations in house prices. Around 90% of bank loans secured on residential property have an original loan-to-value ratio of no more than 80%. However, this figure covers only banks that report capital adequacy using the standardised method under the Basel II rules. These banks have a combined market share of 28% based on total assets.

Bank and mortgage company lending to the corporate market is growing rapidly. The fastest growth is to the construction, utilities, mining, manufacturing and oil and gas sectors. Property management and commercial services account for the largest share of loans from banks and mortgage companies. These loans accounted for 19% of banks' and mortgage companies' total lending at the end of the first quarter of 2008. The figure is higher for large banks than for small banks.

In Norges Bank's latest *Survey of Bank Lending* (see box on page 52), banks reported a slight tightening of credit standards for loans to non-financial enterprises and a marginal tightening for loans to households in the first quarter of 2008. The tightening of credit standards for enterprises was due to changes in the macroeconomic outlook, sector-specific factors, banks' risk appetite and the funding situation. Banks expect a further tightening of credit standards for non-financial enterprises and a marginal tightening for households in the second quarter.

The risk of individual banks running into solvency and/or liquidity problems (probability of failure) has been estimated on the basis of banks' accounts (see box on following page). The financial turmoil has only slightly increased the estimated failure probability for the majority of Norwegian banks (see Chart 2.19). At the end of 2007, the failure probability for 90% of banks was below 0.02%. However, a few banks had a high and rising failure probability. These were banks with a low capital adequacy ratio, a low liquidity indicator, high-risk loan portfolios and/or a low return on assets.

Chart 2.19 Probabilities of bank failures[1]. 75 and 90 per cent percentiles.[2] Quarterly figures. 00 Q1 – 08 Q1



[1] All banks excluding branches of foreign banks in Norway
[2] 75 (90) per cent of the banks are within the 75 (90) percentile

Source: Norges Bank

Estimating the probability of solvency or liquidity problems at banks

We have estimated a model that attempts to explain why banks run into solvency or liquidity problems (see Norges Bank Working Paper 2008/2 for a more detailed presentation). A bank is defined as failed if, as a result of solvency or liquidity problems, its capital adequacy ratio falls below the statutory minimum of 8% or it is liquidated or taken over by another bank. The model has been estimated on the basis of quarterly data from the third quarter of 2000 to the third quarter of 2005. In the model, a lower capital adequacy ratio increases the probability of a bank failing. A low return on assets and a low liquidity indicator (see footnote on page 19) also result in an increased probability of failure. As historical losses on residential mortgage loans are very low, the probability of failure rises if mortgage lending falls as a share of gross lending. The model also includes an indicator to capture the concentration risk in the loan portfolio and an indicator for expected loan losses based on the composition of the loan portfolio and models for historical losses. A high concentration risk and high expected loan losses increase the probability of failure. The model has strong explanatory power during the estimation period. The model generally also gives strong and accurate early warning signals when tested on bank failures during the crisis of 1990-1993. The model is defined as follows:

Probability of failure = F(9.55 – 0.93 capital adequacy ratio – (50.5 return on assets – 0.059 share of mortgage lending – 0.094 liquidity indicator + 1908.3 expected loss indicator + 8.4 concentration risk indicator)

2.2 Other financial institutions

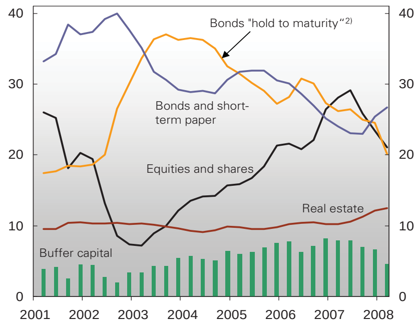
Mortgage companies' first-quarter results were substantially weaker in 2008 than in 2007. Relative to total assets, operating profit fell by 0.21 percentage point to 0.03%, due to Eksportfinans ASA reporting negative results for the first quarter of 2008. As a result of losses on bonds in its liquidity portfolio, Eksportfinans raised new equity of NOK 1.2bn in January 2008. In addition, its largest private-sector shareholders undertook to cover further losses in the liquidity portfolio. Excluding Eksportfinans, mortgage companies' earnings were largely unchanged from the first quarter of 2007.

Finance companies are a diverse group serving a number of different markets. At the end of the first quarter, year-on-year growth in their lending was 32.1%. Unsecured consumer loans have a high credit risk. Companies charge consumers for this credit risk through high effective interest rates. Finance companies' first-quarter results were solid. Recorded loan losses were slightly higher than in 2007. Non-performing loans have increased by 28% over the past year, which suggests that loan losses may be set to increase.

As a result of the turmoil in global financial markets in the first quarter of 2008, life insurance companies reported negative value-adjusted results for the first time since 2002. The value-adjusted loss for the quarter was NOK 15.3bn, equivalent to 8.3% of total assets, and was due primarily to a drop in equity prices. As a result of this loss, buffer capital (the sum of surplus Tier 1 capital, securities adjustment reserve, supplementary provisions with an upper limit of one year, and undistributed profits) fell from 6.7% of total assets at the end of 2007 to 4.6% at the end of the first quarter.

Life insurers are more exposed to market risk than banks, since a far higher share of their total assets is invested in equities and bonds. At the end of the first quarter, bonds and short-term paper accounted for 47% of total assets (see Chart 2.20). The equity portion fell from 23% at the end of 2007 to 21% at the end of the first quarter due to the downturn in the equity market and sales of equities. Property accounted for 13% of total assets. The equity market has rebounded since the first quarter, which would suggest a substantial improvement in life insurers' results in the second quarter.

Chart 2.20 Life insurance companies' buffer capital[1)] and asset mix. Per cent of total assets. Quarterly figures. 01 Q1 – 08 Q1



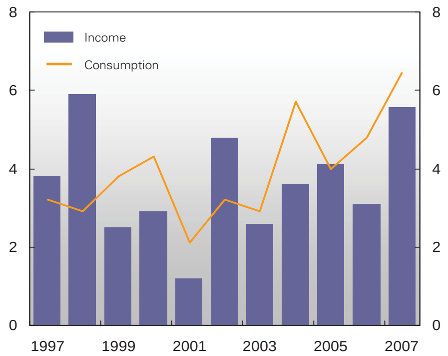
[1)] Buffer capital is defined as the sum of the securities adjustment reserve, supplementary provisions with an upward limit of one year, and surplus of Tier 1 capital
[2)] From 2007 other bonds for permanent investment are also included

Source: Kredittilsynet

3 The Norwegian macro-financial environment

3.1 The Norwegian economy and securities markets

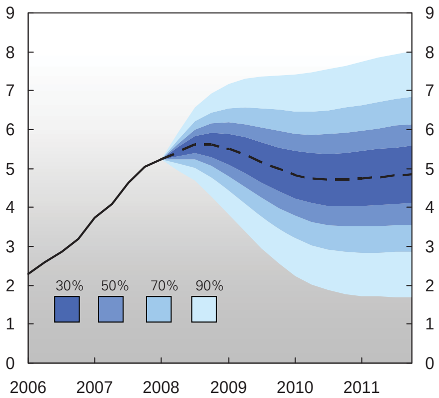
Chart 3.1 Household real disposable income[1] and consumption[2]. Annual growth. Per cent. 1997 – 2007



[1] Adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2007
[2] Includes consumption in non-profit organisations

Sources: Statistics Norway and Norges Bank

Chart 3.2 Projected key policy rate in the baseline scenario with fan chart. Per cent. Quarterly figures. 06 Q1 – 11 Q4



Source: Norges Bank

The Norwegian economy has experienced almost five years of strong growth, although growth in productivity declined in 2008 Q1. During the first part of this period, productivity growth in the business sector was strong. Over the past two years, increased labour force participation and high inward labour migration have facilitated continued strong growth. Actual output, however, has increased more rapidly than potential output, and capacity utilisation has now reached a high level.

Productivity growth in the business sector is slowing, and wage growth is high. Investment is traditionally high towards the end of an economic upturn. Capacity utilisation rises, and enterprises must invest to increase capacity. Total gross investment in the enterprise sector grew by more than 12% in 2007, according to the National Accounts.

Strong growth in household income has led to brisk growth in consumption and housing investment over a number of years (see Chart 3.1). Lower employment growth, higher net interest expenses and higher consumer price inflation will lead to slower growth in household real disposable income.

Monetary Policy Report 1/08, published on 13 March, stated that the outlook and balance of risks suggested that it would be appropriate to raise the key policy rate further. The uncertainty surrounding the interest rate forecast is shown in Chart 3.2. Norges Bank's key policy rate was raised from 5.25% to 5.5% on 23 April, and then remained unchanged at the key policy rate meeting on 28 May. The press release noted that the strategy in *Monetary Policy*

Report 1/08 is that the key policy rate should be in the interval 5-6% in the period to the publication of the next report on 25 June, unless the Norwegian economy was exposed to major shocks. Capacity utilisation in the Norwegian economy is expected to fall gradually in the period to 2011 (see Table 3.1, output gap).

Volatile Norwegian equity market

The prospect of weaker US growth and greater uncertainty about the scale of the problems in global money and credit markets led to a marked drop in equity prices on the Oslo Stock Exchange (OSE) in January (see Chart 3.3). The monthly return in January 2008 was the third weakest ever recorded on the OSE. The Federal Reserve's guarantee to support the acquisition of the investment bank Bear Stearns in March helped equity markets to rebound globally and in Norway. The rally was particularly strong in Norway. For the period as a whole, the OSE benchmark index has remained approximately unchanged since the previous report. The rise in oil prices has contributed to higher share prices for energy companies. Financials have long been underperforming the market, and the financials index has lagged behind the benchmark index since March.

Slightly higher implied volatility from equity options may imply that investors' uncertainty about future earnings has increased since the previous report. During the same period, expected 2008 earnings for companies included in the OSE benchmark index have been revised up by 5% (see Chart 3.19 in Section 3.3). These estimates suggest growth of more than 17% relative to corporate earnings in 2007.

Volatile equity prices and increased uncertainty have led to lower new issue activity in the Norwegian equity market. The total volume of new shares and primary capital certificates issued in the first four months of 2008 was just 13% of that in the same period last year. No new companies were listed on the OSE in the first four months of 2008, compared with 12 in the same period in 2007.

Table 3.1 Macroeconomic aggregates. Percentage change on previous year (unless otherwise stated)

	Projections Monetary Policy Report 1/08			
	2008	2009	2010	2011
Private consumption	3½	1¾	2¼	3
Public consumption	2¾	3¼		
Mainland gross investment	5¼	¾		
Traditional exports	5	1¼		
Mainland GDP	3½	2	2¼	2¾
Output gap, mainland Norway[1)]	2½	1¼	½	¼
LFS unemployment (rate)	2½	3	3¾	4
CPI-ATE[2)]	2¼	2¼	2½	2¾
Annual wage growth[3)]	6	5½	5	4¾

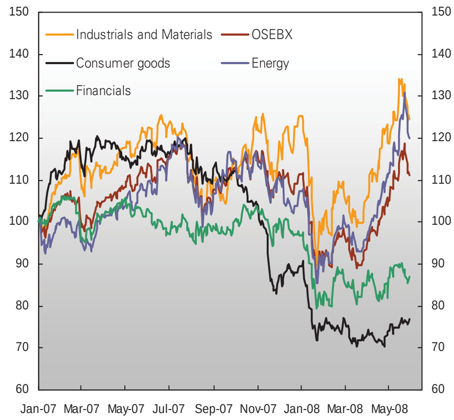
[1)] The output gap measures the percentage deviation between mainland GDP and projected potential GDP

[2)] CPI-ATE: CPI adjusted for tax changes and excluding energy products

[3)] Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations. The number for 2007 includes costs related to the introduction of mandatory occupational pensions

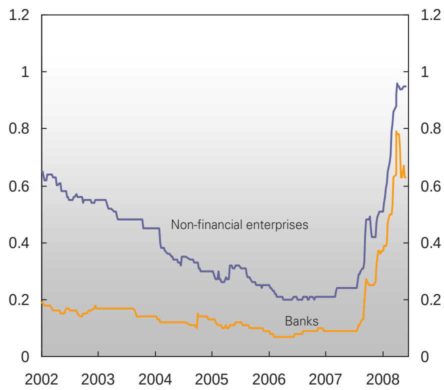
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements and Norges Bank

Chart 3.3 Equity indices, Oslo Stock Exchange. Daily figures. 1 Jan 07 – 29 May 08. 1 Jan 07=100.



Source: Reuters Ecowin

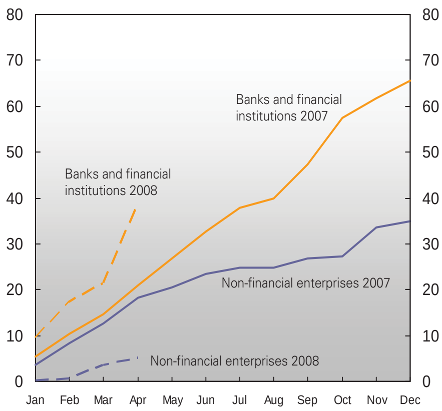
Chart 3.4 Risk premium[1] Norwegian bonds. 5- year maturity. Indicative price. Per cent. Weekly figures. 2 Jan 02 – 28 May 08



1) Distance to mid-swap

Source: DnB NOR Markets

Chart 3.5 Aggregated bond issues registered at Oslo Stock Exchange. Monthly figures. In billions of NOK



Source: Oslo Stock Exchange

Higher risk premium on private bonds

The risk premium for private issuers in the Norwegian bond market has increased markedly since summer 2007 (see Chart 3.4). Higher risk premiums make it more expensive for banks and enterprises to raise capital in the bond market. The increase has been particularly great for banks. The premium has increased further since the previous report. The higher risk premium probably reflects weaker liquidity in the Norwegian market and increased uncertainty due to the turmoil in global credit markets.

Enterprises issued far fewer bonds on the OSE in the first four months of 2008 than in the same period in 2007 (see Chart 3.5). New issue volumes are also low relative to previous years. At the same time, banks and mortgage companies have increased their bond issues. This may indicate that enterprises have raised loans in banks instead of the bond market.

A number of mortgage companies have issued covered bonds in the Norwegian market. In the period from June 2007 to May 2008, covered bonds worth a total of NOK 26bn were issued in the Norwegian market. Several mortgage companies have also issued covered bonds in other markets and currencies. Translated into NOK, the total volume of covered bonds issued since June 2007 is around NOK 115bn.

3.2 Households

Households' overall financial position is sound. At the end of 2007, households had total housing wealth and financial assets of more than NOK 6.5 trillion (see Chart 3.6). The value of dwellings and financial assets is almost four times higher than total household debt.

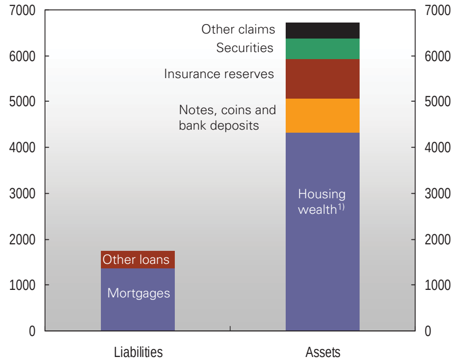
Strong growth in debt

Household debt has grown rapidly in recent years, but year-on-year growth has slowed in the past year (see Chart 3.7). Growth has been fuelled primarily by an earlier period of low interest rates, a favourable labour market and strong increases in house prices and income. As only a small part of the housing stock changes hands each year, movements in house prices in previous years will affect debt growth for a long period. Household debt may therefore continue to grow for many years even though house price inflation has slowed.

The average term of new mortgage loans has increased markedly over the past seven years. Interest-only loans have become more common. This is making it possible to service more debt with a given income and has probably contributed to the strong growth in household debt. Longer repayment periods and interest-only periods can serve as a buffer against leaner times. A number of households have already used up this buffer. Most households also pay an adjustable rate of interest on their loans.

Norges Bank's latest *Survey of Bank Lending* (see box on page 52) revealed that household demand for loans fell in 2008 Q1, and that banks anticipate a further decrease in demand in 2008 Q2. The survey also found that banks have tightened their credit standards for households. This may mean that growth in household debt will slow.

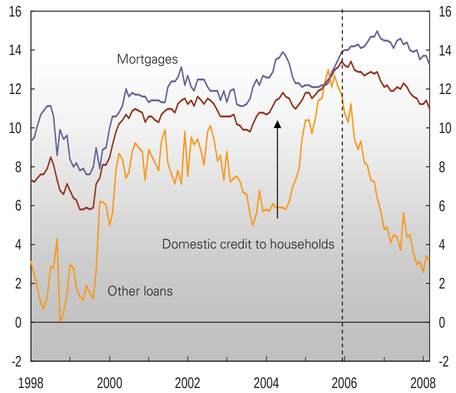
Chart 3.6 Household liabilities and assets In billions of NOK. 2007 Q4



1) Projections

Sources: Association of Norwegian Real Estate Agents, ECON Pöyry, Finn.no, Association of Real Estate Agency Firms, Statistics Norway and Norges Bank

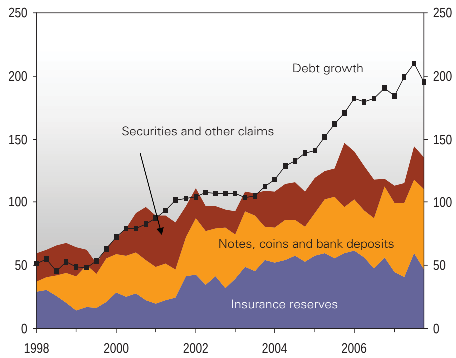
Chart 3.7 Credit to households. 12-month growth in percent. Monthly figures. Jan 98 – Mar 08[1]



1) Break in the series in December 2005

Source: Statistics Norway

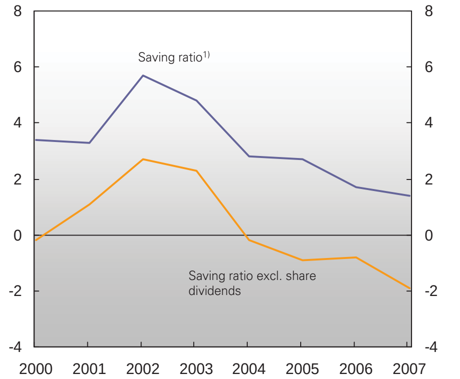
Chart 3.8 Household debt growth and investment in financial assets[1] by investment instrument. Sum last four quarters. In billions of NOK. Quarterly figures. 97 Q1 – 07 Q4



1) Investment in financial assets is adjusted for reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2007

Source: Statistics Norway

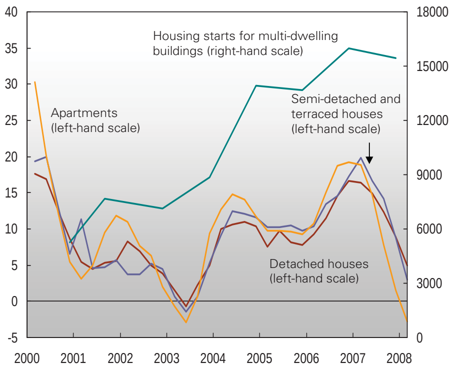
Chart 3.9 Household saving as a share of disposable income. Per cent. Annual figures. 2000 – 2007



1) Adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2007

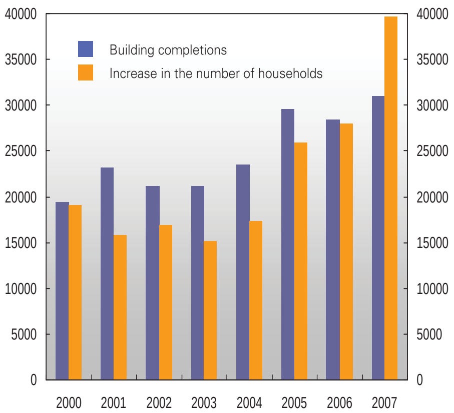
Sources: Statistics Norway and Norges Bank

Chart 3.10 House prices by type of dwelling. 4-quarter rise. Per cent. 00 Q1 – 08 Q1. Housing starts for multi-dwelling buildings. Number. Yearly figures. 2000 – 2007



Sources: Association of Norwegian Real Estate Agents, Association of Real Estate Agency Firms, ECON Pöyry, Finn.no and Statistics Norway

Chart 3.11 Building completions and increase in the number of households. Yearly figures. 2000 – 2007



Source: Statistics Norway

Low saving ratio

Since 2003, households have borrowed more than they have invested in financial assets[1] (see Chart 3.8). At the same time, household net fixed investment is high. The saving ratio (saving as a proportion of disposable income) has been in decline since 2002 (see Chart 3.9). The low level of saving means that households are only to a limited extent building up buffers against economic shocks.

Household financial wealth has become less liquid. Insurance reserves account for just over 35% of total household financial assets. These consist mainly of funds in group insurance schemes which are not available in the short and medium term. Excluding insurance reserves, household net financial assets have decreased since 2000.

Lower house price inflation

Higher interest rates and a high supply of existing homes have contributed to a sharp drop in house price inflation in the past year. The slowdown has been most marked for apartments (see Chart 3.10). In the period 1997-2002, apartment prices increased somewhat more than other types of housing. This higher rise in prices for apartments was probably a sign that the stock of this type of housing was insufficient to meet demand. This may be a reason why apartments have accounted for most of the increase in residential construction in recent years. Annual starts of apartments climbed from 5 000 in 2000 to more than 15 000 in 2007 (see Chart 3.10).

The share of the population typically interested in apartments (those aged 20-35 and 60-79) has fallen, but is set to rise again over the next ten years. Centralisation may also lead to greater demand for apartments instead of other housing types. Demand for apartments may therefore increase in the longer term.

1 Investment in financial assets has been adjusted for estimated reinvested dividends in the period 2000–2005 and redemptions/reductions of equity capital in 2006 and 2007.

Housing starts have been high in recent years. Population growth has also been strong. Over time, the supply of new housing must be high enough to meet demand for new housing resulting from population growth and housing losses. In 2007, the number of housing completions was lower than the increase in the number of households (see Chart 3.11). Housing starts have fallen markedly in the first few months of 2008, while population growth remains strong.

The turnover of existing homes remains high. The supply of existing homes grew strongly in 2007 and peaked at almost 18 500 in September. It has since fallen back but is still unusually high. The time taken to sell existing homes has increased markedly in the past year. The time taken to sell new dwellings in southeastern Norway has also increased considerably in recent years. The high stock of unsold homes can lead to lower house prices further ahead.

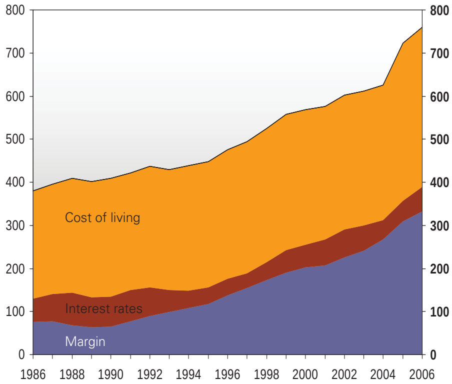
Few signs of payment problems in households

Higher household debt and interest burdens have so far not resulted in an increase in banks' loan losses. Non-performing bank loans were low at the end of 2008 Q1. Recent years have seen the establishment of housing cooperatives with low deposits, high joint debt and an initial interest-only period. As interest rates increase and the interest-only period comes to an end, this may lead to increased payment problems for households that have bought such dwellings. The number of petitions of forced sales of shares in housing cooperatives was higher in 2008 Q1 than in the same period in 2007. Banks' total lending to housing cooperatives with low deposits and high joint debt is low.

First-time homebuyers have a high debt burden

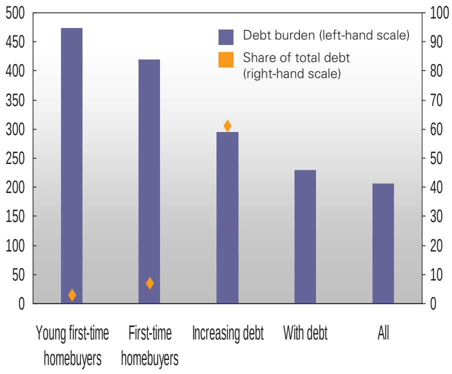
Households' financial margin (defined as income after tax less interest expenses and general living expenses as calculated by the National Institute for Consumer Research) has increased substantially over the past 20 years (see Chart 3.12). This is due partly to strong income growth during the period. The increase in general living expenses has been lower than income growth, with the result that a smaller share of income is needed to cover general living

Chart 3.12 Post-tax income excluding share dividends distributed by expense item and margin. Households excluding self-employed. In billions of 2006-NOK. 1986 – 2006



Sources: Statistics Norway, National Institute for Consumer Research and Norges Bank

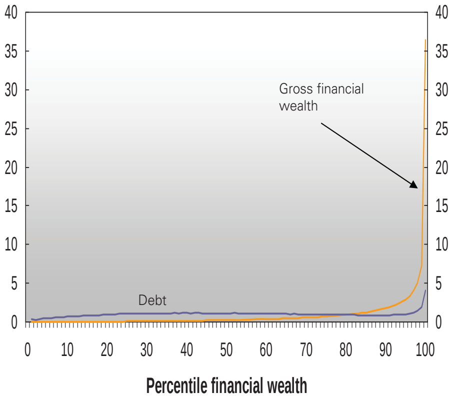
Chart 3.13 Debt burden[1)] in selected household groups at end-2006. Households excluding self-employed. Per cent



[1)] Debt as a percentage of disposable income adjusted for estimated redemption/reduction of equity capital

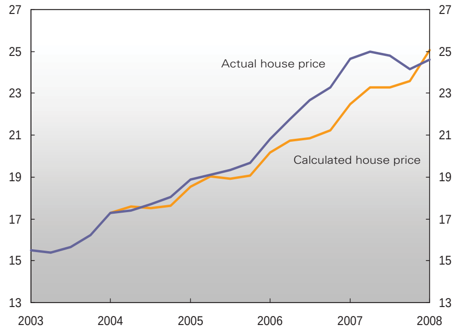
Sources: Statistics Norway and Norges Bank

Chart 3.14 Distribution of gross financial wealth and related debt at end-2006. Households excluding self-employed. Per cent



Sources: Statistics Norway and Norges Bank

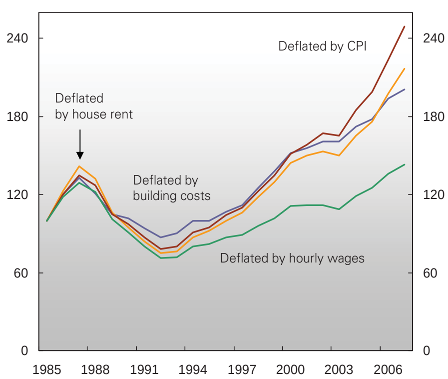
Chart 3.15 Actual and calculated[1)] house price. 1000 NOK/sq. m. 03 Q1 – 08 Q1



[1)] Calculated house price is calculated by estimating the house price model with data up to 2004 Q1 and simulating forward by using actual values for the explanatory variables and calculated values for house prices in the forecast period

Sources: Association of Norwegian Real Estate Agents, Association of Real Estate Agency Firms, FINN.no, Econ Pöyry and Norges Bank

Chart 3.16 Real house prices. Indices. 1985 = 100. Annual figures. 1985 – 2007



Sources: Association of Norwegian Real Estate Agents, Association of Real Estate Agency Firms, FINN.no, Econ Pöyry, Statistics Norway and Norges Bank

expenses. With lower interest rates, a smaller share of income is used to service debt, thereby increasing households' financial margin.

Debt has grown faster than disposable income for a number of years, and the household debt burden has therefore increased. Figures based on micro data at the end of 2006 reveal large variations in the size of the debt burden across different household groups (see Chart 3.13). The average debt burden for indebted households was just above 200% of disposable income at the end of 2006. First-time homebuyers, comprising 70 000 households, had the largest debt burden, an average of more than 400%[2]. These households accounted for 7% of total debt. First-time homebuyers aged 25-35 had an average debt burden of 473% of disposable income. Just below 30 000 households aged 25-35 were first-time homebuyers in 2006.

Financial assets can be used to service debt if income proves insufficient. However, most households do not have large buffers. Debt and assets are unevenly distributed across households. More than 35% of financial assets are owned by the 1% of households with the highest financial wealth (see Chart 3.14). Debt is more evenly distributed. The majority of financial assets are held by households with a low debt burden.

Outlook

Calculations based on a simple estimated model showed that house prices were probably slightly higher from the second half of 2006 to the first half of 2007 than developments in short-term interest rates, income, unemployment and residential construction in isolation would imply (see Chart 3.15). Falling house price inflation has meant that house prices at the end of 2008 Q1 were slightly lower than simple model-based calculations would imply. These calculations are only one indicator of house prices, and the results of such calculations must be interpreted with caution. Although house prices are now lower than

2 A rule of thumb is that households should not borrow more than three times their gross income, corresponding to a debt burden of between 400 and 500%.

simple model-based calculations would imply, changes in the macro-economic explanatory variables or household expectations may nevertheless lead to falling prices ahead.

Real house prices (deflated by consumer prices, building costs and rents) are historically high (see Chart 3.16). Deflated by hourly wages, the increase in house prices over the past ten years is more moderate, but the level is high. Model-based calculations and these indicators do not, therefore, provide a clear-cut picture of price levels.

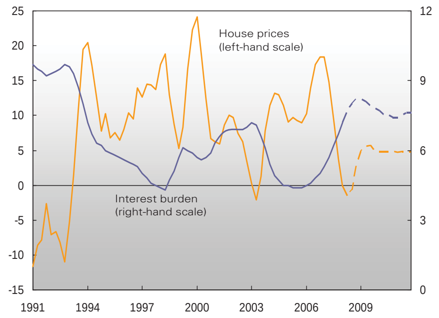
We expect the four-quarter rise in house prices to remain low over the next six months (see Chart 3.17). Over time, we assume that house prices will rise in line with growth in household income. However, the outlook for house prices is very uncertain.

The household debt burden is now historically high (see Chart 3.18). At the end of 2007, household debt was equivalent to almost 200% of disposable income (adjusted for returns on insurance reserves). Projections based on the baseline scenario in *Monetary Policy Report* 1/08 suggest that the debt burden could grow further in the next few years and reach a level of just over 220% at the end of 2011. At the same time, the rise in general living expenses has been slower than income growth over the past 15 years. The household debt burden is significantly lower than in the late 1980s if disposable income is adjusted for general living expenses. High debt growth and higher interest rates since mid-2005 have led to an increase in the household interest burden in recent years (see Chart 3.17). The interest burden is now roughly as high as at the beginning of 1994.

Overall assessment

Unemployment is unusually low, and further solid growth in household disposable income is expected. However, recent years' strong growth in household debt, an increase in interest-only loans, a low proportion of fixed-rate loans and low saving imply, in isolation, greater vulnerability to higher mortgage rates, tighter bank credit standards and loss of income. The debt burden is particularly high among first-time homebuyers, but these households account for a relatively small share of total debt.

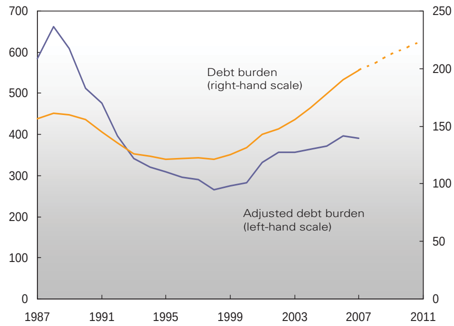
Chart 3.17 Four-quarter rise in house prices. Interest burden[1]. Per cent. Quarterly figures. 91 Q1 – 11 Q4[2]



[1] Interest expenses after tax as a percentage of liquid disposable income adjusted for estimated share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2011 plus interest expenses
[2] Projections for 2008 Q2 – 2011 Q4

Sources: Association of Norwegian Real Estate Agents, ECON Pöyry, Finn.no, Association of Real Estate Agency Firms, Statistics Norway and Norges Bank

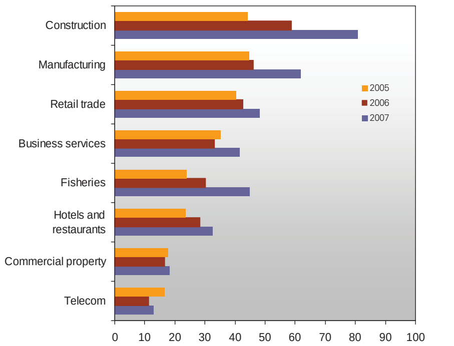
Chart 3.18 Debt burden[1] and debt burden adjusted for household general living expenses[2]. Annual figures. 1987 – 2011[3]



[1] Debt as a percentage of liquid disposable income adjusted for estimated reinvested share dividends for 2000 - 2005 and redemption/reduction of equity capital for 2006 – 2011
[2] Disposable income less general living expenses as calculated by the National Institute for Consumer Research (SIFO)
[3] Projections for 2008 – 2011

Sources: Statistics Norway, SIFO and Norges Bank

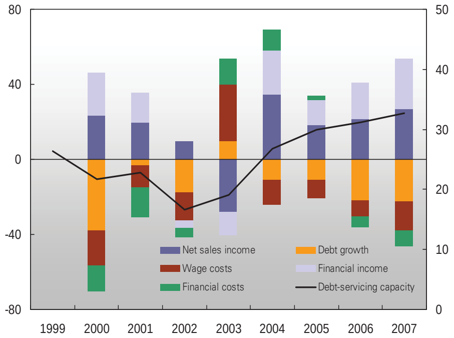
Chart 3.19 Debt-servicing capacity[1)] for different industries. Per cent. Yearly figures. 2005 – 2007[2)]



[1)] Ordinary results before tax, write-downs and depreciation as a percentage of bank debt and bonds. Non-financial firms, mainland Norway. Group-financed firms are not included.
[2)] Projections for 2007 are based on a sample of financial statements that were submitted early

Source: Norges Bank

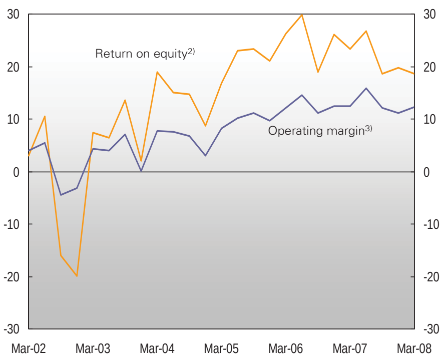
Chart 3.20 Debt-servicing capacity[1)]. Levels (right-hand scale) and contribution to relative changes (left-hand scale) from growth in debt, income and costs[2)]. Per cent. 1999 – 2007[3)]



[1)] See footnote 1, Chart 3.18
[2)] Net sales income is defined as sales income less the cost of goods sold, operating costs and change in inventories
[3)] Projections for 2007 are based on a sample of financial statements that were submitted early

Source: Norges Bank

Chart 3.21 Key ratios for non-financial firms listed on Oslo Stock Exchange[1)] Per cent. Quarterly figures. 2002 Q1 – 2008 Q1



[1)] Sample consisting of 171 listed firms. Projections for 2008 Q1 are based on a smaller sample (OBX index).
[2)] Ordinary results before tax as a percentage of book equity
[3)] Operating results as a percentage of sales

Sources: Statistics Norway and Norges Bank

3.3 Enterprises

Improved debt-servicing capacity

Enterprises have delivered solid results in recent years. Despite high debt growth, debt-servicing capacity in most industries has improved (see Chart 3.19). A sample of already submitted accounts for Norwegian limited companies for 2007 suggests that 2007 was a very profitable year. However, increased costs, in particular high wage growth and interest expenses, are beginning to put pressure on corporate results (see Chart 3.20). This makes enterprises dependent on further strong revenue growth if profitability is to be sustained.

Lower global economic growth may erode export companies' revenues in 2008. Enterprises that generate their revenue primarily in USD or compete with enterprises that incur their costs in USD, are particularly vulnerable if the USD remains weak. Favourable prices for Norwegian export goods and favourable markets for the engineering industry have helped to mitigate these challenges to date.

The turmoil in global credit markets has made it more expensive for enterprises to raise capital in the bond market (see Chart 3.4). Enterprises' borrowing costs for bank financing will gradually rise accordingly if the situation persists. Interest expenses amounted to 23% of corporate pre-tax results in 2006.

The return on equity for listed companies was slightly lower in 2007 than in 2006, declining in particular from 2007 Q2 (see Chart 3.21). The return on equity is still strong. Operating margins have not deteriorated. This means that corporate revenues have so far kept up with cost increases.

High credit growth

Corporate credit growth has been high since the second half of 2005, and especially high in property management and commercial services. In 2008, credit growth has increased in manufacturing, retailing and construction, but has levelled off in property management and commercial services (see Chart 3.22). Property management and manufacturing are the two largest borrower sectors and account for 43% and 10% respectively of total debt to credit institutions. According to Norges Bank's latest *Survey of Bank Lending*, banks experienced a weakening in the demand for new loans in the first quarter of 2008.

Solid enterprises

The equity ratio has remained high despite recent years' strong debt growth (see Chart 3.23), due to both strong results and injections of new equity. Retained earnings have risen since 2004 and are increasingly helping to underpin the equity ratio.

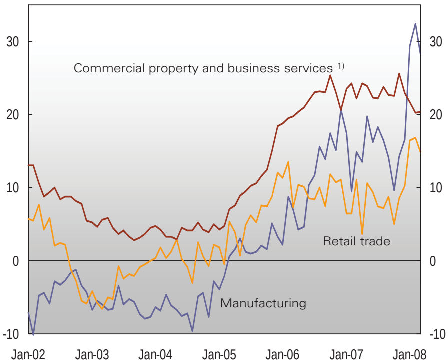
Reduced optimism in the commercial property sector

Commercial property companies' operations consist primarily of *renting* and *buying and selling* commercial property. Some companies engage in only one of the two. Rental companies are dependent on movements in rents, interest rates and owner costs (operating, maintenance and renovation costs). Companies involved in the purchase and sale of commercial property are also exposed to movements in property values.

Over the past three years, strong growth in the value of commercial property has resulted in strong sales revenues for many commercial property companies. Many property investors choose to gear their investments at a certain ratio to market price. This leads to debt growth when market values rise. High debt growth results in higher interest expenses, which need to be serviced by revenues. The value of office premises and other commercial property fluctuates considerably with economic activity. And over time, property companies are dependent on rental income and adding value through development. According to Norges Bank's latest *Survey of Bank Lending*, several banks have tightened their credit standards for new commercial property financing (see box on page 52).

The net yield on offices in Oslo, defined as net rental income as a percentage of market value, increased in the second half of 2007 and was again higher than the yield on long-term government bonds (see Chart 3.24). According to market operators, the net yield increased further by

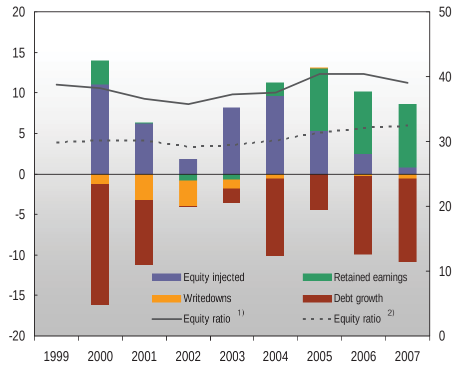
Chart 3.22 Credit to selected debt-holding industries from Norwegian financial institutions. 12-month growth. Per cent. Jan 04 – Mar 08



1) Includes financial services

Source: Statistics Norway

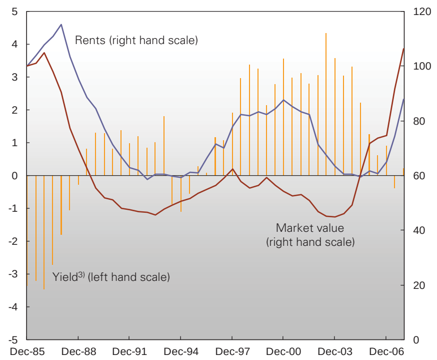
Chart 3.23 Equity ratio[1] (right-hand scale) and contribution to relative changes (left-hand scale) from debt growth, retained earnings, writedowns and equity injected. Per cent. 1999 – 2007



1) Non-financial firms. Mainland Norway
2) Only firms with bank debt included

Source: Norges Bank

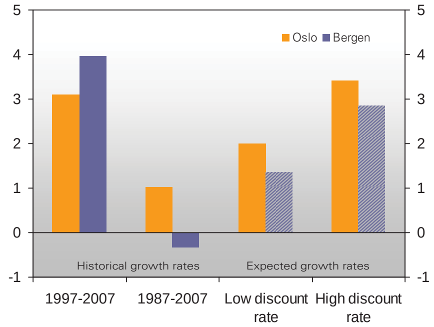
Chart 3.24 Real rents and market value of offices.[1] Real indices (1985=100). Yield.[2] Per cent. Half-year series. 1985 – 2007.



1) High standard offices centrally located in Oslo
2) Rents net of owner costs as a percentage of market value
3) Measured as a percentage deviation from 10-year government bonds

Sources: Statistics Norway, OPAK and Norges Bank

Chart 3.25 Office rents in Oslo and Bergen. Average annual growth in selected periods and equilibrium expectations[1)] for future growth rates assuming different discount rates. Per cent



[1)] Rental growth needed to equal the present value of rental income equal to market value. Nominal discount rate after tax (28 per cent) is set at 5.1 (6.65) per cent. The discount rate may reflect 75 per cent leverage,1.5 (3) per cent credit margin, 5 per cent market premium, equity beta 0.57, and risk free rate 5 (6) per cent

Sources: Norges Bank and OPAK

an estimated 0.25-0.75 percentage point in 2008 Q1. The Investment Property Databank (IPD) reports that the rise in market value was negative for all types of commercial property in the same period. The fall in market values was most pronounced for offices, which saw a quarterly fall of 2%.

The net yield is still low. We have used a simple model to derive the rise in rental prices that an investor must assume if the net yield is to provide owners with a normal return on new investments. This analysis shows that expected rent increases are slightly lower than long-term inflation expectations if the discount rate after tax is set at 5%. If the discount rate is instead set at 6.½%, rents will need to rise by almost 3½% annually (see Chart 3.25). In both cases, rent increases must be higher than the actual level seen in the period 1987–2007.

Sales of new homes weakened at the beginning of 2008. Companies focusing on property development and sales could suffer a drop in revenue if sales do not pick up. These companies have reported very strong results in recent years despite rising building costs. However, projects that have seen strong cost increases may result in low profitability if prices for new homes must be lowered. A prolonged turnaround in the market for new homes would also lead to reduced activity in the construction industry. In 2007, this industry accounted for only 3% of total bank debt in the non-financial sector.

A number of property funds have recently experienced a decline in interest in new issues, and turnover in 2008 will probably be down on 2006 and 2007. According to market operators, equity-rich property companies and institutional investors will increasingly be looking to buy property, while property funds and financial investors will increasingly be passive or selling property.

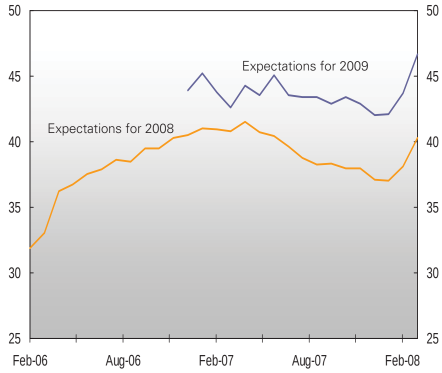
Outlook and overall assessment

Future movements in rents will be crucial for profitability for property companies. Rents have historically fluctuated in line with economic activity. Lower economic activity and higher funding costs for enterprises will probably curb demand for commercial property. Rent increases may be lower than in recent years. Rents for office premises in the cities will depend particularly on profitability in commercial and financial services.

Market analysts' expectations for listed companies' earnings in 2008 and 2009 have been revised down only moderately since the turmoil in global financial markets began (see Chart 3.26). In recent months, earnings expectations have been revised up again, partly due to higher expectations with regard to oil prices. Equity prices on the OSE have risen in the past two months, after a pronounced fall in January. Overall, market information suggests that growth in listed companies' earnings may slow in the period ahead.

However, it is likely that slower growth in export markets will put a damper on turnover. Lower growth in private consumption may have the same effect. Capacity utilisation looks set to remain high into 2008, and increases in wages and other costs will continue to put pressure on corporate results. Despite a slightly weaker outlook, enterprises' debt-servicing capacity will probably remain robust in 2008.

Chart 3.26 Expected earnings for firms listed on Oslo Stock Exchange. Earnings in 2008 and 2009.[1)] NOK per share. Monthly figures. Feb 06 – Apr 08



[1)] Estimates given by market analysts at different points in time

Source: Reuters EcoWin

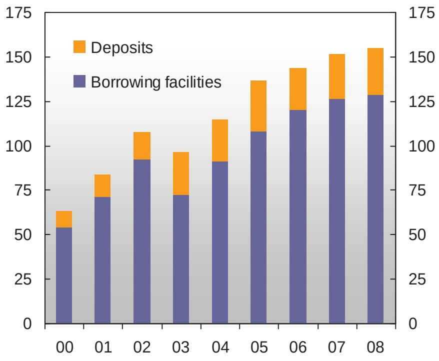
3.4 Financial infrastructure and regulatory framework

A robust and efficient financial infrastructure is essential for a smoothly functioning economy. It is particularly important that this infrastructure functions as intended in periods of market turmoil, when financial institutions are vulnerable to shocks and uncertain about counterparties' capacity to fulfil their obligations.

Infrastructure has functioned well

Financial system infrastructure has functioned well during the market turmoil since summer 2007. Banks have had sufficient deposits with and borrowing facilities at Norges Bank for settling payments. These borrowing facilities depend on the value of the securities pledged as collateral to Norges Bank. Banks have maintained their borrowing facilities during the turmoil (see Chart 3.27).

Chart 3.27 Banks' deposits with and borrowing facilities at Norges Bank. In billions of NOK. Average daily observation. 2000 – 2008[1)]



[1)] 2008: Average for the last day of the months January-April

Source: Norges Bank

Proposal for increased number of annual petroleum tax instalments

When oil companies pay taxes to the government, they draw on their bank accounts, thereby reducing the balance on banks' accounts at Norges Bank. This means that banks have a very large liquidity requirement in connection with the two annual instalments of petroleum tax. Recent years' high oil prices have led to particularly high petroleum tax payments. In connection with the payment of petroleum tax on 1 April 2008, Norges Bank issued F-loans (fixed-rate loans) with a longer maturity than usual in order to facilitate banks' liquidity management.

On the initiative of Norges Bank, the Government proposed the collection of petroleum taxes in six rather than two annual instalments in the Revised National Budget for 2008. This would reduce banks' liquidity requirements around each due date and thereby reduce the liquidity risk in payment settlements.

New settlement system delayed

Norges Bank is in the process of replacing its settlement system. The new system was due to come into operation in spring 2008, but now seems likely to be postponed by nearly a year. Changes in systems have often increased the risk of unstable operation. Norges Bank, banks and other operators therefore will test the new system thoroughly and train their personnel before it is put into operation.

Changes in the infrastructure of securities markets

In February, a group of eight exchanges in the Nordic and Baltic regions (the OMX exchanges) combined with the US exchange Nasdaq to form a new, large group. The name of the new group is Nasdaq OMX. This leaves the Oslo Stock Exchange (OSE) as the only independent exchange in the Nordic region. However, the OSE has an agreement with OMX on trading systems and a joint Nordic list. The OSE and the Norwegian Central Securities Depository (VPS) merged in November last year. In April, it was announced that VPS is setting up a new company together with six other European central securities depositories in order to be able to offer faster and cheaper cross-border settlement of securities trades.

The Ministry of Finance circulated proposals during the spring for new rules on the ownership of companies providing infrastructure for securities markets (exchanges, settlement centres and securities registers). It is proposed that the rules be relaxed to bring them more in line with those for banks. One proposal is that only shareholders deemed capable of ensuring proper management of such a company should be allowed to hold more than 10% of its shares. Another proposal is that the maximum holding in an exchange or securities register should normally be limited to 20% (up from 10%), although infrastructure companies can apply for a higher level. These rules could make it easier to carry out international acquisitions and restructuring, thus increasing the incentive for efficient operation.

New rules resulting from the Capital Markets Directive

New regulations resulting mainly from the EU's Capital Markets Directive were fully incorporated into Norwegian legislation at the beginning of 2008. The rights and obligations of market participants throughout the EEA have therefore become more harmonised. This will facilitate cross-border activity and promote more integrated and smoothly functioning markets.

The rules provide stronger protection for small investors, partly through more stringent rules on mandatory bids. Advising on investment in financial instruments has also become a service that requires authorisation and is subject to supervision. Kredittilsynet (Financial Supervisory Authority of Norway) awarded authorisation to more than 50 new securities companies in 2007. Most of these needed authorisation to continue to act as investment advisors and intermediaries. The rules have increased the requirements for qualified and independent advice. Some advisers have terminated activities as a result of these requirements.

4 Outlook and challenges

The turbulence in money and credit markets has continued since the previous *Financial Stability* report, and the global economic outlook has deteriorated. Market developments have resulted in serious problems in financial institutions in many countries. Norwegian financial institutions have felt the turbulence in the form of more expensive and less accessible funding and losses on their securities holdings.

4.1 Outlook for banks in Norway

Due to the turbulence in money and credit markets in the past year and signs of slower global economic growth, the challenges facing Norwegian banks are greater than they have been for many years. Banks' capital adequacy is solid after several years of low loan losses and favourable results. The outlook for financial stability is still considered to be satisfactory.

Several years of high earnings have boosted enterprises' financial strength. However, corporate credit growth has been very high over the past two years. Slower growth ahead in the Norwegian and global economies may result in lower growth in corporate earnings, thereby reducing debt-servicing capacity. The high debt burden in some household categories may also result in some losses on loans to households. Overall, banks' loan losses are expected to increase somewhat ahead, although from very low levels.

High lending growth has increased banks' net interest income in krone terms. Net interest income measured as a percentage of total assets has, however, declined in recent years as a result of lower interest margins. Over the past few quarters, the interest margin has stabilised (see Chart 2.13). Developments in the interest margin ahead are uncertain. The lending margin is very low, while the deposit margin is high.

After several years of low loan losses and declining lending margins, lending margins may have reached a minimum level in relation to credit risk. There are signs that banks are beginning to take into account a possible rise in credit risk in the future. The banks in Norges Bank's *Survey of Bank Lending* report that they expect higher lending margins on corporate loans, but at the same time competition for borrowers will probably continue to keep lending margins at a fairly low level.

The turbulence in money and credit markets has pushed up banks' funding costs and generated uncertainty about the supply of funding from these markets. As a result, banks' interest in obtaining more of their funding from other sources, such as customer desposits, is increasing. There are clear signs that competition for customer deposits is picking up, and this pushes down deposit margins.

High lending growth over several years has contributed to the rise in net interest income and banks' solid results. The announced tightening of banks' credit standards for corporate loans will probably curb lending growth. Lending growth may also moderate because house price inflation is levelling off and households already have high debt levels. Slower lending growth may ease the pressure on lending margins.

Other operating income is another important income item for banks. The trend whereby an increasing number of banks offer services without bank charges may have a negative impact on this income. In addition, changes in rules governing the sale of structured products and lower issue activity due to financial turbulence may lead to a decline in earnings for bank-owned investment firms.

Banks' profits as a percentage of total assets were high in the period 2004–2007, although they edged down in the last two years of the period. With prospects for somewhat higher loan losses and continued pressure on interest margins, this downward trend will probably continue unless banks manage to reduce costs. With solid capital adequacy, banks are well equipped to cope with a period of weaker profits. The past year's financial turbulence shows that good, long-term risk management is crucial in banks.

4.2 Risk outlook

In *Financial Stability* 2/2007, we highlighted four factors that could jeopardise financial stability in Norway. Two of these have shown negative developments in the past six months. Turbulence in money and credit markets has escalated further, even if there have been signs of improvement in the credit markets the last months. The uncertainty regarding the global economic outlook has increased. The last two risk factors we highlighted in the previous *Financial Stability* report were the high household debt burden and the situation in the commercial property market. In the following, it is explained why the four factors mentioned above are still considered to pose the greatest risk to the financial stability outlook.

1. Persistent turbulence in money and credit markets

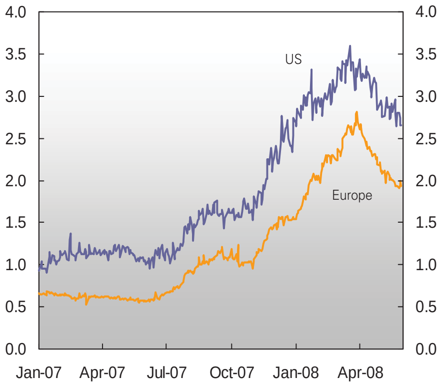
The turmoil that began in summer 2007 has persisted and shows that unforeseen events can rapidly change the outlook for banks and for financial stability. The turmoil has had marked consequences for Norwegian financial institutions' liquidity and market risk.

Both internationally and in Norway, interbank short-term lending rates are high compared with expected key rates. Even though central banks in most countries have provided ample liquidity, the turmoil has in periods spilled over to the shortest rates. Premiums on money market rates were particularly high in September 2007, around the turn of the year and in March/April 2008 (see Chart 1.3).

Risk premiums on investments with credit risk have risen considerably since summer 2007 (see Chart 4.1), making long-term borrowing more expensive for Norwegian banks. It has at times been difficult for Norwegian banks to obtain funding in the bond market, including the covered bond market. Many banks have increased their short-term funding (see Chart 2.8). This results in higher liquidity risk.

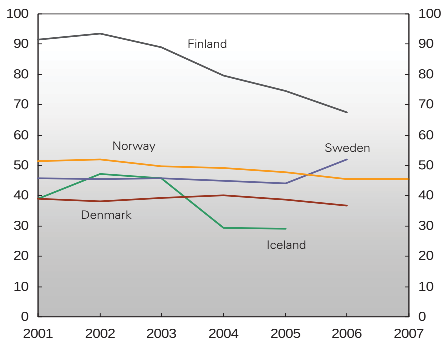
Most banks in Norway have a fairly high deposit-to-loan ratio (see Chart 2.10). For Norwegian credit institutions, this ratio is higher than in Denmark and Iceland (see Chart 4.2). The figures are, however, influenced by different institutional structures in the Nordic countries. Mortgage companies, for example, which do not rely on deposit funding, account for a very large share of lending in Denmark.

Chart 4.1 Credit risk premium on corporate bonds rated BBB. 5-year maturity. Percentage points. 1 Jan 2007 – 29 May 2008



Source: Reuters EcoWin

Chart 4.2 Deposit-to-loan ratio in credit institutions[1)] in Nordic countries. Deposits from customers as a percentage of lending to customers. 2001 – 2007[2)]



[1)] Includes banks, mortgage companies and other credit institutions
[2)] Break in time series between 2005 and 2006

Sources: Nordic Banking Structures report (2006), EU Banking Sector Stability report (November 2007) and Norges Bank

With Norway's generous deposit guarantee scheme, there is less risk of mass withdrawals of deposits. For an individual bank, however, customer deposits can be volatile. Customers with large deposits are often constantly searching for the best possible return. Deposits from this customer group, particularly deposits exceeding the guaranteed amount, can therefore be particularly volatile.

Any negative news about other Nordic banks may have an adverse impact on Norwegian banks' access to funding. Negative news might be an economic crisis in one or more of the Baltic countries, where two Swedish banks in particular have extended substantial loans, or in Iceland. In order to support the Icelandic authorities in their efforts to stabilise economic developments in Iceland, the central banks of Norway, Denmark and Sweden entered into bilateral credit agreements with Iceland's central bank, Sedlabanki Islands, in mid-May 2008. Each of the agreements enables Sedlabanki Islands to acquire up to EUR 500m against the Icelandic krona.

Icelandic banks have long been watched closely by market participants because of an expansive growth strategy beyond Iceland's borders and unfavourable developments in the Icelandic economy. As a result, credit default premiums on Icelandic banks have been very high, with wide fluctuations. The turbulence surrounding Icelandic banks has so far had little effect on Scandinavian banks. Icelandic banks' share of the Norwegian banking market is small, just under 1.5% at the end of 2008 Q1 measured in total assets.

Because of greater reluctance to lend each other money in the interbank market and difficult markets for more long-term funding, liquidity risk for Norwegian banks is higher compared with the situation six months ago.

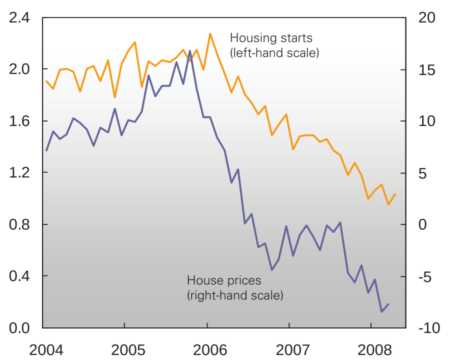
Due to the increase in credit premiums, bond prices have declined, with attendant losses for bondholders and reduced capital adequacy in many US and European banks. A large share of Norwegian financial institutions' bondholdings is held for liquidity purposes. Despite generally high credit ratings, these bonds have fallen in value and bondholders have incurred losses. Banks' equity holdings are very small. Their vulnerability to fluctuations in equity markets is therefore very limited.

2. Great uncertainty regarding the global economic outlook

Credit risk in Norwegian banks is primarily influenced by enterprises' financial results. The Norwegian business sector is highly dependent on international markets. A downturn in the global economy might adversely affect Norwegian banks in the form of higher losses as a result of lower exports and weaker earnings in Norwegian enterprises.

The greatest risk to the global economy seems to be the situation in the US economy. Housing starts have declined sharply in the past two years and house prices are falling (see Chart 4.3), contributing to slower economic growth and rising unemployment. US bank losses on prime mortgages and on loans to enterprises are increasing.

Chart 4.3 12-month rise in house prices[1] and housing starts[2] in the US. Jan 2004 – Apr 2008



[1] Rise in median prices for existing homes in per cent
[2] In million homes

Source: Reuters EcoWin

In a number of large international banks, capital adequacy has weakened due to substantial losses, restricting the banks' capacity to extend loans. At the same time, higher credit premiums are pushing up banks' funding costs and customers' borrowing costs. Both of these factors can contribute to a credit squeeze, resulting in profitable projects being postponed for lack of funding. The risk of a credit squeeze is probably greatest in the US and the UK. In the event of a credit squeeze, the real economy will be affected.

High prices for oil and other commodities, such as food, may curb global economic growth. The problems in the US economy have resulted in a steadily declining US dollar exchange rate. The sterling exchange rate has also fallen considerably. This may present a problem to Norwegian enterprises competing with enterprises that largely incur costs in USD or GBP.

The uncertainty surrounding developments in the global economy is, on balance, greater than it was six months ago. This is due to money and credit market turbulence, uncertainty as to how deep the downturn in the US economy will be, and the magnitude of the consequences for the world economy.

3. Household financial behaviour

The household debt burden in Norway is historically high and still rising (see Chart 3.18). House prices are still high from a historical perspective (see Chart 3.16). Many households have interest-only loans, and the great majority of Norwegian households have adjustable-rate loans. The saving ratio has fallen considerably over the past few years and was unusually low in 2007 (see Chart 3.9). These factors indicate that some households have stretched their finances to the limit and will be vulnerable in the event of a negative turnaround in the economy. Falling house prices, higher-than-expected interest rates and weaker-than-expected income growth are examples of events that may exacerbate households' situation.

Weaker developments in households' financial position and falling house prices will increase credit risk associated with bank lending to households, although from a very low level. The most important effect of such developments will probably be exhibited in the enterprise sector. An abrupt correction in the saving ratio may result in weaker corporate earnings and will probably increase banks' losses on loans to enterprises.

There are signs that household demand for loans will moderate. The rise in house prices has slowed. These factors imply that the risk of a build-up of financial imbalances may be diminishing, reducing the risk of an abrupt and pronounced change in the household saving ratio further ahead.

4. High commercial property prices

History shows that long periods of sharply rising property prices can be followed by a sharp fall in prices. Selling and rental prices in the commercial property market increased considerably up to the second half of 2007 (see Chart 3.24). There are indications that selling prices have peaked and that commercial property price inflation is now slowing. Market participants expect a decline in turnover volume in 2008 relative to the two previous years. Several property funds have experienced diminished interest in issues. Even though the rise in commercial property prices in recent years can probably be attributed to favourable macroeconomic developments, the rise may to some extent have been driven by expectations that it would simply continue. A pronounced change in expectations may therefore cause problems for property companies.

Lower demand in the Norwegian economy might result in a slower rise in rental prices than expected by property companies, triggering a fall in prices. Even though property companies often choose fixed-rate loans, higher interest rates will reduce some companies' profitability. Property companies are often highly leveraged, and lower property prices will reduce the value of banks' collateral.

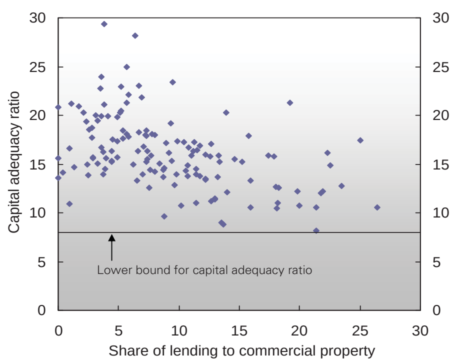
Lending to property companies accounts for about 18% of banks' total lending to households and enterprises. Reduced profitability and lower property prices may therefore lead to loan losses for banks. In this situation, the fact that a number of banks with relatively low capital adequacy have a high share of lending to property companies constitutes an element of risk (see Chart 4.4).

The optimism and the rise in prices in the commercial property market seem to have abated since 2007. Banks have become more cautious about extending loans to the commercial property industry. Developments in the commercial property market have become more uncertain in the short term. On the other hand, recent developments have probably curbed the risk of substantial imbalances between debt and property prices further ahead.

Stress-testing

Stress-testing has been carried out to illustrate the possible impact of some of the risk factors referred to above (see box on page 47). In the stress-test, we assume that a weakening of household confidence in their own financial situation and the Norwegian economy leads to a sharp fall in house prices. We also assume that the interest rate will be substantially increased in response to prospects for higher inflation. Banks are expected to tighten credit standards, with a sharp decrease in debt growth as a result. In the stress-test, the scale of problem loans increases, particularly in the enterprise sector. Assuming that 55% of problem loans are lost, banks' losses would amount to 2¼% of total loans at the end of the projection period in 2011. In spite of substantial loan losses, the five largest Norwegian banks will together satisfy the minimum capital adequacy requirement in 2011.

Chart 4.4 Banks'[1)] capital adequacy ratio and lending to commercial property as a share of gross lending. As at 2007 Q4. Per cent



1) All banks excluding foreign branches in Norway and banks with a capital adequacy ratio above 30 per cent

Source: Norges Bank

4.3 Measures taken and lessons learned in the light of the financial turmoil

There have been a number of lessons to learn from the turbulence in money and credit markets in the past year. Losses that arise in markets far beyond our borders can have considerable impact on Norwegian banks even when they are not directly involved in these markets. This is due to globalised markets and Norwegian banks' heavy reliance on foreign funding. Banks have experienced that funding in money and credit markets can be considerably more expensive and less accessible even though banks are solid and the outlook for the Norwegian economy is favourable.

Since 1 June 2007, Norwegian banks have been able to securitise loans by issuing covered bonds. Before this type of bond was introduced, it was emphasised that the issue of these bonds could function as a liquidity buffer in times of unrest. Experience has shown that lack of confidence in the US market for securitised mortgages has also had a negative effect on the European market for securitised mortgages, including Norwegian covered bonds. Although it has been difficult in periods to issue covered bonds, banks have nonetheless issued these bonds through mortgage companies to the value of NOK 115bn since June 2007. Norwegian banks' funding situation would have been even more difficult without the option of securitising loans.

What action should be taken?

Banks should be prepared for sustained periods of turbulence in financial markets. A solid local deposit base combined with a substantial share of long-term bond funding will reduce banks' vulnerability to turbulence in money and credit markets.

Stress-testing can be a useful tool to test a bank's vulnerability to a shortage of short-term or long-term funding. The tests should take into account contagion effects from international credit and money markets, markets that may dry up for long periods, and market participants' behaviour during periods of turbulence. It is important that the stress-test results are reflected in banks' planning and contingency work.

The authorities can also place greater emphasis on monitoring liquidity risk. As part of its bank monitoring activities, Norges Bank has launched regular surveys of banks' liquidity management and credit standards.

In an international context, measures have been proposed by a number of organisations. Financial Stability Forum (FSF) recommends actions in five areas:

- strengthening prudential oversight of capital, liquidity and risk management in financial institutions, including issuance of a sound practice guidance on the management and supervision of liquidity
- enhancing transparency and valuation of complex structured credit products and off-balance sheet entities
- improving the quality of the rating process for structured credit products and reduce the credit rating agencies' conflicts of interest in these rating processes
- strengthening authorities' responsiveness to risk
- establishing robust arrangements for dealing with stress in the financial system, including arrangements for dealing with weak banks

Some of the problems contributing to the financial turbulence arose because banks in other countries took advantage of loopholes in the Basel I Framework to establish off-balance sheet companies which were not included when calculating capital adequacy. When these companies were no longer able to obtain funding in securities markets, the banks were obliged to provide funding and take them onto their own balance sheets. In order to prevent this from recurring, the view of the Basel Committee on Banking Supervision is that it is important for the risk-sensitive Basel II Capital Adequacy Framework to be implemented as soon as possible in as many countries as possible.

The financial turbulence has also demonstrated some shortcomings in Basel II, and it is important to rectify these shortcomings in the light of experience gained. In the wake of the FSF report and statements from the G7 countries, the Basel Committee on Banking Supervision proposed measures for improving various parts of Basel II. These measures include higher capital requirements for complex structured credit products and stricter capital requirements for credit lines to off balance sheet conduits.

Any changes in Basel II that are formally included in the EU Capital Adequacy Directive will also be incorporated into Norwegian legislation as part of Norway's EEA obligations.

So-called hybrid instruments combine some of the characteristics of equity and some of the characteristics of debt. The extent to which supervisory authorities accept hybrid instruments as part of banks' Tier 1 capital varies widely across countries. Norway pursues a restrictive practice with regard to the permitted share of hybrid instruments in Tier 1 capital. The financial turbulence has sown doubt about the value and marketability of hybrid instruments. The IMF therefore urges supervisory authorities to focus on these conditions in their application of the capital adequacy framework.

In the wake of the US crisis and the rescue operation for the investment bank Bear Stearns, the US Treasury Secretary has proposed changes in the supervisory structure and regulations in the financial sector. The proposal is to reduce the number of supervisory authorities by combining authorities in order to improve coordination and close gaps between areas of responsibility. Supervision will also to a greater extent be a federal rather than a state responsibility. Under the proposal, the Federal Reserve will have a more formal role in the monitoring of financial stability.

Some of the problem related to US sub-prime mortgages has been the extensive use of mortgage brokers, who had incentives to sell as many mortgages as possible without taking borrowers' debt-servicing capacity into account. The US Treasury deems the regulatory framework to be inadequate and proposes national minimum standards for all operators intermediating mortgages.

Crisis management exercises

The past year's financial turbulence with problems in a number of foreign banks is a reminder that crisis management exercises at government level are important. The purpose of these crisis management exercises is to enhance the authorities' ability to manage future crises. Because of structural changes in financial markets, exercises should be carried out at regular intervals. One important structural change in the Nordic countries in the past ten years is the emergence of cross-border banks. In 2003 the Nordic central banks signed a Memorandum of Understanding (MoU) on coordination, the exchange of information and management of external communication in the event of a crisis in a cross-border bank. A corresponding MoU has been established between the supervisory authorities. The most recent exercise on crisis management in cross-border banks in the Nordic and Baltic regions was conducted in September 2007.

The EU has prepared a new MoU on crisis management cooperation between supervisory authorities, central banks and finance ministries. The MoU comprises three main parts. The first part is a compilation of nine joint principles at EU-level for the management of crises in cross-border financial institutions. Part two is a joint framework of analysis for assessing the systemic effects of a potential crisis. This framework has been drawn up by the EU Banking Supervision Committee (BSC) and the Committee of European Banking Supervisors (CEBS). The third part will comprise joint practical guidelines for crisis management.

Boxes

Stress-testing of bank losses and results

Norges Bank's Survey of Bank Lending

Central bank measures to address liquidity problems at banks

Stress-testing of bank losses and results

An important part of Norges Bank's surveillance work is analysing how economic shocks might affect banks' financial position.[1] A bank model is among the tools used to analyse the five largest banks' performance and capital adequacy. In this model, developments in key bank figures are largely determined by developments in macro variables that are incorporated in a macro model for the Norwegian economy.

The macro model features several properties that are of particular interest in analysing financial stability: House prices rise if household confidence in economic developments increases or if the supply of credit increases. With higher house prices and higher credit, total demand and output will rise, which embodies effects via consumption and investment. Higher house prices result in increased wealth for homeowners, who may want to realise a share of the gain in the form of debt-financed consumption and/or investment. At the same time, new residential construction projects become profitable when house prices rise in relation to residential construction costs. This leads to higher housing investment. Higher house prices will also push up household indebtedness. The model thus embodies the correlation between the level of economic activity, house prices and household debt growth.

The bank model is used to project a baseline scenario for results and capital adequacy up to and including 2011 based on the baseline scenario for the Norwegian economy presented in *Monetary Policy Report* 1/08. Developments for banks in that scenario are then compared with an alternative scenario for the Norwegian economy where we assume that a number of economic shocks occur. Such a stress scenario is not necessarily the most likely alternative to the baseline scenario for the Norwegian economy, but an analysis of a possible scenario that could entail problems for banks.

In addition to the analysis of banks, corporate and household debt-servicing capacity is analysed using models of the enterprise and household sectors. The models are based on microdata and are used to estimate corporate bankruptcy probabilities[2] and household margins[3]. Like the bank model, the enterprise and household models use macroeconomic forecasts. Growth in total output, unemployment and interest expenses are included in the estimation of corporate bankruptcy probabilities. Household income relative to cost-of-living and interest expenses determines household margins. Interest rate expenses depend on indebtedness and the interest rate level. The debt growth derived from the macro model is broken down on groups of households using the same pattern as in the historical data. Micro models provide, among other things, information about which groups of enterprises and households will be the most vulnerable under different scenarios for the Norwegian economy.

In this *Financial Stability* report we look at an alternative stress scenario for the Norwegian economy where a severe shock occurs as from 2008. A weakening of households' confidence in their own financial situation and the Norwegian economy leads to a sharp fall in house prices. Consumer price inflation increases as a result of both higher domestic price

1 For a further description of the model framework used to stress-test banks , see Andersen, Berge, Bernhardsen, Lindquist and Vatne: A suite-of-models to stress-test financial stability. Staff Memo, 2/2008, Norges Bank.

2 For a further description of the enterprise model, see Bernhardsen and Larsen: "Modelling credit risk in the enterprise sector – further development of the SEBRA model", Economic Bulletin 3/07, Norges Bank.

3 Household margin is calculated as total income after tax less estimated normal consumption and interest expenses. For a further description of the household model, see Vatne: "How large are the financial margins of Norwegian households? An analysis of micro data for the period 1987-2004", Economic Bulletin 4/06, Norges Bank.

pressures and increased imported inflation. Moreover, we assume that banks' risk-willingness declines in pace with heightened global liquidity and credit risk.

House prices fall markedly in the alternative stress scenario (see Chart 1). In 2010, house prices are close to 35% lower than at the end of 2007. By comparison, house prices fell by about 30% between 1988 and 1992, when there was a banking crisis in Norway. House prices edge up towards the end of the simulation period. With higher consumer price inflation in the alternative stress scenario, the interest rate rises rapidly over the next two years to curb inflation. Lower house prices and higher bank lending rates (see Chart 2), result in lower corporate and household credit demand and weaker economic growth compared with the baseline scenario. GDP growth is negative in two of the three years. By comparison, mainland GDP growth in Norway declined by 1% in 1988 and 1½% in 1989.

As a result of a change in the macroeconomic outlook and increased loan defaults, we assume that banks tighten lending standards by reducing new loans to both households and enterprises. Under the alternative stress scenario, household and corporate debt growth drops sharply over the next two years (see Chart 3).

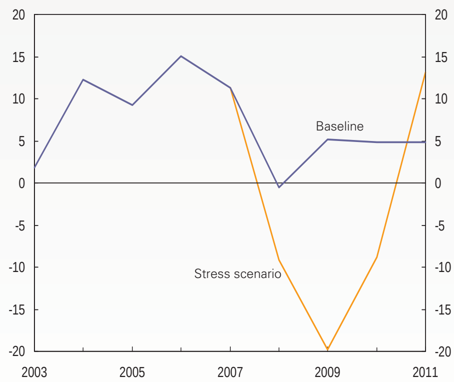
Lower property prices and lower household and corporate debt growth lead to slower growth in total demand and output (see Chart 4). In 2011, unemployment rises to just above 5%, or about 2¼ percentage point higher than in the baseline scenario.

Weaker macroeconomic developments and higher bank lending rates reduce borrowers' debt-servicing capacity. This increases the scale of problem loans[4], particularly among enterprises. At the end of the simulation period, corporate problem loans account for almost 10% of total corporate loans. By comparison, this share came to about 16-17% towards the end of the 1990s banking crisis. For households, the increase will be less dramatic, but the share will nevertheless double in relation to the baseline scenario.

The share of problem loans that banks will have to record as losses depends to a large extent on collateral values. Bank loans are normally secured, largely on residential and commercial property. Simplifying, we assume that commercial property prices follow residential property prices. A fall

4 Problem loans are defined as non-performing loans and other loans that banks regard as particularly doubtful.

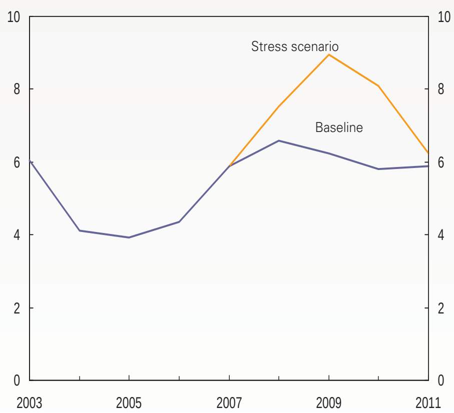
Chart 1 House prices. Year-on-year rise. Per cent[1)]



1) Projections for 2008 – 2011

Sources: Association of Real Estate Agents, ECON Pöyry, FINN.no, Association of Real Estate Agency Firms and Norges Bank

Chart 2 Banks' lending rate[1)]



1) Projections for 2008 – 2011

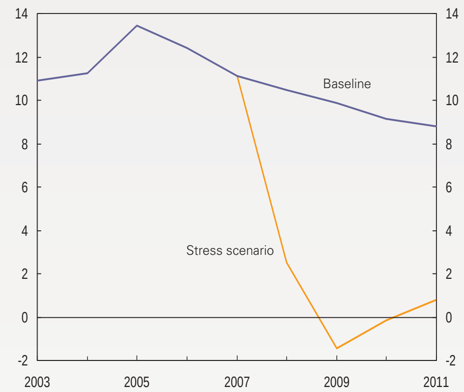
Sources: Statistics Norway and Norges Bank

in residential and commercial property prices result in higher loan losses. We assume that loan losses increase to 55% of problem loans in 2011. Such a high loan-loss ratio has not been recorded since the early 1990s, i.e. towards the end of the previous banking crisis. With such a loan-loss ratio, losses account for 2¼% of total loans at the end of the projection period (see Chart 5).

Charts 6 and 7 show the projections of the five largest banks' results and capital adequacy in the baseline scenario and the alternative stress scenario. Both scenarios are based on the assumption that bank deposit growth follows household wage growth, the interest margin is constant during the projection period and other operating expenses increase by about 5% annually.

In the baseline scenario, the banks' post-tax results are estimated to fall somewhat compared with the result for 2007 and account for about 0.6-0.7% of average total assets in 2010 and 2011. In the alternative scenario, the banks' post-tax results as a percentage of average total assets decline sharply as early as in 2008 compared with the baseline scenario. Despite weaker bank

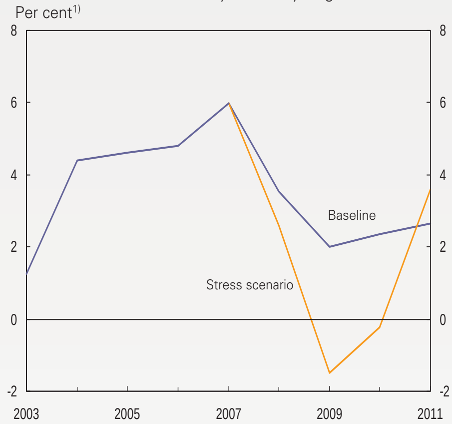
Chart 3 Credit to households (C2). Year-on-year growth.[1] Per cent[2]



[1] Change in stock measured at end of year
[2] Projections for 2008 – 2011

Sources: Statistics Norway and Norges Bank

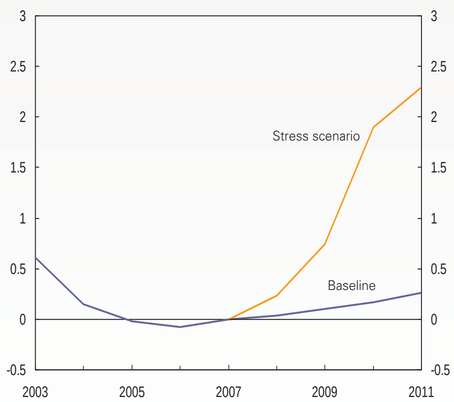
Chart 4 GDP mainland Norway. Year-on-year growth. Per cent[1]



[1] Projections for 2008 – 2011

Sources: Statistics Norway and Norges Bank

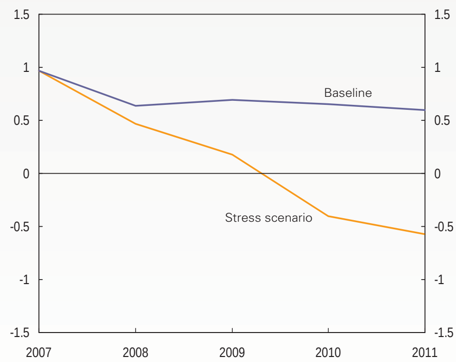
Chart 5 Banks' losses. Percentage of gross lending. Annual figures[1]



[1] Projections for 2008 – 2011

Source: Norges Bank

Chart 6 Post-tax results in Norway's five largest banks[1]. Percentage of average total assets. Annual figures[2]



[1] DnB NOR Bank (excl. branches abroad), SpareBank 1 SR Bank, Sparebanken Vest, SpareBank 1 Nord-Norge and SpareBank 1 SMN
[2] Projections for 2008 – 2011

Source: Norges Bank

results, capital adequacy ratios increase in the first two years under the alternative scenario compared with the baseline scenario. This is due to our assumption of a marked fall in lending growth, which also reduces the capital adequacy requirement for these banks. Negative performance in 2010 and 2011 will lead to weaker capital adequacy both in terms of level and compared with the baseline scenario.

Consequences for enterprises and households

Even if the decline in the average capital ratio for the five banks is moderate, the credit squeeze and high lending rates have a severe impact on some vulnerable groups of enterprises and households. Enterprises account for the largest share of the increase in problem loans and bank losses under the alternative scenario. The number of problem loans increases for all industries in the corporate sector. The increase is highest for real estate firms. Projections up to and including 2011 show that real estate firms' share of expected losses will increase from about 30% in 2007 to about 40% of total corporate losses (see Chart 8).

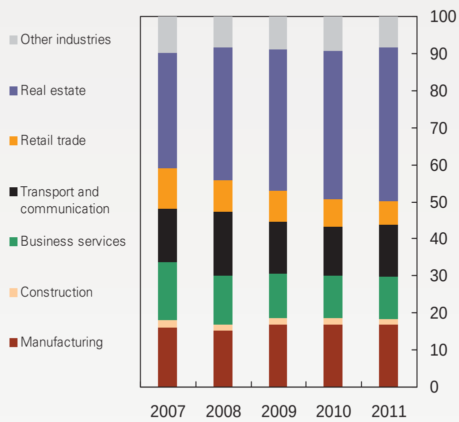
Corporate debt-servicing capacity is severely impaired in the stress scenario, reflecting reduced rental income when domestic activity

Chart 7 Capital adequacy in Norway's five largest banks[1]. Per cent. Annual figures[2]

[1] DnB NOR Bank (excl. branches abroad), SpareBank 1 SR Bank, Sparebanken Vest, SpareBank 1 Nord-Norge and SpareBank 1 SMN
[2] Projections for 2008 – 2011

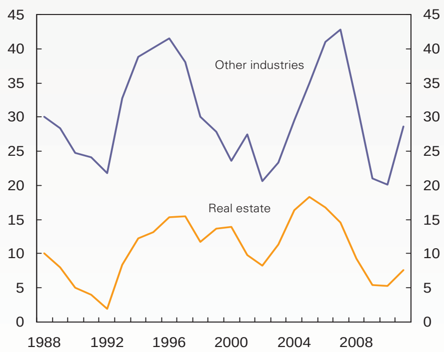
Source: Norges Bank

Chart 8 Expected loss in stress scenario. By industry. Percentage of total loss.



Source: Norges Bank

Chart 9 Debt-servicing capacity.[1] Historically and in the stress scenario. Real estate firms and all industries except real estate[2]. 1988 – 2011[3]



[1] Pre-tax results, depreciation and writedowns as a percentage of interest-bearing debt
[2] Non-financial enterprises. Mainland Norway
[3] Projections for 2007 – 2011

Source: Norges Bank

falls, increased interest expenses and a decline in commercial property prices (see Chart 9). Real estate firms' debt-servicing capacity, as measured here, is lower than the average for other industries, but the levels of the indicator are not directly comparable with other industries. Real estate firms generally have longer repayment terms on their loans. This is not corrected for in this indicator. Measured in relation to 2002, the debt-servicing capacity of real estate firms will still weaken considerably more than for other enterprises, albeit not to the same extent as in the early 1990s.

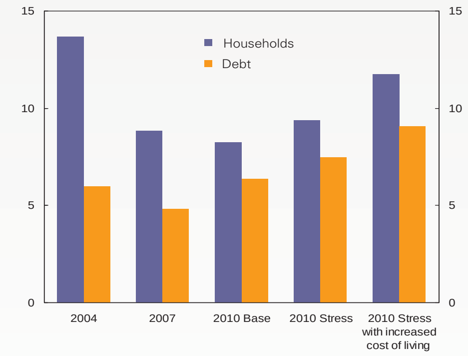
Bank losses on loans to households also increase under the alternative scenario, but to a lesser extent than for the corporate sector. Some groups of households could still be exposed to financial difficulties in the event of developments as described in the alternative stress scenario.

Given the baseline scenario for the Norwegian economy, households with a negative margin will account for about 8% of total households in 2010. In the stress scenario, households with a negative margin will account for 9% of total households (see Chart 10). Under the assumption that living costs for necessity goods increase three times as much as the consumer price index, households with a negative margin will account for almost 12% of all households.

Debt outstanding for households with a negative margin in the stress scenario, about 7½% of total debt, will not necessarily result in defaults or losses on bank loans. Household willingness to service debt is very high and a large portion of debt outstanding is secured on residential property.

The debt at risk is not evenly distributed among households. The most vulnerable groups of households will be homeowners with a very high debt burden and first-time homebuyers. In the stress scenario, 13% and 11% respectively of the groups' total debt outstanding will be held by households with a negative margin (see Chart 11).

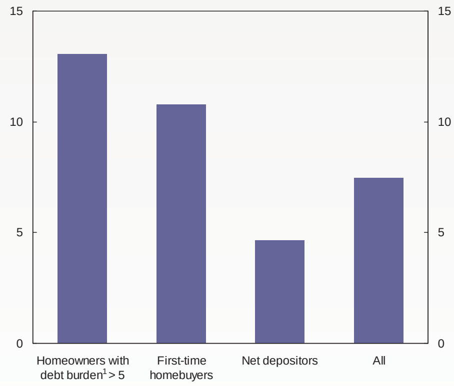
Chart 10 Percentage of households with negative margin[1] and debt in households with negative margin as a percentage of total debt.



[1] Margin = after tax income – standard cost of living – interest payments – calculated repayments (20 year)

Sources: Statistics Norway, National Institute for Consumer Research and Norges Bank

Chart 11 Debt in households with negative margin in selected group. Percentage of group debt. Stress scenario. 2010



[1] Debt-to-disposable-income ratio

Sources: Statistics Norway and Norges Bank

Norges Bank's Survey of Bank Lending

Norges Bank has launched a quarterly survey of bank lending. The main aim of the survey is to provide qualitative information on the demand for and supply of new loans and the terms and conditions applied. This information is not currently covered by other types of statistics. The survey covers two main areas – lending to households and lending to non-financial corporations. Banks are asked to assess developments in the past quarter and expected devleopments in the next.

The bank lending survey may provide users with earlier access to current information. It may also contribute more systematic and formalised information about the driving forces behind banks' behaviour. The results of the survey may make it easier to identify and monitor risk factors related to financial stability.

The banks in the survey use a scale of five alternative responses to indicate the degree of change in credit standards, terms and conditions and demand. Banks that report that conditions have changed 'a lot' are assigned twice the score of those reporting that conditions have changed 'a little'. The responses are weighted by the banks' shares of the change in lending to households and to non-financial corporations respectively. The resulting net balances are scaled to lie between -100% and 100%. If all the banks in the sample report some tightening of credit standards, the net percentage balance will be -50%. If some of the banks have tightened their credit standards a little without the other banks changing their credit standards, the net percentage balance will lie between 0 and -50%.

If all the banks in the sample have substantially tightened their credit standards, the net percentage balance will be -100%. The blue bars in the charts show developments over the past quarter. The orange diamonds show developments expected in the next quarter. The orange diamonds have been moved forward one quarter so that actual developments and expected developments can be easily compared.

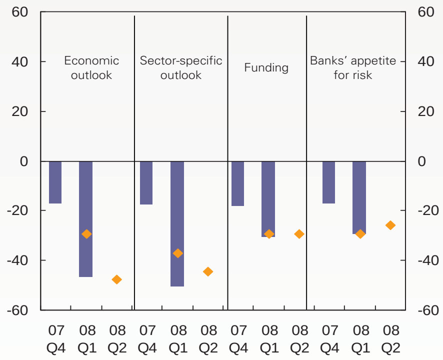
Banks reported that they had tightened credit standards for corporate loans in 2007 Q4 and 2008 Q1 (see Chart 1). The tightening of credit standards for loans to the commercial real estate sector was considerable in Q1. Banks expect further tightening of credit standards for corporate loans in 2008 Q2 compared with Q1.

Chart 1 Change in credit standards for approving loans to non-financial corporations. Net percentage balances[1), 2)]. Quarterly figures. 07 Q4 – 08 Q1

[1)] Net percentage balances are calculated by weighting together the responses in the survey. The blue bars show developments over the past quarter. The orange diamonds show expectations over the next quarter. The orange diamonds have been moved forward one quarter
[2)] Negative net percentage balances indicate tighter credit standards

Source: Norges Bank

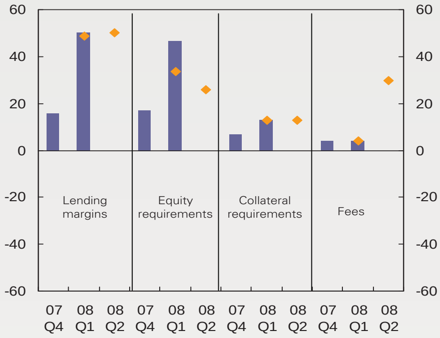
Chart 2 Factors affecting credit standards for approving loans to non-financial corporations. Net percentage balances[1), 2)]. Quarterly figures. 07 Q4 – 08 Q1



[1)] See footnote 1 in Chart 1
[2)] Negative net percentage balances indicate that the factor contributes to tighter credit standards

Source: Norges Bank

Chart 3 Change in loan conditions for non-financial corporations. Net percentage balances[1), 2)]. Quarterly figures. 07 Q4 – 08 Q1

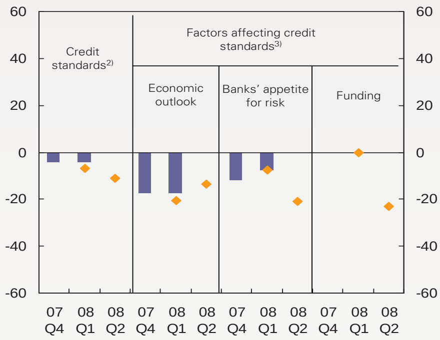


1) See footnote 1 in Chart 1

2) Positive net percentage balances for lending margins indicate higher lending margins. Positive net percentage balances for lending margins, equity requirements, collateral requirements and fees indicate tighter credit standards

Source: Norges Bank

Chart 4 Change in credit standards for approving loans to households. Factors affecting credit standards. Net percentage balances[1)]. Quarterly figures. 07 Q4 – 08 Q1



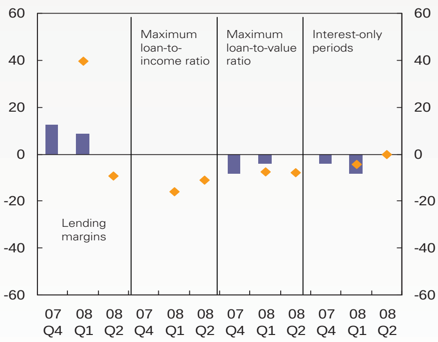
1) See footnote 1 in Chart 1

2) Negative net percentage balances indicate tighter credit standards

3) Negative net percentage balances indicate that the factor contributes to tighter credit standards

Source: Norges Bank

Chart 5 Change in loan conditions for households. Net percentage balances[1), 2)]. Quarterly figures. 07 Q4 – 08 Q1



1) See footnote 1 in Chart 1

2) Positive net percentage balances for lending margins indicate higher lending margins and therefore tighter credit standards. Negative net percentage balances for maximum LTI ratio, maximum LTV ratio and use of interest-only periods indicate tighter credit standards

Source: Norges Bank

Most banks cited the sector-specific and macroeconomic outlook as the reason for tightening credit standards for corporate loans in Q1 (see Chart 2). Credit standards were also affected by the funding situation and banks' appetite for risk. Looking ahead, banks expect the macroeconomic and sector-specific outlook to have the greatest impact on credit standards, followed by the funding situation and banks' appetite for risk.

Tighter credit standards in the past two quarters were primarily implemented by increasing lending margins and equity requirements (see Chart 3). Banks expect tighter loan terms and conditions in Q2, with the emphasis on lending margins, bank fees and equity requirements.

There was marginal tightening of banks' credit standards for loans to households in 2007 Q4 and 2008 Q1 (see Chart 4). The factors contributing to tightening on lending to households were the macroeconomic outlook and banks' appetite for risk. In Q2 banks still expect a slight tightening of credit standards on loans to households as a result of the above factors combined with the funding situation and a pickup in defaults.

Banks changed a number of conditions for loans to households in the past two quarters (see Chart 5). They increased lending margins and fees, and reduced maximum loan-to-value ratios and interest-only periods. In the period ahead, banks expect to reduce maximum loan-to-income and loan-to-value ratios. The results of Norges Bank's *Survey of Bank Lending* are available on www.norges-bank.no.

Central bank measures to address liquidity problems at banks

Since the turbulence started, banks have been facing liquidity problems, i.e. their capacity to service and roll over short-term debt has been weakened. This primarily reflects impaired liquidity in several markets, both interbank markets and securities markets. Banks have been uncertain about both their own and other banks' future liquidity and have sought to limit lending to other banks in the interbank market. This has pushed up interest rates in both interbank markets and securities markets where banks are important operators.

Over time banks have become increasingly dependent on funding in securities markets. Liquidity in securities markets has thus gained increased importance for banks' liquidity. At the same time, many markets have become more dependent on banks' participation in the markets. Liquidity problems in one market may rapidly spread to other markets.

Recent liquidity problems have entailed higher borrowing costs for banks. This will either translate into higher lending rates and/or weaker bank results. It may also weaken banks' capital adequacy. This will curb credit growth, which will in turn have an impact on economic activity. Liquidity problems may also become acute so that one or several banks may default on their payment obligations. The problems could then rapidly spread to other banks and the consequences may be considerable.

Central banks thus seek to resolve liquidity problems in the banking system. It is important that central bank liquidity measures do not weaken banks' motivation to engage in sound liquidity management. Central banks can influence banks' liquidity situation both directly by increasing the banking system's claims on the central bank (print money) or indirectly by seeking to boost liquidity in important securities markets. Both channels have been used during the current turbulence.

Table: Central bank measures to address the financial turbulence

	Fed	ECB	BoE	SNB	BoC	NB
1 Supply short-term liquidity	x	x	x	x	x	x
2 Supply longer-term liquidity	x	x	x	x	x	x
3 Change standing facilities (discount loans)	x					
4 Broaden range of eligible counterparties	x		x			
5 Broaden range of eligible collateral	x		x		x	
6 Offer foreign currency loans		x		x		
7 Market maker of last resort	x		x			
8 Lender of Last Resort	x		x			

Fed = Federal Reserve System (USA), ECB = European Central Bank, BoE = Bank of England
SNB = Swiss National Bank, BoC = Bank of Canada, NB = Norges Bank

The measures in the table above are briefly described in the following:

1. If failing confidence between banks pushes up the shortest money market rates, central banks can provide additional liquidity, i.e. increase the banking system's claims on the central bank, through ordinary channels. Normally, such action will return short-term market rates to a normal rate. When the financial turbulence spread in earnest to the money market on 9 August, Norges Bank injected extra liquidity. This was in line with normal practice when the redistribution of liquidity in the money market does not function normally. Extra liquidity was also provided towards the end of the year. In May, money market rates showed a fairly marked increase

in relation to the expected central bank key rate. Norges Bank responded by supplying extra liquidity through several channels, including currency swaps, which pushed down the shortest money market rates again.

2. If central banks do not achieve the desired effect on money market rates at somewhat longer maturities by means of ordinary liquidity policy instruments, they can operate in the markets by supplying liquidity at longer maturities. Internationally, many central banks have increased the supply of longer-term liquidity since last autumn. After petroleum tax payments were made on 1 April, there were prospects that banks in Norway would have substantial borrowing needs up to the summer. In response to this, Norges Bank offered a fixed-rate loan with a longer maturity than normal. Premiums in money markets subsequently edged down.

3. A borrowing facility normally available to banks if they are unable to raise loans in the market consists of very short-term discount loans from the central bank. The discount rate is comparable to the overnight lending rate in Norway and forms a ceiling for the shortest money market rates. The Federal Reserve has lowered the discount rate so that it is now only 25 basis points higher than the federal funds rate, compared with 100 basis points before the turbulence started. The Federal Reserve has also extended the term on discount loans to influence money market rates at somewhat longer maturities. Discount loans can be viewed as a safety valve for banks. In many countries, the schemes are used to a limited extent because banks fear the stigma associated with their use.

4. Some central banks only trade with a limited number of banks, often called primary traders. Broadening the range of counterparties provides more banks with access to central bank liquidity. In Norway all banks, including branches of foreign banks, have access to Norges Bank's borrowing facilities. Foreign banks that are active in the Norwegian money market also had access to the currency swap facility introduced in May. This was in line with previous practice for supplying liquidity through swap agreements.

5. Accepting a broader range of collateral provides for increased borrowing from the central banks for institutions with such funding needs. This measure can also contribute to enhancing market liquidity of the instruments accepted as collateral. Both the Federal Reserve and the Bank of England have accepted a broader range of counterparties and collateral. Norges Bank ordinarily accepts a broader range of collateral than these central banks and has not changed its collateral requirements.

6. Foreign currency loans can improve the liquidity situation for banks that have to service or roll over foreign currency debt. In periods, US banks have shown limited willingness to provide USD funding to European banks early in the day US time before they have fully determined their own liquidity needs. This has impaired USD liquidity for European banks. The Federal Reserve has offered USD liquidity to European banks via currency swap lines with the European Central Bank (ECB) and the Swiss National Bank (SNB).

7. Central banks can enhance liquidity in securities markets by purchasing or borrowing securities held by financial institutions. In March, the Federal Reserve announced that financial institutions could for a period swap asset-backed securities, in particular mortgage-backed securities, for Treasury bills. These mortgage-backed securities are not easily tradable in today's market. With this measure, the central bank also assumes the role of "market marker of last resort". The Bank of England introduced a similar scheme in April but the swap agreements feature a longer maturity.

8. As Lender of Last Resort (LLR), the central bank can provide loans on special terms when there are no other sources of credit. Such emergency credit was provided to the British bank Northern Rock, which is now nationalised. In response to the liquidity problems at the US investment bank Bear Stearns, the Federal Reserve decided to provide emergency funding on 14 March 2008.

Annex 1

Boxes 2004–2008

1/2008
Stress-testing of bank losses and results
Norges Bank's Survey of Bank Lending
Central bank measures to address liquidity problems at banks

2/2007
Problems in the US residential mortgage market
Problems in interbank markets - central bank liquidity measures
Covered bonds
Stress testing of banks' losses and results

1/2007
International experience of turnarounds in the housing market
Low share of fixed-rate loans in the household sector
Low household saving
An analysis of banks' problem loans

2/2006
Substanital losses in Amaranth hedge fund
Housing investment and house prices
Higher debt in households in many countries
A fall in household consumption – what is the impact on credit risk in the corporate sector?
Basel II – what is the impact on banks' capital adequacy?

1/2006
Implications of changes in pension fund regulations for the bond market
Long-term real interest rates and house prices
Household housing wealth and financial assets
Household margins
Banks' pricing of corporate credit risk
The importance of Norges Bank's key rate and the competitive climate for banks' interest rates
Equity market valuation

2/2005
Are equity prices more volatile in Norway than in other countries?
Developments in house prices
Distribution of household debt, income and financial assets
Macroeconomic gap indicators
Foreign banks in Norway
Security for loans from Norges Bank: new guidelines

1/2005
Risk premiums in the equity market
What influences the number of bankruptcies?
Small enterprises more exposed to risk then large enterprises
Loans to households other than mortgage loans
Risk associated with loans to various industries
Banks' financial position is more robust today than prior to the banking crisis

2/2004
Derivatives markets are expanding
Use of a central counterparty in the settlement of financial instruments
Is there a connection between house prices and banking crisis?
Relationship between the results of companies listed in the Oslo Stock Exchange and of the Norwegian enterprise sector as a whole
How do enterprises hedge against exchange rate fluctuations?
Risk associated with loans to small enterprises and the new capital adequacy framework
Norges Bank's role in the event of liquidity crisis in the financial sector

1/2004
How Norwegian is the Oslo Stock Exchange?
Fixed-interest mortgages
What drives house prices?
Predictions with two credit risk models
Loan loss provision rate and loan losses
A more robust securities settlement system

Annex 2

Other published material on financial stability

Articles dealing with financial stability issues, written by researchers and economists at Norges Bank and published since *Financial Stability* 2/07, are presented below.

Collateral for loans from Norges Bank – consequences of changes in the rules

Economic Bulletin 1/2008

Bjørn Bakke, Knut Sandal and Ingrid Solberg

Norges Bank requires collateral for all lending to banks. Collateral is provided in the form of securities which are pledged to Norges Bank. The list of eligible securities was changed in 2005. The aim of the changes has been to reduce Norges Bank's risk while ensuring that the borrowing facilities available to banks remain sufficient for payments to be settled and monetary policy to be implemented effectively. This article presents the changes that have been made and analyses the effects on Norges Bank's risk and banks' borrowing facilities. We conclude that the changes in the rules have indeed reduced Norges Bank's risk, and that the rules still provide for adequate borrowing facilities

Clearing and settlement at Norges Bank – a historical review

Economic Bulletin 4/2007

Harald Haare

A clearing and settlement system that resembles the present system did not exist in Norway until 82 years after the establishment of Norges Bank. Norges Bank was assigned a key role as settlement bank and this role is firmly established today. However, the current system is very different from Norges Bank's activities in this field just after it was established in 1816. Norges Bank's responsibility then was to provide a means of payment in Norway, i.e. notes and coins, in which the public had confidence. At an early stage, however, the Bank offered to transfer cash between the Bank's branches. This article primarily describes some important events in the Norwegian clearing and settlement system in the period from 1816 up to World War II.

Liquidity at the Oslo Stock Exchange

Working Paper 2008/9

Randi Næs, Johannes A. Skjeltorp and Bernt Arne Ødegaard

We analyse the relationship between long-term developments in liquidity at the Oslo Stock Exchange and the Norwegian economy for the period 1980 to 2007. We calculate different liquidity measures that capture various dimensions of liquidity over time and across industry groups. Overall, we find that liquidity at the OSE has improved over the sample period. However, the improvement is most pronounced for the largest firms on the Exchange. The paper suggests that liquidity measures provide important real-time information about the current state of the economy as well as market participants' expectations about future economic growth.

Annex 3

Table 1 Structure of the Norwegian financial industry.[1] As at 31 March 2008

	Number	Lending (NOK bn)	Total assets (NOK bn)	Tier 1 capital ratio (%)	Capital ratio (%)
Banks (excluding branches of foreign banks in Norway)	139	1,800	2,661		
Branches of foreign banks	10	330	536		
Mortgage companies	13	379	648		
Finance companies	50	125	142		
State lending institutions	3	203	219		
Life insurance companies (excluding branches of foreign companies in Norway)	11	21	735	11.3	15.1
Non-life insurance companies (excluding branches of foreign companies in Norway)	46	1	137	36.9*	37.2*

*as at 31 Dec. 2007

Memorandum:	(NOK bn)
Market value of equities, Oslo Stock Exchange	1,789
Outstanding domestic bonds and short-term paper debt	922
Issued by public sector and state-owned companies	340
Issued by banks	291
Issued by other financial institutions	72
Issued by other private enterprises	108
Issued by non-residents	111
GDP Norway, 2007	2,289
GDP mainland Norway, 2007	1,709

1) Branches of foreign institutions are included unless otherwise specified

Sources: Norges Bank, Kredittilsynet (Financial Supervisory Authority of Norway), Oslo Stock Exchange and Statistics Norway

Table 2 Financial conglomerates' market shares[1] in Norway in various sectors as at 31 March 2008. Per cent

	Banks	Finance companies	Mortgage companies	Life insurance	Total for conglomerate
DnB NOR (including Nordlandsbanken)[2]	37.9	27.5	14.8	30.9	33.3
Nordea Norway	13.5	8.3	3.6	5.9	10.8
Sparebank 1 alliance[3]	12.1	7.0	3.7	3.2	9.4
Storebrand[4]	1.3	0.0	1.0	27.4	5.3
Terra alliance[5]	5.1	1.5	1.7	0.0	3.7
Danske Bank Norway (Fokus Bank)[6]	6.2	0.0	0.0	0.0	4.2
Total	76.1	44.3	24.8	67.4	66.7

1) Market shares are based on total assets in the various sectors. "Total for conglomerate" is equivalent to the combined total assets of the various sectors in the table. The table does not show an exhaustive list of the activities of the financial conglomerates. For example, non-life insurance, securities funds and asset management have been excluded

2) Excluding DnB NOR's subsidiaries and branches abroad

3) The Sparebank 1 alliance comprises Sparebank 1 Gruppen AS (including subsidiaries) and the 22 banks that own the group

4) Excluding Storebrand's Swedish subsidiary, SPP, acquired in December 2007

5) The Terra alliance comprises Terra Gruppen AS (including subsidiaries) and the 78 banks that own the group

6) Fokus Bank ASA was converted to a branch of Danske Bank as of 1 April 2007

Source: Norges Bank

Table 3 Results and capital adequacy in Norwegian banks for selected quarters[1)]

	2007 Q1		2007 Q2		2007 Q3		2007 Q4		2008 Q1	
	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA
Net interest income	8.82	1.47	8.26	1.35	9.64	1.57	10.00	1.59	10.21	1.55
Other operating income	4.93	0.82	3.95	0.64	3.63	0.59	5.96	0.95	1.09	0.17
commission income	2.60	0.43	2.52	0.41	2.44	0.40	2.67	0.42	2.34	0.36
securities, for. exch. and derivatives	1.80	0.30	1.21	0.20	-0.17	-0.04	0.74	0.12	-2.57	-0.39
Other operating expenses	7.20	1.20	6.34	1.04	6.77	1.10	7.87	1.25	7.21	1.10
personnel expenses	4.06	0.68	3.51	0.57	3.88	0.63	4.16	0.66	4.07	0.62
Operating result before losses	**6.55**	**1.09**	**5.87**	**0.96**	**6.50**	**1.06**	**8.10**	**1.28**	**4.09**	**0.62**
Losses on loans and guarantees	-0.05	-0.01	0.08	0.01	0.04	0.01	-0.08	-0.01	0.30	0.04
Pre-tax profit	**6.63**	**1.11**	**5.82**	**0.95**	**6.49**	**1.06**	**8.47**	**1.34**	**3.80**	**0.58**
Profit after taxes	4.92	0.82	4.34	0.71	4.64	0.76	6.80	1.09	2.98	0.45
Capital ratio (%)	11.6		11.2		11.2		11.7			
Core capital (Tier 1) ratio (%)	8.7		8.6		8.7		9.3			

1) All banks with the exception of branches of foreign banks in Norway. Results as a percentage of average total assets (ATA) are annualised

Sources: Norges Bank, Kredittilsynet (Financial Supervisory Authority of Norway)

Table 4 Results and capital adequacy in Norwegian banks[1)]

	2003		2004		2005		2006		2007	
	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA
Net interest income	30.14	1.99	30.71	1.91	31.75	1.78	34.51	1.62	36.72	1.50
Other operating income	14.31	0.94	15.16	0.94	17.63	0.99	18.11	0.85	18.47	0.75
commission income	7.63	0.50	8.82	0.55	9.74	0.55	10.39	0.49	10.24	0.42
securities, for. exch. and derivatives	5.69	0.37	4.86	0.30	6.66	0.37	6.44	0.30	3.58	0.15
Other operating expenses	25.86	1.70	26.56	1.65	26.49	1.49	28.21	1.32	28.17	1.15
personnel expenses	13.81	0.91	13.77	0.86	14.24	0.80	15.52	0.73	15.61	0.64
Operating result before losses	**18.59**	**1.22**	**19.31**	**1.20**	**22.89**	**1.29**	**24.40**	**1.14**	**27.02**	**1.10**
Losses on loans and guarantees	6.89	0.45	1.25	0.08	-1.08	-0.06	-1.45	-0.07	-0.01	0.00
Pre-tax profit	**12.02**	**0.79**	**19.78**	**1.23**	**24.61**	**1.38**	**27.14**	**1.27**	**27.41**	**1.12**
Profit after taxes	9.41	0.62	14.79	0.92	18.53	1.04	20.64	0.97	20.78	0.85
Capital ratio (%)	12.4		12.2		11.9		11.2		11.7	
Core capital (Tier 1) ratio (%)	9.7		9.8		9.5		8.7		9.3	

1) All banks with the exception of branches of foreign banks in Norway

Sources: Norges Bank, Kredittilsynet (Financial Supervisory Authority of Norway)

Table 5 Banks'[1)] losses on loans to various industries and sectors as a percentage of lending to the respective industries and sectors

Industry / sector	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Agriculture, forestry, fishing	-0.06	0.19	0.29	0.26	0.21	2.73	6.06	1.46	-2.07	-0.52	0.04
Fish-farming, hatcheries	0.40	-0.14	1.25	0.12	0.16	8.05	22.37	3.90	-11.40	-0.15	-0.08
Extraction of crude oil and natural gas	-1.29	-0.08	0.06	0.40	0.08	1.84	1.83	-1.12	-0.03	-0.04	0.00
Manufacturing and mining	0.56	0.54	0.64	0.60	0.97	1.65	1.68	0.53	0.78	-0.25	0.06
Electricity and water supply, construction	-0.13	0.15	0.41	0.69	0.21	0.46	1.66	0.50	0.29	-0.16	0.07
Construction	-0.23	0.18	0.68	1.13	0.42	0.50	2.33	0.56	0.26	-0.13	0.10
Retail trade, hotels and restaurants	0.13	0.26	0.56	0.61	0.80	0.90	0.95	0.43	0.19	0.09	0.10
Wholesaling and agency business	0.11	0.27	0.36	0.27	1.05	0.71	0.65	0.27	0.12	0.12	0.21
Retail trade	0.08	0.27	0.82	1.39	1.05	0.50	0.96	0.27	0.15	0.04	-0.06
Hotels and restaurants	0.02	0.23	0.60	0.50	0.74	0.55	1.06	0.85	0.22	0.03	0.10
Shipping and pipeline transport	0.44	0.31	0.22	0.76	1.43	0.76	0.64	-0.04	0.06	0.06	-0.01
Shipping	0.48	0.26	0.19	0.26	0.18	0.68	0.38	-0.09	0.06	0.06	-0.01
Other transport and communications	-0.16	0.19	0.39	0.37	1.13	1.23	0.71	0.52	0.05	0.05	-0.02
Commercial services and property management	-0.16	0.07	0.09	0.08	0.37	1.51	0.56	0.04	-0.12	-0.04	0.03
Property management	-0.15	0.04	0.08	0.02	0.12	0.68	0.22	0.08	0.02	-0.12	0.02
Other service industries	-0.10	0.07	0.02	0.81	0.54	1.22	1.57	0.34	0.28	0.15	0.07
Total industry market	**0.02**	**0.19**	**0.27**	**0.41**	**0.61**	**1.44**	**1.50**	**0.34**	**-0.12**	**-0.07**	**0.03**
Retail market excl. self-employed	**-0.06**	**-0.01**	**-0.01**	**0.00**	**0.06**	**0.12**	**0.06**	**0.05**	**0.03**	**0.00**	**0.04**
Others[2)]	**0.04**	**0.67**	**0.02**	**0.21**	**0.30**	**0.26**	**0.16**	**0.25**	**-0.14**	**0.03**	**-0.01**
Total lending	**-0.02**	**0.16**	**0.11**	**0.19**	**0.31**	**0.63**	**0.57**	**0.16**	**-0.04**	**-0.03**	**0.03**

[1)] In 2007, the sample included all banks in Norway with the exception of branches of foreign banks in Norway

[2)] Financial institutions, central government and social security administration, municipal sector and foreign sector

Source: Norges Bank

Table 6 Rating by Moody's[1)], total assets, capital adequacy[2)] and return on equity for Nordic financial conglomerates, subsidiaries in Norway and Norwegian banks as of 2008 Q1. Consolidated figures.

	Financial strength	Short-term	Long-term	Total assets (NOK bn)	Core capital (Tier 1) ratio (%)	Capital ratio (%)	Share of interim profits (%)	Return on equity 2006	Return on equity 2007	Return on equity 2008 Q1
Danske Bank	B	P-1	Aa1	3,718	9.5	13.6	100	17.5	15.1	9.8
Nordea Bank AB	B	P-1	Aa1	3,312	7.0	9.2	0	22.9	19.7	15.8
SEB	B-	P-1	Aa2	2,055	8.9	11.1	100	20.8	19.3	9.6
Handelsbanken	B	P-1	Aa1	1,607	6.7	10.3	0	20.9	23.3	12.3
DnB NOR	B-	P-1	Aa1	1,565	7.0	9.4	0	19.5	22.0	5.7
Swedbank	B	P-1	Aa1	1,453	6.5	9.3	100	19.3	18.9	16.8
Glitnir	C-	P-1	A2	260	7.7	11.0	100	39.4	19.3	15.0
Nordea Bank Norge	B-	P-1	Aa1	444	6.8	9.1	0	15.7	13.2	10.9
SpareBank 1 SR-Bank	C+	P-1	Aa3	104	7.6	10.8	50	23.1	20.0	9.0
Sparebanken Vest	C	P-1	A1	77	8.4	9.7	0	17.9	16.2	7.5
SpareBank 1 SMN	C+	P-1	Aa3	70	8.1	12.1		23.7	18.9	7.8
SpareBank 1 Nord-Norge	C+	P-1	Aa3	59	9.3	11.5		24.5	18.6	3.6

1) Rating as of 27 May 2008. Moody's scale of rating: Financial strength: A+, A, A-, B+, B, B-, C+, C, C-,… Short-term: P-1, P-2,… Long-term: Aaa, Aa1, Aa2, Aa3, A1, A2,…

2) The share of interim profits included in the core capital ratio and capital ratio varies between institutions. The higher the share of (positive) interim profits included, the higher are the capital adequacy ratios. If the institution has reported capital adequacy ratios with 0% of interim profits included, these ratios are used in the table. Varying national regulations, including consolidation of life insurance companies, imply that Norwegian financial conglomerates' capital adequacy ratios are not directly comparable with ratios of other Nordic financial conglomerates.

Sources: Banks' websites and Moody's

Table 7 Balance sheet structure, Norwegian banks.[1)] Percentage distribution

	2007	2007 Q1	2008 Q1
Cash and deposits	8.0	8.0	7.6
Securities (current assets)	10.8	10.5	11.9
Gross lending to households, municipalities and non-financial enterprises	68.6	70.0	67.6
Other lending	9.8	9.0	9.7
Total loan loss provisions	-0.3	-0.3	-0.3
Fixed assets and other assets	3.0	2.8	3.4
Total assets	**100.0**	**100.0**	**100.0**
Customer deposits	43.2	43.0	41.2
Deposits/loans from domestic financial institutions	4.7	4.0	5.4
Deposits/loans from foreign financial institutions	11.0	12.8	10.9
Deposits/loans from Norges Bank	1.2	0.1	0.3
Other deposits/loans	2.9	3.1	3.0
Notes and short-term paper	5.1	2.9	5.6
Bond debt	18.3	20.0	18.3
Other liabilities	5.3	5.8	7.3
Subordinated loan capital	2.2	2.5	2.2
Equity	6.0	5.8	5.9
Total equity and liabilities	**100.0**	**100.0**	**100.0**
Memorandum:			
Total assets (NOK billion)	2,579	2,483	2,661

1) All banks with the exception of branches of foreign banks in Norway

Source: Norges Bank

Table 8 Balance sheet structure and profit/loss, covered bond companies[1)]

	2007	2007 Q1	2008 Q1
Balance sheet. Percentage distribution			
Cash and deposits	3.7	2.1	2.4
Securities (current assets)	1.4	0.5	1.4
Gross lending, of which:	94.7	97.1	95.5
Repayment loans	72.4	96.4	69.2
Loan loss provisions	0.0	0.0	0.0
Fixed assets and other assets	0.3	0.3	0.8
Total assets	**100.0**	**100.0**	**100.0**
Notes and short-term paper	2.6	4.4	1.6
Bond debt	44.7	6.8	57.2
Loans	46.2	82.4	34.9
Other liabilities	1.6	0.3	1.7
Subordinated loan capital	1.0	1.6	0.9
Equity	4.0	4.4	3.6
Total equity and liabilities	**100.0**	**100.0**	**100.0**
Profit/loss. Percentage of ATA (annualised)			
Net interest income	0.45	0.32	0.56
Operating expenses	0.27	0.26	0.26
Losses on loans and guarantees	0.02		0.02
Pre-tax profit	0.15	0.01	0.34
Memorandum:			
Total assets (NOK billion)	119	52	146

1) Mortgage companies with the right to issue covered bonds in accordance with the regulation that came into force on 1 June 2007. In 2007, the figures are for three companies: DnB NOR Boligkreditt, Terra Boligkreditt and SpareBank 1 Boligkreditt. In 2008, five companies: the above plus BN Boligkreditt and Storebrand Kreditt. Common to the five is that the covered bonds are backed by mortgages.

Source: Norges Bank

Table 9 Key figures	Average				Projections		
	1987-1993	1994-2006	2007	2008 Q1	2008	2009	2010-2011
Households							
Debt burden[1)]	148	142	196		205	213	222
Interest burden[2)]	9.6	5.6	6.7		8.2	7.8	7.5
Borrowing rate after tax	8.3	4.7	4.1		4.9	4.5	4.1
Real interest rate after tax[3)]	4.0	2.7	2.0		2,6	1,7	1,4
Net financial wealth[4)]	8	46	44				
Unemployment[5)]	4.7	4.1	2.5		2.5	3.0	3.9
Rise in house prices[6)]	-1.3	10.4	11.3		0	5.3	4.8
Enterprises							
Debt burden[7)]	1377	809	468		578	613	602
Interest burden[8)]	49	28	16		18	19	18
Return on total assets[9)]	2	5	11				
Equity-to-assets ratio[10)]	27	38	42				
Banks[11)]							
Profit/loss[12)]	-0.1	1.2	1.1	0.6			
Interest margin[13)]	5.2	3.0	2.3	2.3			
Non-performing loans[14)]		2.0	0.6	0.6			
Loan losses[15)]	2.3	0.2	0.0	0.1			
Lending growth[16)]	4.7	11.2	12.9	9.7			
Return on equity[17)]		15.3	15.9	8.3			
Capital ratio[18)]	10.3	12.4	11.7				

1) Loan debt as a percentage of liquid disposable income adjusted for estimated reinvested share dividends for 2000–2005 and redemption/reduction of equity capital for 2006–2011

2) Interest expenses after tax as a percentage of liquid disposable income adjusted for estimated reinvested share dividends for 2000–2005 and redemption/reduction of equity capital for 2006–2011 plus interest expenses

3) Household borrowing rate after tax deflated by the 12-quarter moving average (centred) of inflation measured by the CPI

4) Households' total assets less total debt as a share of disposable income adjusted for estimated reinvested share dividends for 2000–2005 and redemption/reduction of equity capital for 2006–2011

5) Comprises all groups 16–74 years

6) Based on house prices from the Association of Norwegian Real Estate Agents, the Association of Real Estate Agency Firms, ECON Pöyry and Finn.no

7) Enterprises' total debt as a percentage of profits before tax and depreciation. Limited enterprises in Norway. Exclusive oil/gas, bank/insurance and public sector. Figures only include enterprises with debt

8) Enterprises' total interest costs as a percentage of profits before tax, interest costs and depreciation. Limited enterprises in Norway. Exclusive oil/gas, bank/insurance and public sector. Figures only include enterprises with debt

9) Enterprises' profits before tax as a percentage of total assets. Llimited enterprises in Norway. Exclusive oil/gas, bank/insurance and public sector

10) Book equity as a percentage of total assets. Limited enterprises in Norway. Exclusive oil/gas, bank/insurance and public sector

11) Annual accounts and stock at year-end form the statistical basis. Figures for profit/loss, loan losses, lending growth and return on equity as of 2008 Q1 are annualised

12) Pre-tax profit as a percentage of average total assets. For the period 1987–1989 branches of foreign banks in Norway and branches of Norwegian banks abroad are included. This does not apply to other periods

13) Percentage points. Average lending rate minus average deposit rate for all banks in Norway, based on stock at year-end

14) Non-performing loans as a percentage of gross lending to households, non-financial enterprises and municipalities

15) Loan losses as a percentage of gross lending to households, non-financial enterprises and municipalities for all Norwegian banks except branches of foreign banks in Norway and branches of Norwegian banks abroad

16) Per cent. Annual growth in lending to the corporate and retail market from all banks in Norway

17) Net profit as a percentage of average equity for all Norwegian banks except branches of foreign banks in Norway and branches of Norwegian banks abroad. The average for the period 1987–1993 cannot be calculated due to insufficient data on equity

18) Regulatory capital to risk-weighted assets for all Norwegian banks except branches of foreign banks in Norway. The average for the period 1987–1993 is for the years 1991–1993 due to lack of data

Sources: Statistics Norway, Association of Norwegian Real Estate Agents, ECON Pöyry, Finn.no, Association of Real Estate Agency Firms and Norges Bank

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