NORGES BANK

Financial Stability

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Financial Stability 2/10

NORGES BANK

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Norges Bank's reports on financial stability

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

Financial stability is one of Norges Bank's primary objectives in the work on promoting economic stability. Norges Bank's tasks and responsibilities in this area are set out in Section 1 of the Norges Bank Act, which states that the Bank shall "*promote an efficient payment system domestically as well as vis-à-vis other countries*", but that the Bank may also "*implement any measures customarily or ordinarily taken by a central bank*". Section 3 states that "*the Bank shall inform the ministry when, in the opinion of the Bank, there is a need for measures to be taken by others than the Bank in the field of monetary, credit or foreign exchange policy*".
Norges Bank acts as a lender of last resort. The central bank shall provide extraordinary liquidity to individual institutions in the financial sector or to the banking system when liquidity demand cannot be satisfied from alternative sources. The role of lender of last resort provides an independent justification for Norges Bank's function in monitoring the financial system as a whole and its particular focus on the risk of systemic failure.

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 broad overview of risks and developments in the Norwegian payment system.

Editorial

Norway should make a rapid transition to Basel III

In Norway, there are prospects for fairly solid growth in domestic demand for goods and services in the years ahead. This reflects favourable prices for domestically produced goods and services, increased oil revenue spending and persistently, fairly low real interest rates. A large share of demand will be met by imports of goods and services because the price and cost level in Norway is very high. Housing services can only be produced domestically. With strong growth in demand, there is a risk that house price inflation will pick up, with an attendant increase in household debt accumulation. This will place demands on Norges Bank's macroprudential surveillance of the financial sector.

Finanstilsynet's new guidelines for prudent residential mortgage lending will make a contribution. In addition, the Basel Committee on Banking Supervision has adopted new standards for bank capital and liquidity. In order to mitigate the risk of a tightening in bank lending growth in an environment of weak growth, the Basel Committee has provided banks with a long transition period. Norwegian banks are faring well and growth in the Norwegian economy now seems to have gained a firm footing. The new regulation is not without shortcomings. Norwegian banks should therefore satisfy the new minimum requirements with a good margin. As the large Nordic banks are active in several countries, the Nordic authorities should cooperate on the introduction of the new regulation.

Discretionary measures have also been proposed. A new instrument that has been recommended is the use of countercyclical buffer requirements when there is excess growth in the volume of credit. Pending the introduction of countercyclical buffers, higher capital requirements should be imposed on banks in order to restrain future imbalances.

In the years ahead when banks are likely to encounter increased demand, funding must be structured on a much sounder basis than before the financial crisis. As witnessed at that time, key funding sources can suddenly dry up. Banks should seek to increase their deposit-to-loan ratio and aim for more long-term funding. Norges Bank will closely monitor banks' funding in the years ahead. When setting the requirements for banks' access to the central bank's lending facilities, it may be relevant to give weight to their liquidity management.

Svein Gjedrem
30 November 2010

1. Assessments of financial stability

The outlook for financial stability in the short and medium term is broadly unchanged since the May report. Banks' earnings increased somewhat, primarily owing to lower loan losses. This past year many banks have boosted their capital adequacy ratios. Banks still rely to a considerable extent on short-term market funding. The risk for banks is particularly due to uncertainty concerning developments in the international economy and financial markets and vulnerability in relation to high debt burdens among Norwegian households. Given that developments in the Norwegian economy are in line with the baseline scenario, banks are expected to post solid earnings ahead.

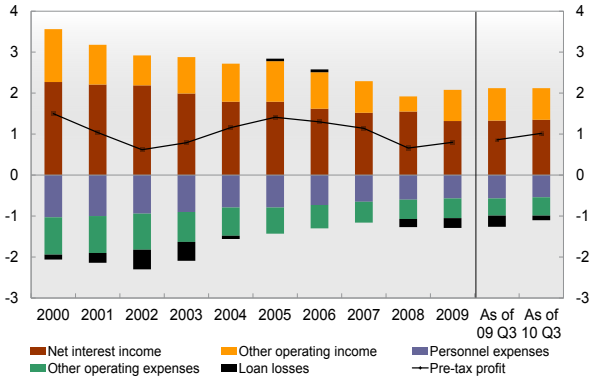
A Developments in the Norwegian banking system

1. Capital and earnings

Banks' earnings are solid, with Tier 1 capital ratios improving in the past year

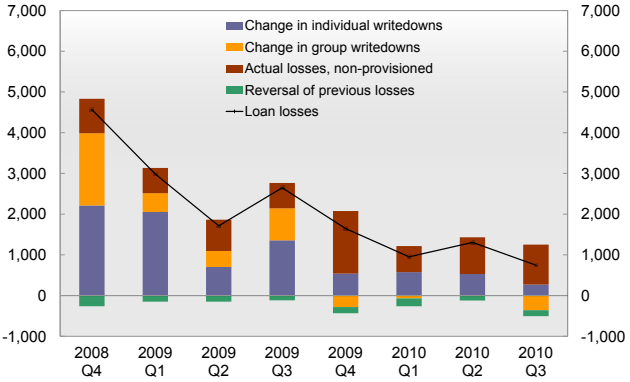
Banks' earnings have increased somewhat, mainly owing to lower loan losses. In the first three quarters of 2010, banks' earnings as a percentage of average total assets were slightly below the average for 2000 – 2006 (see Chart A.1). Net interest income as a percentage of average total assets fell considerably from 2008 to 2009, but was at the 2009 level for the first three quarters of 2010. Compared with the cost of long-term market funding, banks' lending rates on loans to enterprises may appear low. To prevent a renewed fall in net interest income, it is important that banks' pricing of loans ensures coverage of all costs connected with the loan. Banks' interest margins are stable. Lower money market rates in 2010 Q3 resulted in higher lending margins.

Chart A.1 Banks'[1] pre-tax profits as a percentage of average total assets. Annual figures. 2000 – 2009. Three first quarters of 2009 and 2010



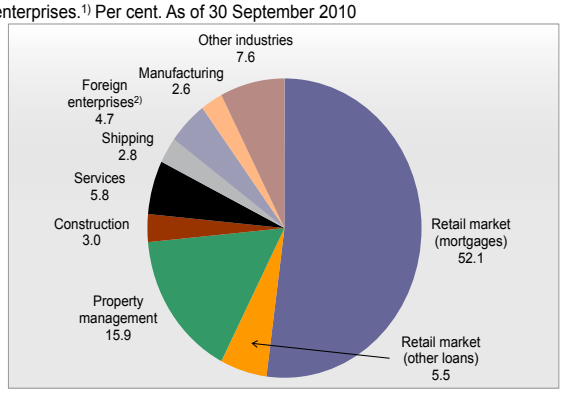
1) All banks excluding branches of foreign banks in Norway
Source: Norges Bank

Chart A.2 Components of banks'[1] recognised loan losses. In millions of NOK. Quarterly figures. 2008 Q4 – 2010 Q3



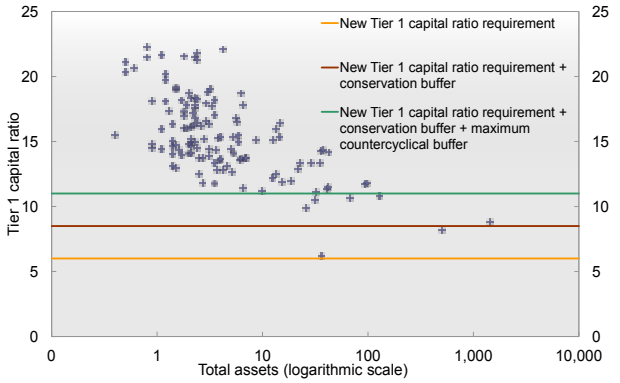
1) All banks in Norway
Source: Norges Bank

Chart A.3 Distribution of banks and OMF covered bond mortgage companies' loans to the retail market, corporate market and foreign enterprises.[1] Per cent. As of 30 September 2010



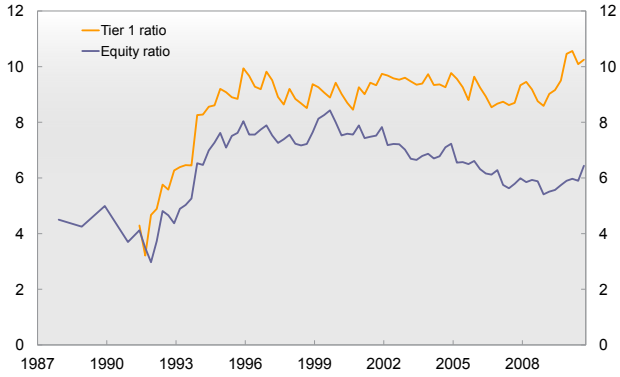
1) All banks and OMF covered bond mortgage companies in Norway
2) Shipping accounts for a large share of lending to foreign enterprises
Source: Norges Bank

Chart A.4 Banks[1)] Tier 1 capital ratio. Per cent. Total assets. In billions of NOK. As of 2010 Q3



1) All banks excluding branches of foreign banks in Norway
Source: Norges Bank

Chart A.5 Banks[1)] Tier 1 capital ratio and equity ratio. Per cent. Quarterly figures.1987 Q4 – 2010 Q3



1) All banks excluding branches of foreign banks in Norway. Equity ratio prior to 1990 is for all banks
Sources: Finanstilsynet (Financial Supervisory Authority of Norway) and Norges Bank

Table A.1 Average risk weights on loans secured on dwellings. Per cent. Consolidated numbers for 2009 and 2010

Bank	Risk weight
Norwegian banks (IRB)	
SpareBank 1 SR-Bank	10
DnB NOR Bank	11
SpareBank 1 Nord-Norge	11
SpareBank 1 SMN	12
Nordea Bank Norge	13
Sparebanken Vest	14
Nordic banks (IRB)	
Handelsbanken	7
Swedbank	7
Danske Bank	10
Nordea	11
SEB	17
Norwegian banks (Standardised approach)	
Loans with loan-to-value ratio of less than 80 per cent	35

Sources: Capital adequacy reports and quarterly reports by banks and Norges Bank

In the first three quarters of 2010, other operating income was broadly unchanged from the corresponding period in 2009, though this is due to a one-time gain.[1] Overall, personnel and other operating expenses as a percentage of total assets were at the same level as in the first three quarters of 2009.

Banks' loan losses were moderate in the first three quarters of 2010 (see Chart A.2). In this period loan losses accounted for around 0.2% of loans to customers on an annualised basis, half of the figure for 2009. The share of non-performing loans is at a moderate level.

With large stocks of outstanding loans secured on property (see Chart A.3), credit risk for banks and OMF covered bond mortgage companies depends on developments in property prices. A sharp decline in property prices could have an impact on the stability of the entire banking system. Nevertheless, credit risk per krone on loans to the commercial property sector is often lower than in other industries.

The recapitalisation of banks with low Tier 1 capital ratios towards the end of 2009 has led to an increase in capital adequacy in most Norwegian banks. In September the Basel Committee presented its recommendations for new capital standards (see Box 2). The new minimum Tier 1 capital ratio will be 6%, to apply from 2015. Norwegian banks already meet this requirement (see Chart A.4). If the mandatory capital conservation buffer is added on top of the Tier 1 capital standards, only two banks do not comply. And if the maximum countercyclical buffer is added in addition, there are a few more banks that do not fully meet this requirement. The larger banks continue to have the lowest Tier 1 capital ratios. There are international discussions of whether extra capital adequacy requirements should be imposed on large, systemically important banks (see Box 4).

Banks' capital adequacy is strongly influenced by the weights they apply to calculate their risk-weighted assets. Banks using internal rating-based models (IRB approach) apply substantially lower risk weights on residential

1 Approximately 15% of other operating income in the first three quarters of 2010 was attributable to the merger of Nordito (owner of BBS and Teller) and Danish PBS Holding in 2010 Q2.

mortgages than banks using the standardised approach (see Table A.1). This is a paradox, since loans secured on dwellings are a homogeneous product, ordinarily with minor differences in risk.[2]

At the aggregate level, Norwegian banks have an equity ratio of around 6% (see Chart A.5). This is more than 2 percentage points lower than the equity ratio in 1999, but at the same time somewhat higher than the Basel Committee's proposed minimum requirement for the non-risk-based Tier 1 capital ratio (see Box 2). The non-risk-based Tier 1 capital ratio is not directly comparable with the equity ratio. The equity ratio is calculated before regulatory deductions, whereas the Tier 1 capital ratio is calculated after regulatory deductions and includes approved hybrid capital and off-balance sheet items. Roughly speaking, the non-risk-based Tier 1 capital ratio for the larger Norwegian banks was 1 – 2 percentage points lower than the equity ratio in 2009 Q1.

Prior to the 1988 – 1993 banking crisis, banks had an equity ratio of somewhat over 4%. This proved to be too low. After banks were recapitalised during the banking crisis, banks' equity ratios were higher than today. Nor was the composition of banks' loan portfolios very different from what it is now (see Chart A.6) and overall credit risk is probably not substantially lower today than it was following the banking crisis of 1988 – 1993. This may indicate that banks' current equity ratio is at the low end of the spectrum.

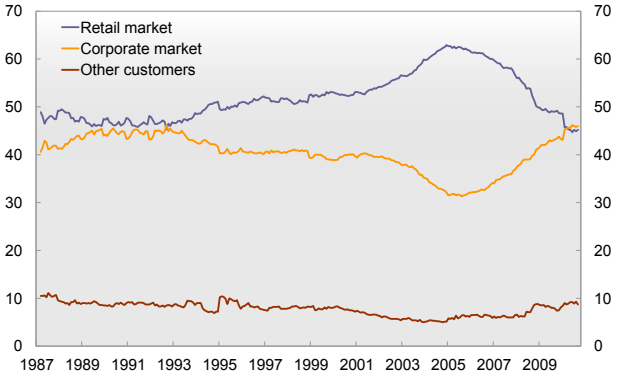
2. Liquidity

Banks continue to rely heavily on short-term market funding

Customer deposits fund a diminishing share of bank and OMF covered bond mortgage company lending (see Chart A.7). The recent years' increase in banks' deposit-to-loan ratios is due to substantial transfers of loans to OMF covered bond mortgage companies.

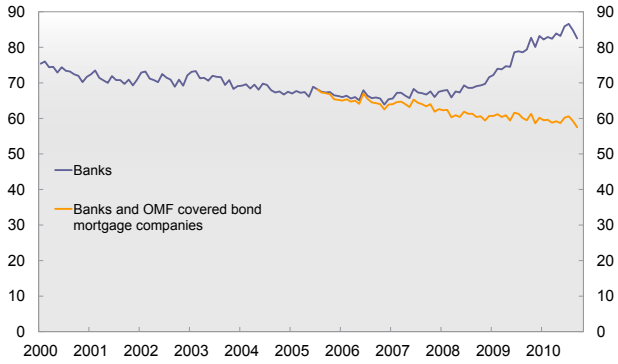
2 Under transitional rules, originally to apply until end-2009, but extended to end-2011, the risk-weighted assets of IRB banks under the Basel II regulations cannot be reduced by more than 20% relative to what it would have been under Basel I. This floor means that many IRB banks do not yet fully benefit from their low risk weights when calculating their capital adequacy ratios.

Chart A.6 Distribution of banks'[1)] gross lending to different customer groups. Shares in per cent. Monthly figures. March 1987 – September 2010



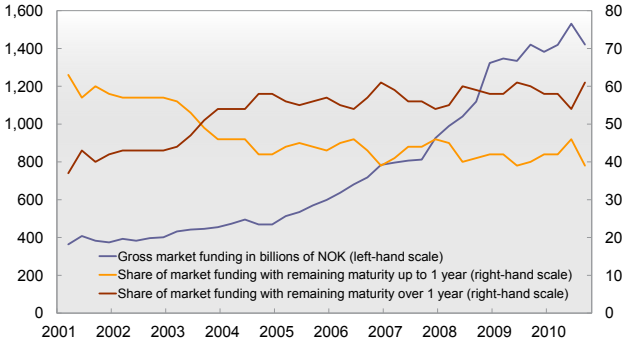
1) All banks excluding branches of foreign banks in Norway
Source: Norges Bank

Chart A.7 Banks and OMF covered bond mortgage companies'[1)] deposit-to-loan ratio for customers. Per cent. Monthly figures. January 2000 – September 2010



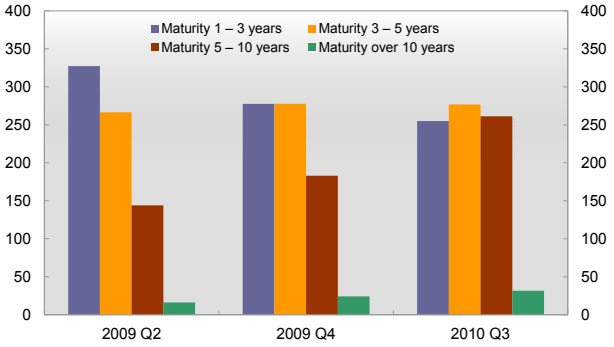
1) All banks and covered bond mortgage companies excluding branches and subsidiaries of foreign banks in Norway
Source: Norges Bank

Chart A.8 Banks and OMF covered bond mortgage companies'[1)] gross market funding. In billions of NOK. Distribution of market funding. Per cent. Quarterly figures. 2001 Q1 – 2010 Q3



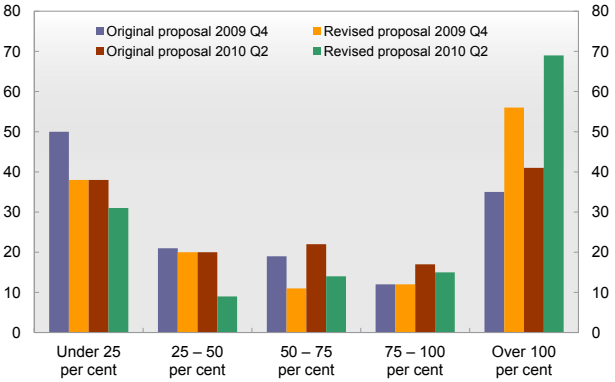
1) All banks and OMF covered bond mortgage companies excluding branches and subsidiaries of foreign banks in Norway
Source: Norges Bank

Chart A.9 Banks and OMF covered bond mortgage companies[1)] long-term bond financing by remaining maturity. In billions of NOK. As of 2009 Q2 and Q4 and 2010 Q3



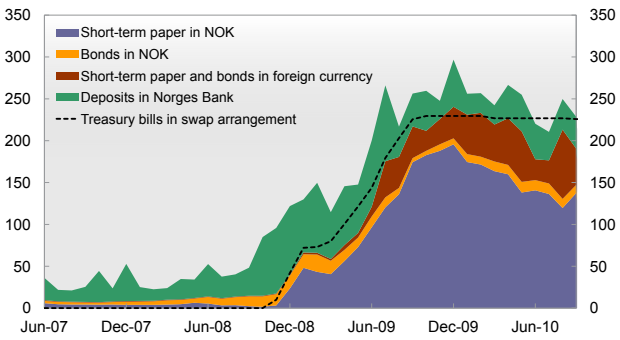
1) All banks and OMF covered bond mortgage companies excluding branches and subsidiaries of foreign banks in Norway
Source: Norges Bank

Chart A.10 Banks[1)] liquid assets as a percentage of required liquid assets. Number of banks. As of 2009 Q4 and 2010 Q2



1) All banks excluding branches of foreign banks in Norway
Source: Norges Bank

Chart A.11 Norwegian banks[1)] deposits in Norges Bank and government and government-guaranteed bonds and short-term paper. Outstanding Treasury bills in connection with swap arrangement. In billions of NOK. Monthly figures. June 2007 – September 2010



1) All banks excluding branches of foreign banks in Norway
Source: Norges Bank

Given lower equity and deposit-to-loan ratios, banks and OMF covered bond mortgage companies must increase their share of market funding. Total market funding has doubled in the past four years (see Chart A.8). Up until the end of 2010 Q2, the share of market funding with residual maturities of up to one year increased to its immediate pre-crisis level, but fell in Q3. The level of short-term funding must be viewed in conjunction with the size of banks' holdings of liquid assets. At the end of Q2, net short-term market funding was 31% of gross short-term market funding. This percentage varies considerably.

A positive trend is that banks and OMF covered bond mortgage companies increasingly issue bonds with maturities of over five years. This has raised the residual maturity of long-term market funding and is contributing to more stable funding (see Chart A.9). One explanation for this trend may be early transition to the Basel Committee's proposed quantitative liquidity standards (see Box 2).

In July 2010 the Basel Committee softened the liquidity coverage and net stable funding requirements it had announced previously. Under the relaxed requirements, a larger number of Norwegian banks meet the liquidity buffer requirements, although many banks still do not (see Chart A.10). Even so, the trend is in the right direction. A larger number of banks met the liquidity buffer requirements at the end of 2010 Q2 than was the case at the end of 2009. Implementation of the net stable funding ratio requirements has been deferred to 2018. Most Norwegian banks meet these requirements as they are now formulated.

Holdings of liquid assets are very important with regard to banks' ability to meet Basel Committee liquidity buffer requirements. With the government securities obtained through the swap arrangement, banks' holdings of liquid assets soared in 2009 (see Chart A.11). Banks have sold government securities through 2010. At the end of September they owned approximately 60% of the government securities they had obtained through the swap arrangement. The volume of outstanding government securities will decline as swap agreements expire, making it more challenging for banks to maintain the level of

liquid assets ahead. However, this depends on the definition of liquid securities in the new regulations.[3]

3. Structure

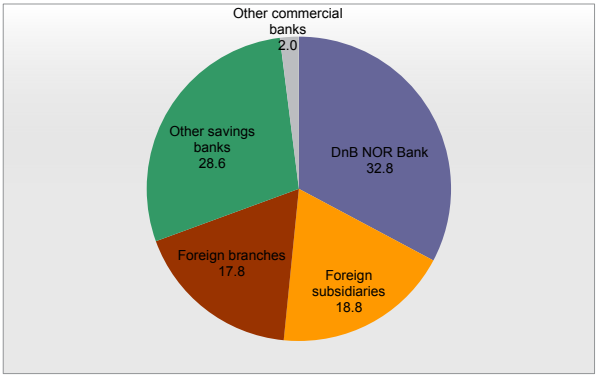
The banking sector is diverse

The resilience of the banking system to shocks depends on the structure of the banking sector. There is an advantage to having several strong participants in all segments of the banking market and a structure where the failure of one participant will not cause serious damage either to other banks or to overall lending. In Norway, loans secured on dwellings are a standardised product characterised by a large number of providers and strong competition. Corporate lending is a more differentiated service requiring greater specialist expertise. To serve large Norwegian corporate customers, banks need to be a certain size. Few Norwegian banks are capable of competing for large corporate customers. Foreign banks, mainly Scandinavian, hold considerable shares in the Norwegian banking market, especially in the corporate lending market (see Chart A.12).

The Norwegian banking sector is diverse. DnB NOR Bank is by far the largest bank, with a market share of approximately a third of lending to both the corporate and retail markets (see Table 3 in Annex 3). The next-largest category comprises Nordea Bank Norway, some branches of foreign banks and some fairly large regional savings banks. There are also a number of smaller banks in Norway, primarily savings banks. A number of these have the advantage of local knowledge and proximity to their customers. But many banks are too small to maintain a diversified funding profile on their own, and they will have difficulty complying with an increasingly comprehensive regulatory framework. New legislative rules on types of capital and forms of organisation in the savings bank sector in summer 2009 made savings bank mergers and acquisitions easier. Following the changes, the number of savings banks has declined from 121 to 114, a faster reduction than previously.

3 For a closer analysis of the Norwegian market for government securities and OMF covered bonds, see Haseeb Syed (2010): The Norwegian market for government securities and covered bonds in the light of new liquidity buffer requirements for banks. *Economic Commentaries* 7/2010.

Chart A.12 Banks and OMF covered bond mortgage companies'[1)] lending to the corporate market. Market shares. Per cent. As of 30 September 2010



1) All banks and OMF covered bond mortgage companies in Norway
Source: Norges Bank

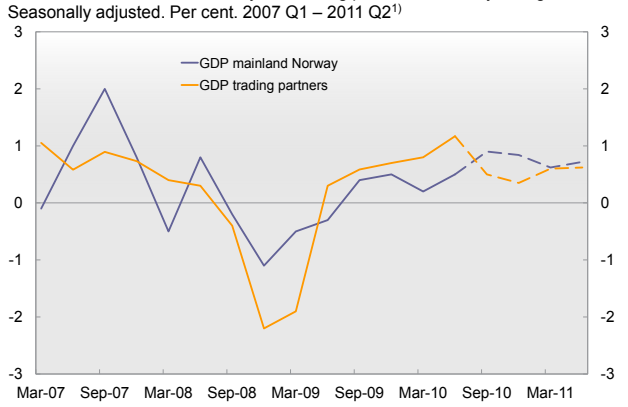
Regulating large systemically important banks is the topic of international discussion. The G20 countries have agreed that systemically important banks should have loss absorbing capacity beyond the minimum capital adequacy standards.[4] A systemically important bank may also be directed to prepare a "living will" for orderly liquidation if the bank ends up in serious financial trouble.

Banks should have access to robust sources of equity and a sufficient degree of freedom to make structural adjustments. For savings banks, conversion to a limited liability savings bank may be an alternative in order to obtain access to more robust sources of equity. Equity certificate holders in a savings bank are entitled to a maximum influence of 40%. In a limited liability company, owners' influence is proportional to their shareholding. Moreover, shares are a more familiar financial instrument. A savings bank organised as a limited liability savings bank will therefore more easily attract fresh equity.

Limited liability savings banks can be acquired by or merged with commercial banks. The conversion of several large savings banks to limited liability savings banks could lead to major restructuring of the banking sector. The extent to which such structural changes are desirable in the interest of financial stability will depend on how the changes affect competition and systemic risk in the banking sector.

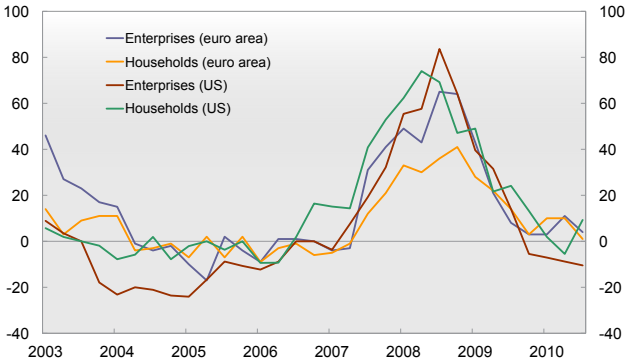
4 This summer the US imposed stricter capital regulations on systemically important financial institutions. In Switzerland an expert group has proposed that the two largest banks have a Tier 1 capital ratio of 19% from 2019.

Chart B.1 GDP mainland Norway and trading partners. Quarterly change. Seasonally adjusted. Per cent. 2007 Q1 – 2011 Q2[1)]



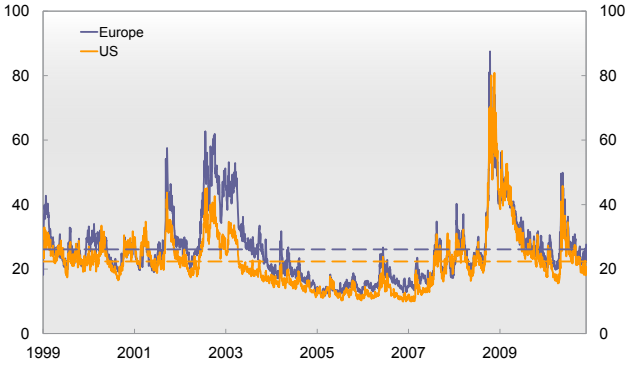
1) Projections for 2010 Q3 – 2011 Q2
Sources: Statistics Norway, OECD, Thomson Reuters and Norges Bank

Chart B.2 Bank lending surveys in US and euro area. Percentage of banks that have tightened credit standards minus percentage of banks that have eased credit standards. Quarterly figures. 2003 Q1 – 2010 Q3



Sources: Federal Reserve and the European Central Bank (ECB)

Chart B.3 Implied volatility[1)] derived from equity options. Per cent. Daily figures. 4 January 1999 – 23 November 2010



1) Market participants' expectations as to future fluctuations in equity prices. The broken lines show the average for the period 1999 – 2010
Sources: Thomson Reuters and Norges Bank

B Risks to the Norwegian banking system from the external environment

4. Macroeconomic conditions

High uncertainty regarding developments in the international economy

Developments in the international economy and financial markets continue to be turbulent. Growth in the world economy has picked up since the May report, but the outlook remains uncertain. The recovery of the global economy is expected to continue, but at a slower pace of growth (see Chart B.1). Especially in the US and in some vulnerable European economies, growth prospects have weakened. The upturn following the financial crisis has been underpinned by expansionary monetary and fiscal policies. The accumulation of substantial budget deficits during the financial crisis has resulted in the need for fiscal policy tightening in many advanced countries. An increase in global private sector demand is not expected to be sufficient to offset lower public sector demand in the short term. In many advanced countries household demand is being dampened by high unemployment, loss of wealth in the form of a fall in house prices, pay cuts and the prospect of higher taxes. In countries where private sector debt is also high, such as the US, Ireland, Portugal and Spain, this sector will also seek to reduce debt burdens ahead. Growth in emerging market economies is strong, but especially in Asia these countries are also dependent on sustained strong demand from advanced countries.

The combination of low growth, high sovereign debt and a continued vulnerable banking sector in many countries poses a risk of new negative spirals between the financial sector and the real economy. Recently it has been observed that European countries with high public debt and large budget deficits are faced with high credit premiums and that turbulence in one country can quickly have an impact on other vulnerable economies. In Europe and the US in particular, banks are still vulnerable. In the European Central Bank (ECB) lending survey, European

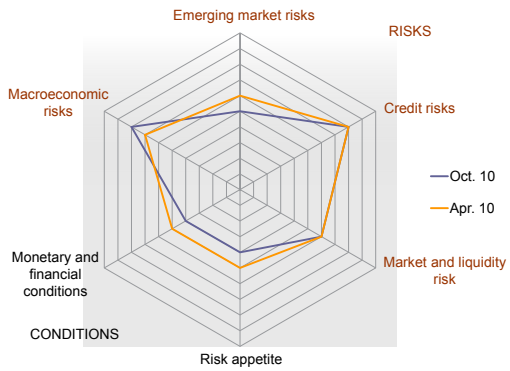
banks report continued tightening of credit standards for enterprises (see Chart B.2). Banks reported that market turbulence contributed to tightening in Q2, since it made funding less readily available. However, banks reported improved availability of funding in Q3. Furthermore, in the US and several European countries there is an unusually large number of houses for sale.

Financial markets stabilised somewhat through autumn (see Chart B.3). However, the IMF reports that high and rising government debt in the global financial system has led to greater uncertainty regarding the macroeconomic outlook (see Chart B.4). Risk premiums on euro government bonds calculated as a differential over German government bonds are high in several countries (see Chart B.5). Risk premiums fell when the EU and the IMF rescue packages were announced in May[5], but have risen recently owing to renewed turbulence. In November, Ireland also turned to the EU and IMF for financial assistance. There is also uncertainty as to the effects of persistently low long interest rates on investors' risk behaviour (see Box 5).

Norwegian banks are vulnerable to the turmoil abroad. Uncertainty regarding high sovereign debt and solvency at several European banks may result in a renewed increase in premiums in money and credit markets, making it more expensive for Norwegian banks to obtain funding. If the turbulence results in lower-than-expected economic activity abroad, the turbulence may also affect Norwegian banks through lower demand for export-oriented enterprises and reduced domestic growth (see Section 2). Weak nominal wage growth and idle production capacity abroad may pose problems for Norwegian competitiveness. Both enterprises and employees will then have to lower their income expectations. Private sector debt is also high in Norway. A downward adjustment of expected income may trigger a need to pay down debt.

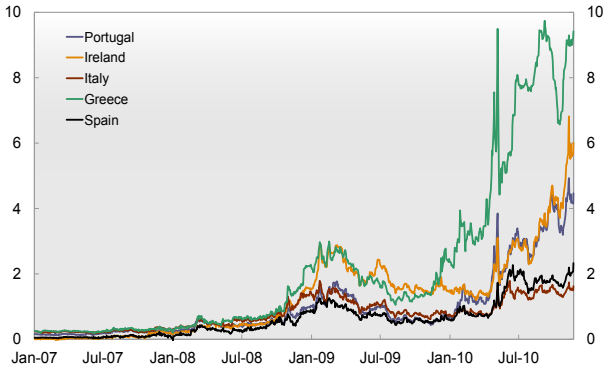
5 On 10 May the EU and the ECB implemented a comprehensive financial assistance package for EU states, including the establishment of the European Financial Stability Facility, with a total volume of EUR 500bn for lending to troubled states. The IMF is providing an additional EUR 250bn loan package.

Chart B.4 The IMF's Global Financial Stability Map[1)]



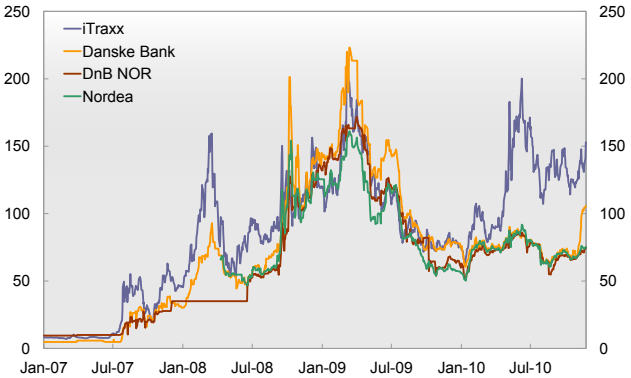
1) *Risks*: Closer to centre signifies less risk. *Conditions*: Farther from centre signifies improved monetary and financial conditions or increased risk appetite.
Source: IMF

Chart B.5 Government bond spreads. Compared with German government bonds. 10-year maturity. Percentage points. Daily figures. 1 January 2007 – 23 November 2010



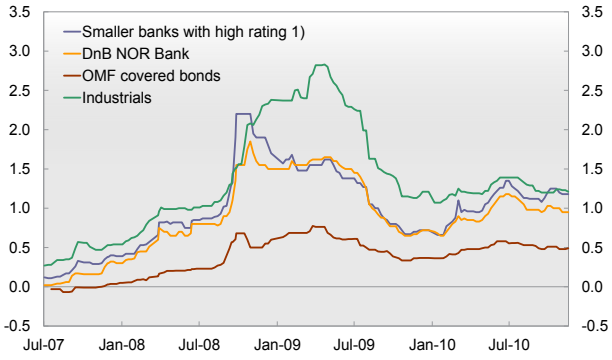
Source: Thomson Reuters

Chart B.6 CDS prices. iTraxx Senior Financials[1)] and Nordic banks. Basis points. 1 January 2007 – 23 November 2010



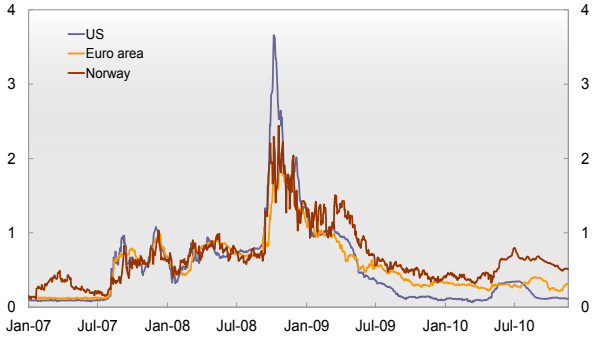
1) iTraxx Senior Financials comprises 25 large European financial institutions
Source: Bloomberg

Chart B.7 Indicative risk premiums on 5-year Norwegian corporate bonds, bank bonds and OMF covered bonds. Spreads against swap rates. Percentage points. Weekly figures. 2 July 2007 – 17 November 2010



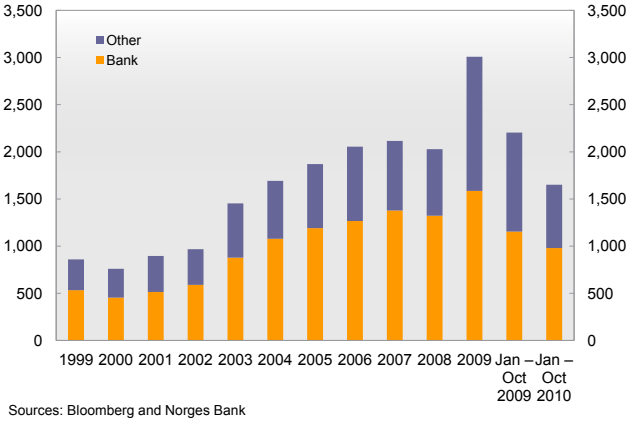
1) Banks with total assets between NOK 5bn and 15bn and rated A by DnB NOR Markets
Source: DnB NOR Markets

Chart B.8 Spread between 3-month money market rate and market expectations as to the key rate.[1)] Percentage points. 5-day moving average. Daily figures. 5 January 2007 – 23 November 2010



1) Expected key rates are derived from Overnight Indexed Swaps (OIS). OIS for Norway estimated by Norges Bank
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart B.9 Bonds issued by European companies. Total issuance in all currencies. In billions of USD. 1999 – 2010



Sources: Bloomberg and Norges Bank

5. Money and credit markets

Although Norwegian banks currently have ample access to funding in money and credit markets, this can change quickly

Nordic banks weathered the turbulence well in 2010. CDS prices, reflecting default probabilities, are considerably lower for Nordea and DnB NOR than for European banks as a whole (see Chart B.6). CDS prices for Danske Bank have shown a marked increase recently, however. Danske Bank has higher loan exposures to Ireland than the other Nordic banks.

The risk premium for Norwegian bank bonds is approximately unchanged since the May report (see Chart B.7). The risk premium on short-term money market funding has fallen somewhat recently (see Chart B.8). This premium is nevertheless higher than before the financial crisis. Risk premiums are also higher in Norway than in other countries, reflecting a poorly functioning Norwegian money market. To improve the redistribution of liquidity reserves in the Norwegian interbank market and bolster money market efficiency, Norges Bank is introducing a new system for managing bank reserves to be implemented from the second half of 2011.[6] Under the new system, the interest rate on a defined volume of deposits in Norges Bank (a quota) will be equivalent to the key policy rate. The interest rate on deposits in excess of the quota will be lower.

In Europe a somewhat smaller volume of bank and corporate bonds have been issued year to date than in the same period in 2009 (see Chart B.9). Matured bonds in European banks exceed the volume of new issues. So far this year, the volume of Norwegian bank bond issuance has increased somewhat compared with the same period in 2009, while the volume of Norwegian corporate bond issuance has fallen. At the same time there have been fewer issues of OMF covered bonds, since a large number of securities in 2009 were issued in connection with the

6 See Norges Bank's consultation submission from 6 October on "Changes in Regulation on the Access of Banks to Borrowing and Deposit Facilities in Norges Bank etc.": http://www.norges-bank.no/templates/article____77465.aspx

swap arrangement. With the exception of some periods of high global market uncertainty, Norwegian banks and covered bond mortgage companies have had ample access to funding in the money and credit markets in the past six months. Going forward, a large portion of bank debt must be refinanced. Banks abroad have not increased to an appreciable degree the maturities of their funding after the financial crisis. When both governments and banks need to borrow at the same time, banks' funding costs may increase. Nevertheless, the Basel Committee's decision to extend the phase-in period for the new capital and liquidity standards means that funding needs linked to the new standards are lower than at the time of publication of the May report.

6. Households

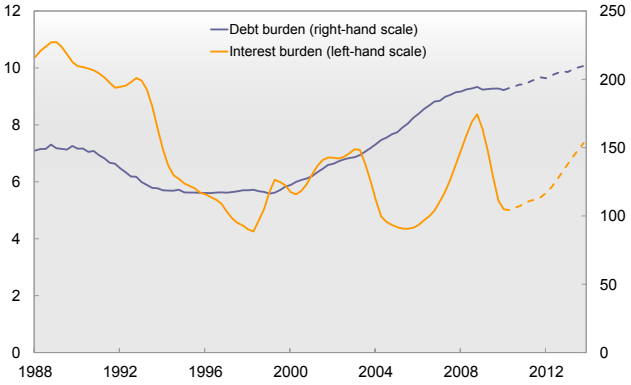
High debt burdens increase household sector vulnerabilities

Growth in household debt (C2) has remained stable at just above 6% since the May report. In Norges Bank's Q3 Survey of Bank Lending, banks reported a tightening of lending standards for first-home purchases. This is in keeping with Finanstilsynet's guidelines for prudent residential mortgage lending.[7] At the same time, household loan demand has edged down. Going forward, debt growth is expected to drift upwards (see Table 9 in Annex 3).

Debt burdens remain elevated and are expected to show a further increase ahead (see Chart B.10). The share of households with very high debt burdens is still on the rise. In 2008, 11% of households had a net debt burden of over 500% (see Chart B.11). These households carry a third of total household debt. Households in the age group 25 – 34 have on average the highest debt burden. Many of these households have student loans and comprise first-time home buyers. Households with a high debt burden will be vulnerable to a loss of income and higher interest rates. With a high debt burden, the interest burden fluctuates more with the level of interest rates. In 1995, a 0.25 percentage point increase in lending rates for households

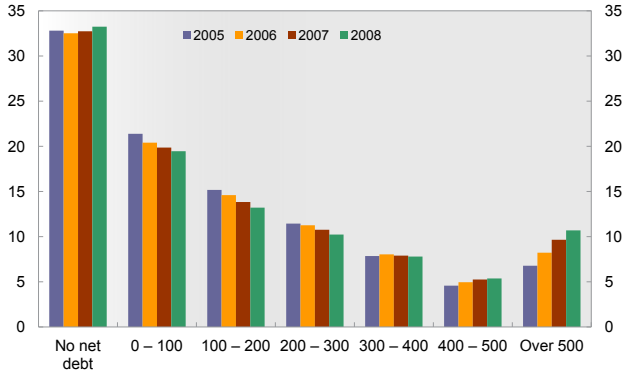
7 According to Finanstilsynet, 20 of the 30 largest banks report that the new guidelines have resulted in changes in their own guidelines (see Finanstilsynet's report *Financial Market Trends 2010*).

Chart B.10 Household debt burden and interest burden. Per cent. Quarterly figures. 1988 Q1 – 2013 Q4[1)]



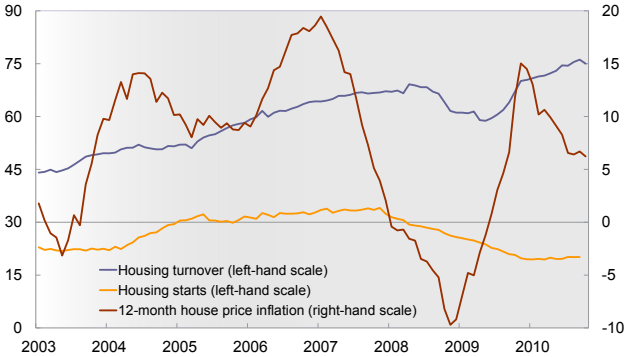
1) Projections for 2010 Q1 – 2013 Q4
Sources: Statistics Norway and Norges Bank

Chart B.11 Private households[1)] by net debt burden.[2)] Per cent. Annual figures. 2005 – 2008



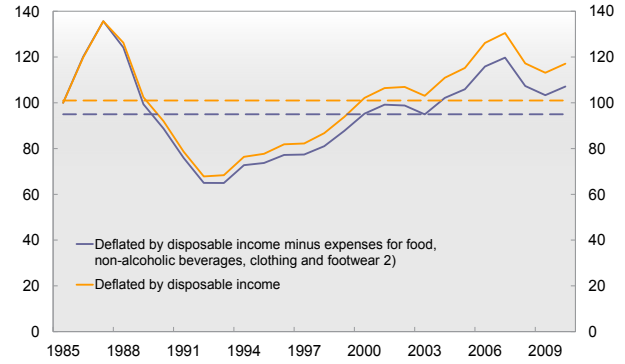
1) Corresponds to the term retail market
2) Net debt burden is debt minus bank deposits as a percentage of disposable income
Sources: Statistics Norway and Norges Bank

Chart B.12 12-month house price inflation in per cent, housing starts and housing turnover in thousands (total over past 12 months). Monthly figures. January 2003 – October 2010



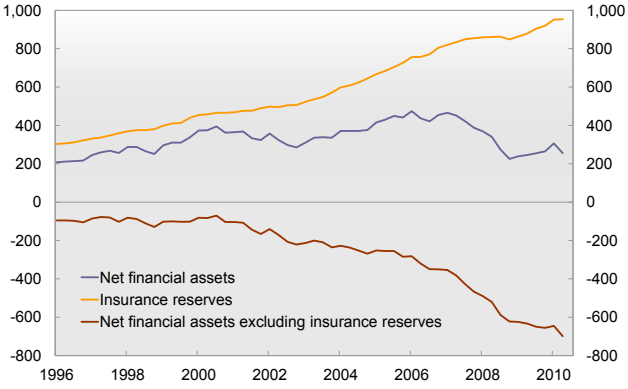
Sources: Association of Norwegian Real Estate agents, Association of Real Estate Agency Firms, Finn.no, Econ Pöyry, Statistics Norway and Norges Bank

Chart B.13 Real house prices. Indices. 1985 = 100. Annual figures. 1985 – 2010[1)]



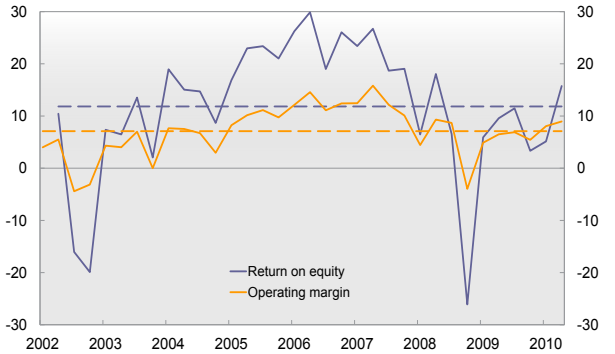
1) January – October 2010. Broken lines show the average over the period 1985 – 2009
2) Sub-indices for private consumption from the national accounts
Sources: Association of Norwegian Real Estate agents, Association of Real Estate Agency Firms, Finn.no, Econ Pöyry, Statistics Norway and Norges Bank

Chart B.14 Household net financial assets incl. and excl. insurance reserves. In billions of NOK. Quarterly figures. 1996 Q1 – 2010 Q2



Sources: Statistics Norway and Norges Bank

Chart B.15 Key ratios for enterprises listed on Oslo Børs.[1)] Per cent. Quarterly figures. 2002 Q1 – 2010 Q2



1) Sample consisting of 139 listed non-financial enterprises as of 2010 Q2. Statoil is not included in the sample. Broken lines show the average for the period 2002 Q1 – 2010 Q2
Sources: Statistics Norway and Norges Bank

would have increased household debt burdens by 0.17 percentage point. The effect of a corresponding increase in lending rates would be approximately double. A fixed rate of interest would give highly indebted households more stable and predictable interest expenses over the life of the loan. In Norway, only 9% of loans to households are fixed-rate loans.

House price inflation has slowed the past year, but has increased somewhat again in autumn (see Chart B.12). The price increase in October was higher than assumed in *Monetary Policy Report* 3/10. House sales have picked up over the past year, and the time it takes to sell a house has returned to normal. At the same time, figures for housing starts are trending slightly upward. House price inflation is expected to level off in the coming year.

House prices are high in a long-term context. Chart B.13 shows house prices deflated by disposable income. In these terms, house prices in 2010[8] are around 16% higher than the average for the past 25 years. Spending on consumption of necessities as a share of overall consumption has fallen since the 1980s. House prices deflated by disposable income, less spending on food, nonalcoholic beverages, clothing and footwear, are somewhat lower, albeit high by historical standards.

Total household gross wealth is around three times higher than the outstanding debt of the sector, though household wealth and debt are unevenly distributed across household categories. In addition, large portions of this wealth are not very liquid. Household net financial wealth is approximately NOK 255bn (see Chart B.14). Insurance reserves account for over a third of gross financial wealth. As most of these funds are not accessible in the short and medium term, they cannot be used as a buffer in a tight economic environment. Household housing wealth, at market prices, has increased markedly in recent years. Credit market developments, including increasing use of home equity lines of credit, have made housing wealth more liquid, but nor can these funds be used as a buffer in the immediate short term.

8 Average January – October 2010

Around 90% of the banking sector's loans to the household sector are secured on dwellings (see Chart A.3). The average credit risk of these loans is low (see Table A.1). But in the event of an unexpected shock, rapidly accumulating household debt and high house price levels can lead to a sudden fall in household demand. This is especially the case if households' liquid financial buffers are low. Rapid shifts in demand for goods and services can lead to financial stresses in the corporate sector. This in turn will weaken household finances through higher unemployment and lower income.

7. Enterprises[9]

Higher profitability and improved financial strength for enterprises

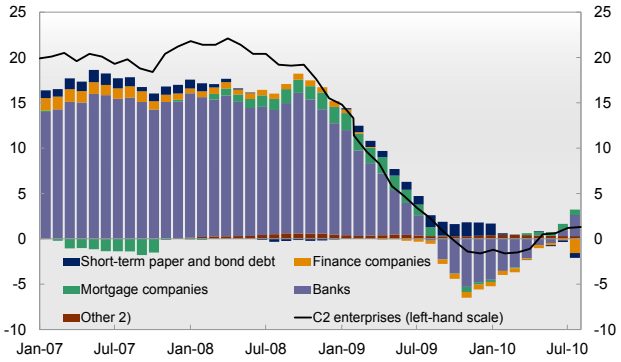
Profitability among listed companies has increased since the May report (see Chart B.15). Higher operating revenues, lower writedowns and substantially reduced financing costs contributed to the increase. Enterprises in Norges Bank's regional network expect a further increase in profitability ahead. This is primarily due to increased demand, but also corporate streamlining measures.

Growth in domestic corporate debt (C2) has increased somewhat since the May report (see Chart B.16), primarily reflecting higher borrowing from banks and mortgage companies. According to Norges Bank's Survey of Bank Lending, banks expect approximately unchanged lending standards ahead. Demand is expected to increase somewhat, due to higher investment activity. Against this background, growth in total corporate debt (C3) is expected to increase in the period ahead (see Table 9 in Annex 3).

Strengthened profitability and low debt growth have improved enterprises' debt servicing capacity. The improvement in 2009 was broadly based (see Chart B.17). The share of enterprises with negative debt servicing capacity fell. Enterprises with negative debt servicing capacity must draw on their liquidity buffers in order

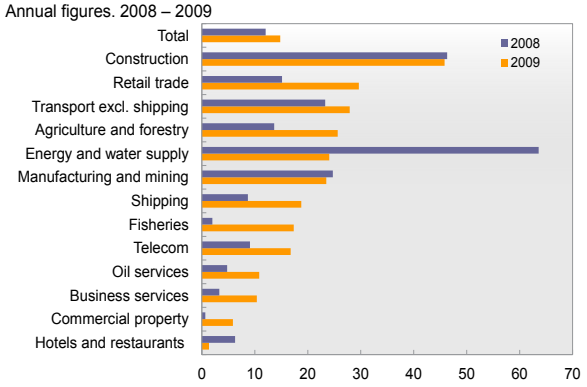
9 Quarterly key figures are based on the performance of all non-financial enterprises listed on Oslo Børs. Statoil is not included in the sample. Annual key figures are based on the performance of all non-financial Norwegian limited companies.

Chart B.16 12-month growth in credit (C2) to enterprises and contribution in per cent[1]. Monthly figures. January 2007 – September 2010



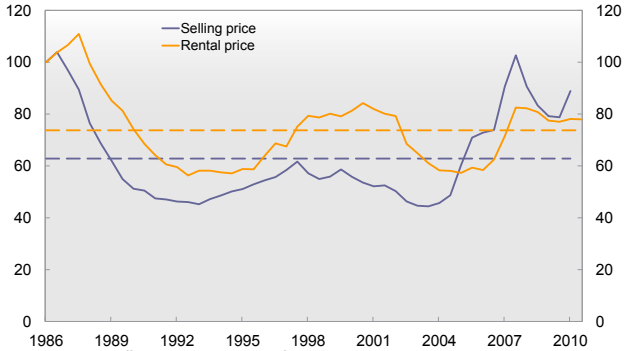
1) Not adjusted for exchange rate fluctuations in the contributions
2) Loans from insurance companies, state lending institutions and pension funds
Source: Statistics Norway

Chart B.17 Debt servicing capacity[1] for selected industries. Per cent. Annual figures. 2008 – 2009



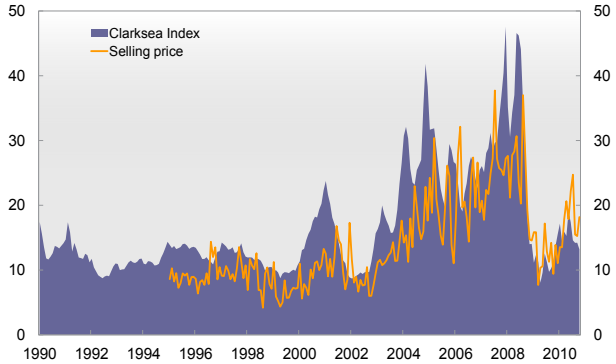
1) Profits before tax, writedowns and depreciation as a percentage of bank and bond debt. Intragroup funding is not included
Source: Norges Bank

Chart B.18 Real rental and selling prices for office premises.[1] Semi-annual figures. Indices. 1986 = 100. June 1986 – December 2010[2]



1) High-standard offices centrally located in Oslo. Broken lines shows the average over the period 1986 – 2010
2) Selling price until June 2010
Sources: OPAK, Statistics Norway and Norges Bank

Chart B.19 Freight rates (Clarksea Index)[1] in USD per day and selling price of ships in millions of USD. Monthly figures. January 1990 – October 2010[2]



1) Weighted average for earnings in the tanker, bulk, container and gas segments
2) Selling price from January 1995
Source: Clarkson Research Services Ltd

to service their debt. Enterprises' liquidity buffer was 9% in 2009, approximately unchanged from the previous year. Liquidity buffers are considerably lower than during the 1988 – 1993 banking crisis. Bank deposits and cash account for the largest share of the buffer. Low interest rates reduce incentives to increase bank deposits.

Equity capital ratios in the enterprise sector rose in 2009 and were higher than the average for the past 20 years. The share of enterprises with a negative equity capital ratio fell. These enterprises accounted for 10% of enterprises' total bank debt. For listed companies, equity capital ratios have fallen somewhat since the May report.

Norwegian banks have large loan exposures to commercial property and shipping (see Chart A.3). The profitability of listed commercial property enterprises has improved further since the May report. This is primarily due to a reversal of previous property writedowns. Selling prices for office premises have risen in the past six months, while rents have flattened out (see Chart B.18). In the period ahead, market participants expect market values to increase further, while rents are expected to remain stable. The market value is substantially higher than the average for the past 24 years. High market values after a steep rise over many years are an important source of risk.

Profitability of listed shipping companies has fallen somewhat since the May report. Both freight rates and market prices for ships have slowed (see Chart B.19). Orders for newbuildings are substantial and came to 35% of the total fleet at the end of October. The dry bulk segment accounts for around 60% of orders. Nevertheless, order books have been reduced somewhat since the May report, primarily owing to vessel completions. In terms of overall capacity, more ships were completed in 2009 than in the past 30 years. So far the level in 2010 appears to be exceeding the record level from 2009. Surplus ship capacity is a structural problem for the industry. As a consequence, profitability is expected to remain moderate ahead.

C Challenges facing banks and government measures

Norwegian banks have weathered the financial crisis better than banks in many other countries, partly because the crisis had relatively limited effects on the Norwegian economy and because Norwegian banks' Tier 1 capital requirements were more stringent than the pre-crisis international minimum requirements. Nevertheless, Norwegian banks will be facing several challenges going forward.

Challenges facing banks

Bank earnings are satisfactory and net interest income as a percentage of average total assets is no longer on the decline. To prevent a renewed decline in net interest income, it is important that banks price their loans so that the full cost of the loan is covered. A comparison of banks' average interest rate on loans to enterprises and the cost of long-term market funding indicates that banks' loan pricing does not fully reflect the credit risk associated with these loans.

During the financial crisis, market participants required markedly higher Tier 1 capital ratios at banks than the regulatory minimum requirement. For banks to be well positioned to weather a future crisis, Norwegian banks should rapidly satisfy the new minimum requirements with a good margin. The banks should therefore retain a substantial share of their profits in periods of high earnings to bolster their financial strength. This applies in particular to large banks, which generally have the lowest Tier 1 capital ratios. The equity ratio for Norwegian banks is lower than after the recapitalisation following the banking crisis in 1988 – 1993. The composition of banks' loan portfolios does not imply a significant reduction in credit risk since that time. This indicates that Norwegian banks' equity ratio is now at the low end of the spectrum.

Banks should have a robust financing structure as a fundament for their operations. The financial crisis showed that short-term funding of a large portion of lending growth is not a robust strategy. As witnessed, key funding sources can suddenly dry up and it does not take long before banks with sizeable short-term funding encounter problems. Even if holdings of liquid assets are sufficient to meet near-term debt maturities, stresses can arise fairly rapidly. Banks should seek to increase their deposit-to-loan ratio and aim for more long-term funding.

Banks should be transparent about their funding structure and liquidity risk. Transparency surrounding key risk factors is important for generating confidence in financial markets. Norwegian banks publish information about their credit risk, partly as a result of the Pillar 3 requirements of the Basel framework. However, banks publish fairly limited information about their liquidity risk. The announced liquidity requirements proposed by the Basel Committee will oblige banks to publish more information about their liquidity risk. Norwegian banks would be well served by starting already now to publish more quantitative information about their funding structure and liquidity risk.

About 70% of the banking sector's loans are secured on dwellings or commercial property. The banks are thus dependent on property price developments. Today's interest rate level is considerably lower than what is regarded as normal. If the interest rate level remains low for a prolonged period and economic agents are short-sighted in their behaviour, household debt burdens and property prices may rise to even higher levels (see Box 5). When evaluating loan applications, banks must therefore assess whether a loan can be serviced at markedly higher interest rates (see Finanstilsynet's circular on "Guidelines for prudent residential mortgage lending" issued in March 2010). Continued favourable taxation of residential mortgages and low capital requirements for housing loans may foster imbalances.

Government measures

The Basel Committee recommends a gradual introduction of the new capital and liquidity requirements, as it is concerned that banks will tighten lending in an environment of weak growth. Norwegian banks are faring well and growth in the Norwegian economy now seems to have gained a firm footing. The new requirements can therefore be implemented somewhat faster in Norway.

The timing can be decided once the Basel Committee has set out the details of the requirements.

Norwegian banks should improve their funding structure in keeping with the intentions of the Basel Committee's proposal. Norges Bank will closely monitor banks' funding in the years ahead. When setting the requirements for banks' access to the central bank's lending facilities, it may be relevant to give weight to their liquidity management.

In order to ensure that the general public has access to information about Norwegian banks' funding structure, the authorities should already now require that banks publish quantitative information about variables such as short-term funding, liquidity buffers and maturity structure.

In its proposal on new banking regulations, the Basel Committee recommends the use of countercyclical buffers when there is excess growth in the volume of credit (see Box 3). Under the Norges Bank Act, the central bank shall inform the Ministry of Finance "when, in the opinion of the Bank, there is a need for measures to be taken by others than the Bank in the field of monetary, credit or foreign exchange policy". Norges Bank will therefore on a regular basis assess whether the situation in the Norwegian economy warrants discretionary use of countercyclical measures in the financial sector. In connection with the semi-annual publication of the *Financial Stability* report, Norges Bank will submit recommendations for relevant measures to the Ministry of Finance and Finanstilsynet.

All the details relating to the use of countercyclical buffers have yet to be clarified. In their response to the European Commission's consultation on countercyclical capital buffers, Finanstilsynet and Norges Bank recommend that a countercyclical buffer regime be implemented as soon as possible and that the host country should set the requirements for branches of foreign banks. In Norway, the large foreign branches are Nordic. The Nordic countries should cooperate on an early implementation of the countercyclical buffer requirements.

In Norway, there are prospects for fairly solid growth in domestic demand for goods and services in the years ahead. This reflects favourable prices for domestically produced goods and services, increased oil revenue spending and persistently fairly low real interest rates. A large share of demand will be met by imports because the price and cost level in Norway is very high. Housing services can only be produced domestically. With strong growth in demand, there is a risk that house price inflation will pick up, with an attendant increase in household debt accumulation. This will place demands on Norges Bank's macroprudential surveillance of the financial sector. Pending the introduction of countercyclical buffers, higher capital requirements should be imposed on banks in order to restrain future imbalances.

Norway has long had a tax regime that favours investment and consumption of housing in relation to saving in bank deposits and investment in other real capital and financial instruments. A more neutral taxation of housing investment and housing consumption could curb growth in house prices and household debt.

Norway has had a relatively sound system for managing banking crises for some time, which builds on the experiences of the banking crisis in the period 1988-1993, as summarised in the Guarantee Schemes Act of 1996. The framework for crisis resolution in Norway was not really put to the test during the financial crisis. International experiences warrant a thorough review of the Norwegian crisis resolution framework, including an assessment of whether more appropriate instruments could be introduced (see Box 4).[10]

10 In the annex to the submission to the Ministry of Finance in connection with *Financial Stability* 2/2010, Norges Bank further describes possible improvements to the Norwegian framework for crisis resolution.

2. Stress-testing banks' capital adequacy

In stress-testing banks' capital adequacy, banks in Norway are exposed to a stress scenario where external growth is lower than expected and Norwegian households are more pessimistic. The stress test shows that banks are reasonably well equipped to deal with a prolonged economic downturn. Sensitivity analyses demonstrate that banks will survive even in a somewhat more adverse scenario.[1] However, should loan losses approach the levels observed in the early 1990s, a number of banks may risk breaching capital adequacy requirements.

A banking sector crisis can arise via several different channels:

- Loan losses. This was the main factor behind banks' problems in the early 1990s.
- Losses on securities such as equities, bonds and derivatives. This has been an important risk factor for many banks internationally in recent years.
- Funding shortages with subsequent liquidity problems. This was the situation for many banks in autumn 2008. In an environment of uncertainty, the price required by investors to provide loans to banks was very high in periods.

The stress tests focus on loan losses in particular. Lending is the basis of traditional banking, and loan losses are traditionally the main reason for the variations in Norwegian banks' earnings.

The stress test is based on assumptions concerning banks' returns on securities holdings. However, it is not given that these returns will move in the same direction as loan losses. In the Bank's stress tests, bank losses will not normally be driven by returns on securities portfolios. This year, a sensitivity analysis has been included to show the level of securities losses banks can absorb without encountering capital adequacy problems when substantial loan losses occur at the same time.

1 For a more detailed description of the stress tests (see article in *Economic Bulletin* to be published mid-December 2010).

With a high proportion of long-term borrowing, banks are more robust to shortages in short-term market funding. To what extent banks' funding satisfies the Basel III requirements regarding stable funding (see Chart 3 in Box 2) is an implicit test of the robustness of the Norwegian banking sector. Liquidity problems and solvency problems are not necessarily linked. The stress tests are based on the assumption that funding costs for banks will be higher in periods of stress than in good times. This is reflected in the higher margin between banks' actual borrowing costs and the central bank key rate.

Macroeconomic developments deteriorate

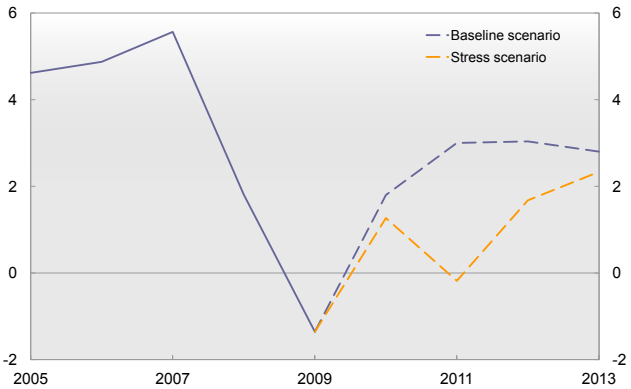
In stress-testing banks' capital adequacy, banks' losses and earnings are calculated[2] in a baseline scenario[3] and an alternative stress scenario. The stress scenario describes a low-probability macroeconomic scenario, where a number of shocks occur in the Norwegian and global economy. The simulation period stretches from the second half of 2010 until the end of 2013. At the end of the simulation period, mainland GDP is about 5½ percentage points lower than in the baseline scenario.

This stress test shares some of the assumptions of the stress test coordinated by the Committee of European

2 The stress test calculations are carried out using a system of models (see Andersen, Berge, Bernhardsen, Lindquist and Vatne (2008): A suite-of-models approach to stress-testing financial stability. *Staff Memo,* 2/2008).

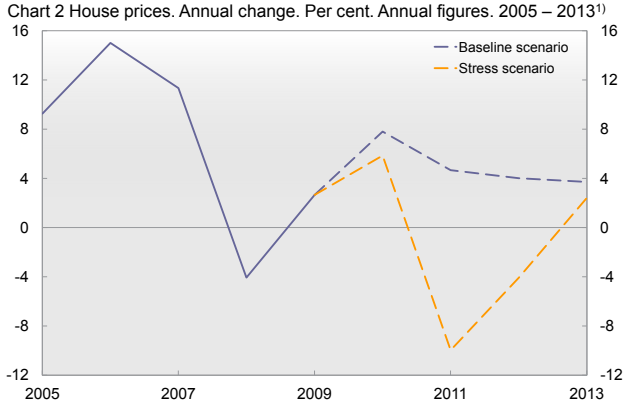
3 The baseline scenario is based on the projections in *Monetary Policy Report* 3/10.

Chart 1 Mainland GDP. Annual volume change. Per cent. Annual figures. 2005 – 2013[1)]



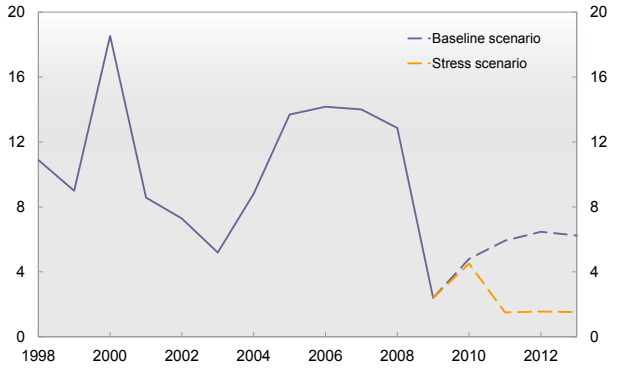
1) Projections for 2010 – 2013
Sources: Statistics Norway and Norges Bank

Chart 2 House prices. Annual change. Per cent. Annual figures. 2005 – 2013[1)]



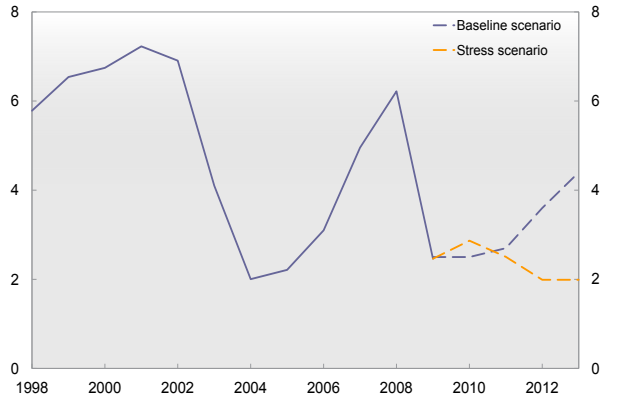
1) Projections for 2010 – 2013
Sources: Association of Norwegian Real Estate Agents, ECON Pöyry, Finn.no, Association of Real Estate Agency Firms and Norges Bank

Chart 3 Credit to households and enterprises. Weighted by sector. Year-on-year growth.[1)] Per cent. Annual figures. 1998 – 2013[2)]



1) Changes in inventory measured at the end of the year
2) Projections for 2010 – 2013
Sources: Statistics Norway and Norges Bank

Chart 4 3-month money market rate. Per cent. Annual figures. 1998 – 2013[1)]



1) Projections for 2010 – 2013
Source: Norges Bank

Banking Supervisors (CEBS)[4] in summer 2010. The assumptions are thus milder than in the May *Financial Stability* report. The stress scenario is nonetheless adapted to Norwegian conditions and reflects key risks for Norwegian banks. In addition, the sensitivity analyses presented below show the potential impact on Norwegian banks of a more adverse alternative. Norwegian banks' capacity to deal with a stressed situation is as high as at the time of the May report.

The stress scenario is based on the following assumptions:

- Developments among Norway's trading partners are weaker than projected in the years ahead. It is assumed that the decline in output among trading partners in 2011 and 2012 is approximately in line with the CEBS assumption for euro area countries in their EU-wide stress testing exercise in July 2010.
- In addition, premiums rise in global money markets as a result of uncertainty with regard to sovereign debt and the international financial sector. Premiums are assumed to rise to close to 100 basis points in 2011.
- Lower global demand leads to a fall in oil prices to about USD 50 per barrel.
- In Norway, households' expectations weaken with regard to their own financial position and the country's economy.
- The real krone exchange rate remains around the same level as in the baseline scenario.

In the stress scenario, the decline in global growth leads to a reduction in manufacturing output in Norway, particularly traditional exports. Low oil prices also lead to a fall in investment. Unemployment rises. Saving increases as a result of weaker expectations among households with regard to their own financial position and the country's economy. Growth in the Norwegian economy declines (see Chart 1).

Higher unemployment, weaker expectations and lower household incomes than in the baseline scenario lead to a fall in house prices (see Chart 2). In nominal terms, house prices fall by about 15% from today's level in the period to 2012. Reduced investment and lower house prices lead to lower debt growth for both households and enterprises (see Chart 3). The mortgage value of housing

4 On 23 July 2010, a stress test of 91 European banks was published by the CEBS in co-operation with the European Central Bank (ECB), the European Commission and national supervisory authorities.

capital falls relative to the baseline scenario, leading to a reduction in debt-financed consumption. This amplifies the decline in the real economy.

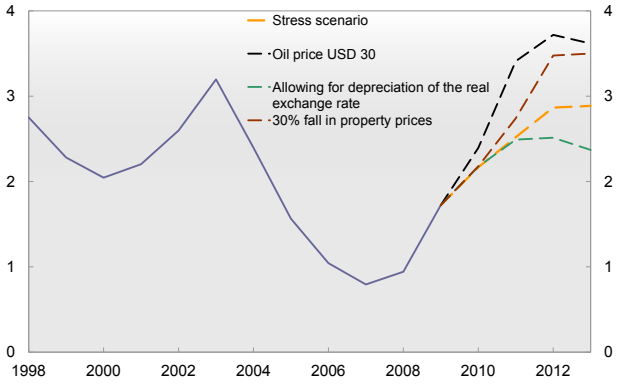
It is assumed that financial market turbulence leads to a rise in international money market premiums. The rise passes through to Norwegian money market rates, which increase by close to 100 basis points. As a technical assumption, the interest rate is set using a simple rule where inflation and economic activity determine the interest rate. In response to weak developments, central bank key rates are reduced in Norway and abroad. Since key rates in Norway and abroad are already low, there is limited scope for counteracting the rise in premiums. As a result, interest rates in the stress scenario show little decline in relation to today's level, despite weaker economic growth (see Chart 4). A fall in oil prices could in isolation lead to a depreciation of the krone. On the other hand, the Norwegian economy might be better equipped than many other economies to face a deterioration in developments among trading partners, combined with low interest rates abroad. It is therefore assumed that the krone exchange rate remains unchanged in relation to the baseline scenario.

Banks' borrowers weaken

In the baseline scenario, problem loans as a percentage of gross lending level off ahead. Activity in the Norwegian economy is on the rise. Corporate profitability is high and debt servicing capacity has increased. In the stress scenario, the share of problem loans is higher than in the baseline scenario, and the number of problem loans increases in particular in the corporate sector. Corporate problem loans rise to more than 6½% of corporate lending in 2013, due to lower domestic demand and lower demand from the oil sector. In the event of a broad-based international downturn, growth in demand cannot be expected in the export industry either.

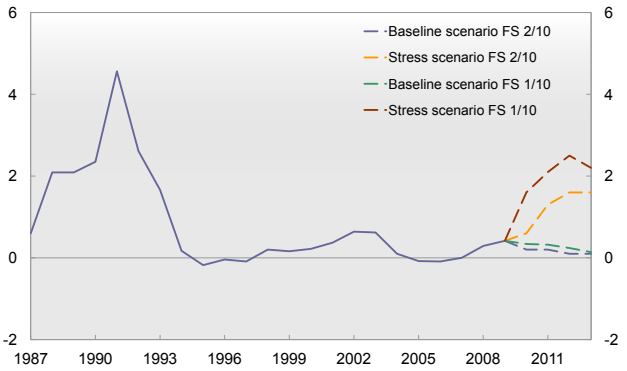
The total share of problem loans in the stress scenario increases to close to 3% in 2012. Chart 5 shows the share of problem loans under some alternative assumptions. In an alternative which includes a depreciation of the krone exchange rate, the share of problem loans is just over ½ percentage point lower. In an alternative with a fall in oil prices to USD 30 per barrel, the share of problem loans

Chart 5 Problem loans in stress scenario under alternative assumptions. Percentage of gross lending. Annual figures. 1998 – 2013[1)]



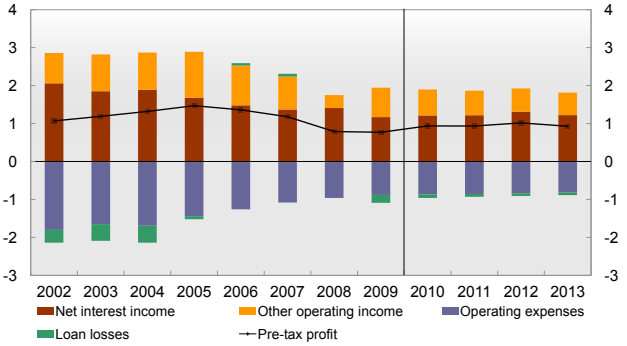
1) Projections for 2010 – 2013
Sources: Statistics Norway and Norges Bank

Chart 6 Loan losses in baseline scenarios and stress scenarios in FS 1/10 and FS 2/10. Percentage of gross lending to customers. Annual figures. 1987 – 2013[1)]



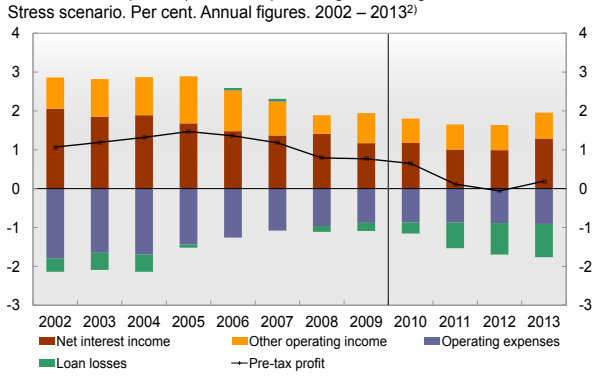
1) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Sources: Statistics Norway and Norges Bank

Chart 7 Banks'[1)] pre-tax profits as a percentage of average total assets. Baseline scenario. Per cent. Annual figures. 2002 – 2013[2)]



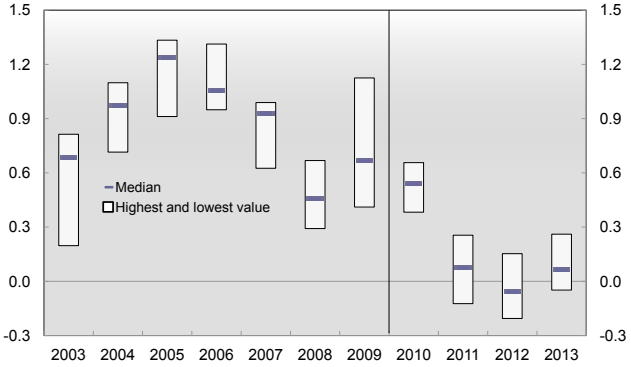
1) All banks excluding branches of foreign banks in Norway
2) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Norges Bank

Chart 8 Banks'[1] pre-tax profits as a percentage of average total assets. Stress scenario. Per cent. Annual figures. 2002 – 2013[2]



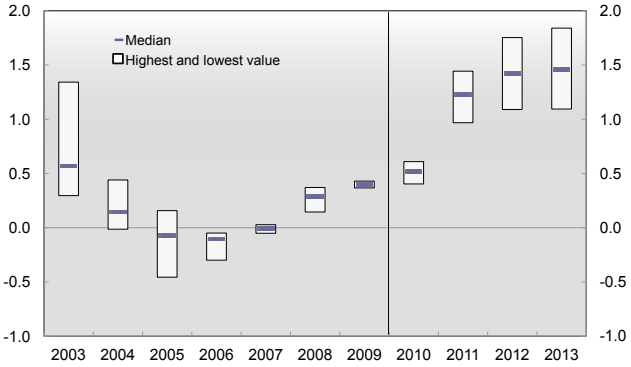
1) All banks excluding branches of foreign banks in Norway
2) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Norges Bank

Chart 9 Banks' post-tax profits. Stress scenario. Percentage of average total assets. Annual figures. 2003 – 2013[1]



1) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Statistics Norway and Norges Bank

Chart 10 Banks' loan losses. Stress scenario. Percentage of gross lending to customers. Annual figures. 2003 – 2013[1]



1) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Statistics Norway and Norges Bank

increases by up to ¾ percentage point. A decline in property prices of about 30% pushes up the share by just over ½ percentage point.

Banks are equipped for a prolonged downturn

In the baseline scenario, banks' loan losses decrease in pace with the levelling off in the share of problem loans. Banks' losses increase markedly in the stress scenario in relation to the baseline scenario, but are far from as high as in the May report (see Chart 6) as the share of problem loans is considerably smaller in the stress scenario.

In the baseline scenario, banks' earnings improve due to lower losses and somewhat higher revenues than in 2009 (see Chart 7). The premium on banks' market funding remains unchanged through the projection period, and banks hold overall interest margins constant.

In the stress scenario, higher loan losses contribute to negative earnings for banks in 2012 (see Chart 8). Banks' net interest income is reduced somewhat due to higher funding costs resulting from increased turbulence in global financial markets. Chart 9 shows the spread in the six largest banks' earnings. Earnings are not equally negative for all the banks. This is largely due to differences in bank loan losses (see Chart 10). In this stress scenario, credit risk has the most pronounced effect. Shipping, export and property are particularly high-risk industries, and loans to these industries comprise a large share of banks' lending. Loan losses are highest among banks where loans to enterprises, particularly the most high-risk industries, constitute the largest share of their lending.

Banks are not only exposed to credit risk in a stress situation. In the fourth quarter of 2008, many banks posted negative earnings after a fall in the value of their securities portfolios.[5] Which banks are hit hardest depends on the size of securities portfolios measured at fair value and on banks' risk management. Even if banks' returns on securities holdings in this stress scenario were to fall to the lowest level for the past seven years, most banks will not encounter problems. The spread in banks' earnings will, however, widen.

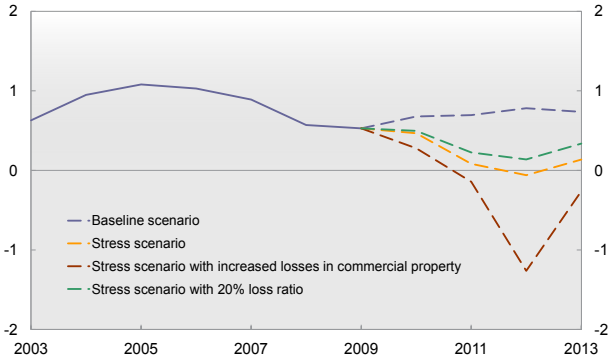
5 Although the effect of the fall in value was reduced as many of the banks reclassified the securities in their trading portfolio as "held to maturity".

Banks' earnings in a stress scenario depend on the share of banks' problem loans that will be recorded as losses. In the baseline scenario, a loan-loss ratio of 10% is assumed. This percentage will increase if developments in mortgage values are more negative than expected. Housing and commercial property prices decrease in the stress scenario. As a result, banks' loan-loss ratios rise to 40% through the period. This is in line with loan-loss ratios during the banking crisis of 1988–1993. Lower loan-loss ratios will result in less negative earnings for banks. Chart 11 shows the effect of a stress scenario with a 20% loan-loss ratio, in line with the ratio for 2002–2003 and 2008–2009. In this milder stress scenario, all the banks will post positive earnings through the period.

High property prices following a sharp increase over many years is an important source of risk. The fall in prices in a stressed situation may be higher than assumed in this stress scenario, leading to a higher loan-loss ratio and thereby higher loan losses. Loans secured on dwellings or commercial property account for around 70% of banking sector lending. If banks were to incur losses on commercial property lending as large as experienced by commercial banks during the banking crisis, their earnings would be considerably more negative (see Chart 11).

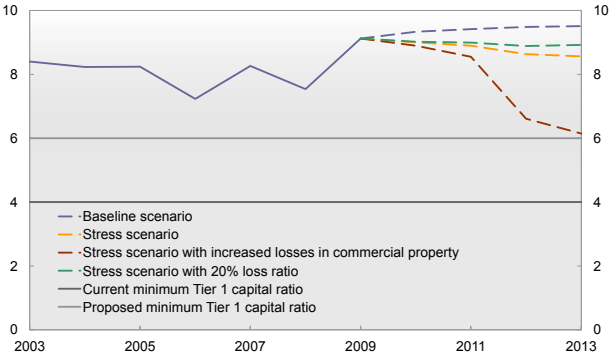
In the baseline scenario, the average Tier 1 capital ratio edges up and remains above 9% (see Chart 12). The Tier 1 capital ratio is also well above the minimum requirement in the stress scenario. Positive earnings in much of the projection period contribute to high Tier 1 capital ratios. The Tier 1 capital ratios in all six banks in the Bank's stress test is well above the minimum requirement of 4% (see Chart 13) and would also be above the proposed new requirement of 6%. Nonetheless, the Tier 1 capital ratio declines somewhat as higher lending risk leads to an annual increase in risk-weighted assets of 2.5 per cent. If a loan-loss ratio of 20% is assumed, banks' Tier 1 capital ratios will be somewhat lower than in the baseline scenario. However, higher losses on commercial property, and the very negative earnings they entail, could lead to an abrupt decrease in the Tier 1 capital ratio. In such a scenario, the Tier 1 capital ratio could rapidly approach 6%. For some banks, the Tier 1 capital ratio could fall below the current minimum requirement of 4% in 2013.

Chart 11 Banks' post-tax profits in stress scenarios. Percentage of average total assets. Annual figures. 2003 – 2013[1)]



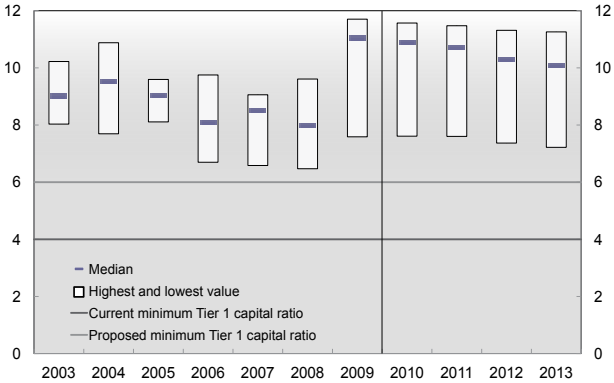
1) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Statistics Norway and Norges Bank

Chart 12 Banks' Tier 1 capital ratio in stress scenarios. Per cent. Annual figures. 2003 – 2013[1)]



1) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Statistics Norway and Norges Bank

Chart 13 Banks' Tier 1 capital ratio. Stress scenario. Per cent. 2003 – 2013[1)]



1) Projections for 2010 – 2013 for DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
Source: Statistics Norway and Norges Bank

Box 1 Projections of bank earnings – changes since the May *Financial Stability* report

So far in 2010, bank earnings have been somewhat stronger than projected in the May report (see Chart 1). Losses in particular have been lower than projected. Substantial bank writedowns through 2009 have served as a buffer in loss recognition. In the first three quarters of 2010, losses as a share of problem loans[1] were on a par with the first half of 2008 and far lower than in 2009. Net interest income has been somewhat higher than expected. In addition, other operating income was higher than projected in the May report due to one-time gains.

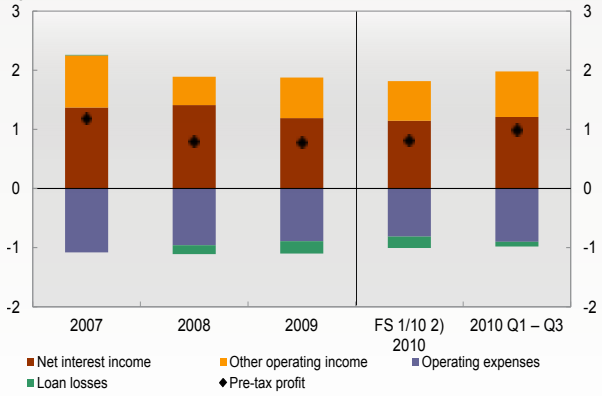
In spite of lower losses, the share of problem loans in relation to total loans is somewhat higher than expected (see Chart 2). Problem loans to households have increased in particular. At the same time, writedowns of personal loans that are not secured on dwellings have increased in the course of 2010. In the past three quarters, banks' writedowns of loans to the construction services and commercial services sectors declined most.

While the stress-tested banks increased their interest margin, the overall interest margin for banks and mortgage companies has been approximately stable. This is probably because since end-2009 the stress-tested banks have transferred many of their best-quality loans, and a larger share of residential mortgage loans than corporate loans, to mortgage companies. The loans retained on their books, which are on average more risky, feature a higher lending margin. In addition, stocks of corporate loans are growing somewhat more rapidly in the stress-tested banks than in the economy as a whole. In addition, the Basel Committee's revised regulatory requirements for net stable funding are less stringent than originally proposed. Banks do not therefore need to increase the proportion of long-term funding by as much as projected in the May report. Net interest income is therefore higher than expected.

The increase in other operating income is primarily attributable to one-time gains in connection with the merger between Nordito and Danish PBS Holding in 2010 Q2. Banks' returns on securities were approximately as expected, while commission income was somewhat lower.

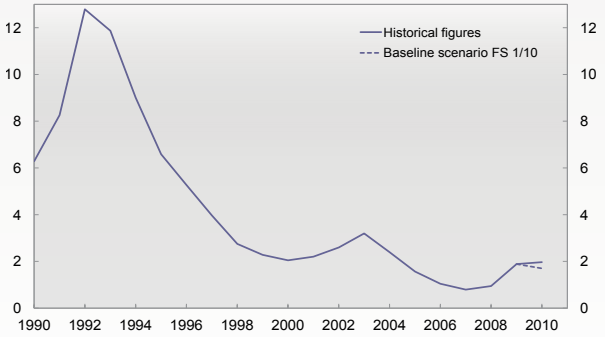
1 Sum of non-performing and doubtful loans.

Chart 1 Banks'[1)] pre-tax profits as a percentage of average total assets. Annual figures. 2007 – 2010



1) DnB NOR Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge
2) Baseline scenario in FS 1/10
Sources: Statistics Norway and Norges Bank

Chart 2 Problem loans as a percentage of gross lending in baseline scenarios. 1990 – 2010[1)]



1) Historical figures until Q3 2010. Projections for 2010 from baseline scenario FS 1/10
Sources: Statistics Norway and Norges Bank

Box 2 New regulation of bank capital and liquidity

Since the May report, the Basel Committee on Banking Supervision has adopted new international bank capital and liquidity standards, which G20 leaders have recently endorsed. The European Commission has announced that draft legislation to implement the Basel Committee's new standards in the EU will be presented in 2011 Q1. Although Basel Committee standards apply to internationally active banking groups, the EU has a tradition of universal application of such standards, both at corporate group level and at the nonconsolidated level. The EU requirements will be incorporated into Norwegian law under the EEA Agreement.

According to the Basel Committee, the new standards will be phased in from 2013 to 2019.[1] Committee estimates suggest that the phase-in costs will be low. The Basel Committee chairman has stated that countries should introduce the new rules earlier if the banks in that country are earning a profit and if an accelerated phase-in will not adversely impact bank lending. The Norwegian economy is well equipped for early implementation of the new standards.

Capital standards

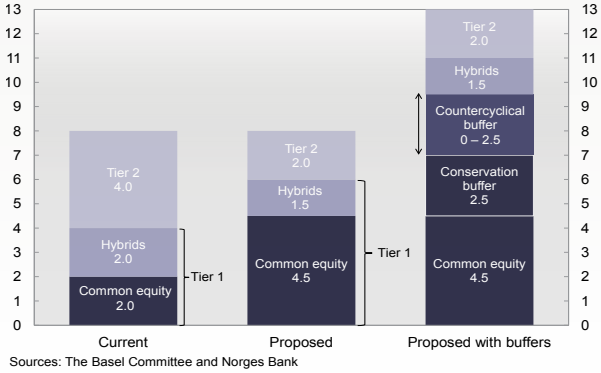
The capital standards that have now been adopted are both qualitatively and quantitatively stricter than current international minimum requirements. In addition, capital buffer requirements are being introduced. The new standards give greater weight to common equity than previously, and standards for common equity have been raised by the application of deductions for goodwill and other intangibles. Banks will also have higher capital requirements for the trading portfolio, derivatives position and similar activities than previously.

Chart 1 illustrates the new quantitative minimum standards and capital buffer requirements. The regulatory minimum for overall capital adequacy remains at 8%, but the required proportion of common equity is larger than previously. In addition, banks must have a specified capital buffer or face constraints on earnings distributions. The quantitative minimum standards will be phased in by 2015, followed by the phase-in of the capital buffer requirements.

The capital buffer has two parts, a capital conservation buffer and a countercyclical buffer.[2] The capital conservation buffer is required at all times. The conservation buffer requirement places various constraints on earnings distributions depending on the level of the buffer. The closer a bank's regulatory capital ratio approaches the minimum requirement, the greater the constraints. If the bank almost meets the buffer requirement, the constraints are small. When the countercyclical buffer requirement is put into effect by the authorities, this will raise the amount of buffer capital a bank must have to avoid constraints on earnings distributions and the entire range of these constraints will be extended accordingly. The countercyclical buffer is discussed in more detail in Box 3.

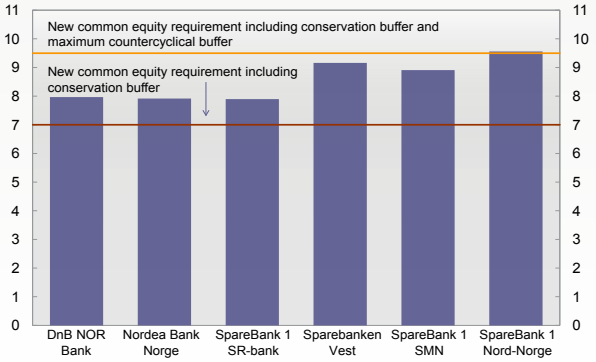
In addition to the new risk-weighted requirements illustrated in Chart 1, a non-risk-based Tier 1 leverage ratio of 3% will be tested. Off-balance sheet exposure, such as derivatives, shall be included in this indicator.

Chart 1 Current and proposed minimum capital requirements, and capital buffer requirements. Per cent of risk-weighted assets



Sources: The Basel Committee and Norges Bank

Chart 2 Consolidated common equity capital ratios of the five largest Norwegian banking groups and Nordea Bank Norge. Per cent. As of 2010 Q3



Sources: Banks' financial reports and Norges Bank

Banks will have to disclose their non-risk-based Tier 1 ratios beginning in 2015, but the minimum requirements will not be introduced before 2018.

As a result of the new capital standards, many of the largest international banks will be required to hold substantially higher capital than prior to the financial crisis, whereas small banks are generally better positioned. For Norwegian banks, the new capital rules will not involve any substantial need for recapitalisation. Norwegian banks have been subject to stricter standards than existing international minimum requirements, especially in terms of capital quality. Norwegian banks also have relatively small trading portfolios and derivative positions. Chart 2 shows that the largest Norwegian banking groups and Nordea Bank Norway are well prepared to meet common equity requirements. However, the proposed Tier 1 leverage ratio may require Norwegian lending institutions with low-risk portfolios, such as mortgage companies, to raise capital. This will depend on the way the standards are formulated for each type of institution and level of consolidation.

Liquidity standards

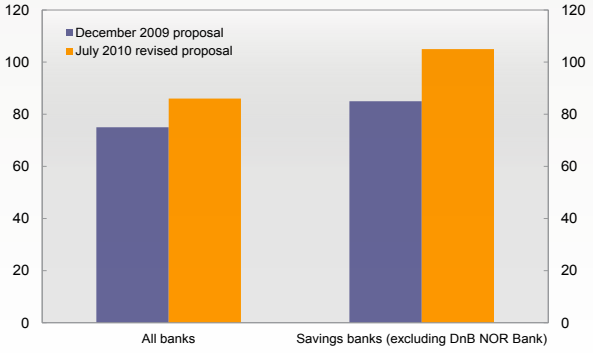
Two quantitative tests will be introduced to supplement existing qualitative requirements. One is a liquidity coverage ratio, the other is a net stable funding ratio. The liquidity coverage ratio is to be introduced in 2015, while the net stable funding ratio will not be introduced until 2018.

Under the liquidity coverage ratio requirement, each bank must have sufficient liquid assets to survive a 30-day period of considerable market stress featuring a substantial outflow of customer deposits. One important issue is which assets will be eligible as liquidity. OMF covered bonds, corporate bonds and municipal bonds will be eligible if the markets are sufficiently deep and liquid and the securities have a high rating. However, it is doubtful that Norwegian securities other than government securities would meet these criteria. The Basel Committee has announced it is considering special rules for countries with small markets for government securities.

Under the net stable funding ratio requirement, a percentage of assets that are not liquid must be financed by long-term funding. The share that must be financed by long-term funding depends on how liquid the asset is. This will limit the use of short-term market funding and make funding more stable and less vulnerable to market turmoil. As long-term funding is more expensive and less easily accessible than short-term funding, a requirement for long-term funding may also restrain credit growth.

The liquidity standards originally proposed in December 2009 posed problems for Norwegian banks. The proposals were revised this summer and are now easier to comply with. In the market turmoil scenario on which calculation of the two ratios is based, a lower percentage of deposits is assumed to be withdrawn from banks. The stable funding requirement will also be easier to meet because residential mortgages only to a limited extent need to be financed by long-term funding. Chart 3 shows that on average Norwegian savings banks meet the stable funding requirement, while other banks pull the average down below the requirement. Norwegian banks have greater difficulty meeting the liquidity coverage ratio (see Chart A.10). Forthcoming proposals for liquid assets in countries with small government securities markets may be important for Norwegian banks.

Chart 3 Banks[1)] stable funding in per cent of requirements. Group average.
As of 2010 Q2



1) All banks excluding branches of foreign banks in Norway
Source: Norges Bank

1 See http://www.bis.org/press/p100912.htm for an overview of the phase-in timetable.
2 The capital conservation buffer may consist only of common equity. Portions of the countercyclical buffer may comprise capital other than common equity, but with corresponding loss-absorbing capacity. The requirements for these capital instruments have not been clarified.

Box 3 Discretionary countercyclical measures

The international financial crisis has illustrated how systemic vulnerability can build up even if individual financial institutions are solid. Developments leading to the crisis followed a familiar pattern: Financial crises generally occur after a lengthy period of rapid asset inflation fuelled by vigorous credit growth. Macroprudential measures to prevent financial crises are aimed at making the financial sector more robust, both by reducing the probability of crises and by making financial institutions better able to weather crises.

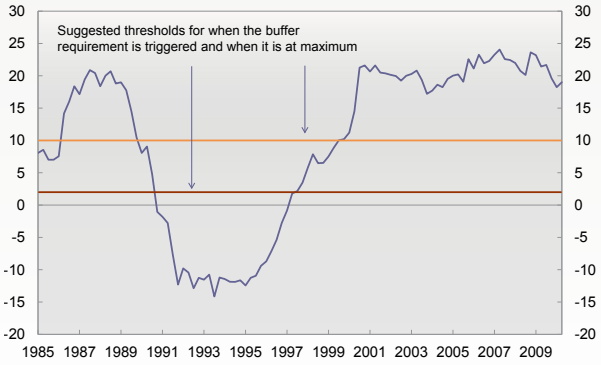
The most important measures for stemming the build-up of imbalances are long-term framework conditions that make rapid credit growth more expensive and financial institutions more solid. A key example is high equity capital requirements for banks. Discretionary actions can also be taken when the authorities recognise that the probability of a crisis is increasing. Although their main purpose will be to better equip the banks to maintain normal lending should a crisis materialise, discretionary measures can also influence credit growth. The Basel Committee has recommended a countercyclical capital buffer regime to boost banks' capital adequacy ratios in such situations (see below). More traditional restrictions on bank lending, such as a loan-to-value limit, may also be a suitable instrument if the primary objective is to restrict the supply of credit to property investment. Finanstilsynet (Financial Supervisory Authority of Norway) already applies various forms of capital requirements and lending restrictions in relation to individual institutions. There are no specific instruments that can be reserved for macroprudential regulation.

Finanstilsynet is a subordinate agency of the Ministry of Finance. The Norges Bank Act requires the Bank to inform the ministry "when, in the opinion of the Bank, there is a need for measures to be taken by others than the Bank in the field of monetary, credit or foreign exchange policy." Norges Bank will therefore regularly assess whether the situation in the Norwegian economy warrants the use of countercyclical measures in the financial sector and assess what would be the reasonable strength of these measures.

The Basel Committee has recommended that governments consider taking action when the credit-to-GDP ratio is clearly above that implied by the long-term trend. Chart 1 illustrates how such a policy rule would have worked in Norway. There would have been a continuous need for countercyclical measures from 2002 up until the present.

Norges Bank's assessments will be based on analyses of credit volume and house price and other property price inflation in Norway relative to changes in GDP. In the same way as credit volume, asset price levels can be assessed against trend. Moreover, Norges Bank will base its assessments on a broader set of indicators.[1] It will be especially important to examine the composition of the total volume of credit and the causes of any asset price inflation. For example, it must be assessed whether there are any elements that provide particular grounds for concern, or whether credit growth is limited to sectors where there is

Chart 1 Credit/GDP in Norway. Measured as gap relative to trend.[1)]
Percentage points. Quarterly data. 1985 Q1 – 2010 Q2



1) According to guidelines from the Basel Committee. Data for mainland Norway from1993 Q4.
Sources: Statistics Norway, IMF and Norges Bank

less cause for concern about financial stability. The overall assessment must necessarily entail an element of discretion.

The assessment of when to exit from the measures can be based on other indicators. Measures should normally be wound down when credit volume and asset prices return to trend. But if, for example, banks experience higher losses or tighten lending standards too sharply before credit growth is reduced, an earlier exit may be appropriate.

Norges Bank will publish analyses of the risk of disturbances to the financial system and of the need for countercyclical measures in conjunction with its Financial Stability reports, which are published twice a year. Norges Bank will also send a letter comprising recommendations for relevant measures to the Ministry of Finance and Finanstilsynet. Transparency regarding the recommendations and the underlying analysis, as well as clarity regarding responsibilities in macroprudential bank regulation, will serve to make the use of policy instruments more predictable.

Countercyclical buffer regime

Under the Basel Committee proposal[2] for a countercyclical capital buffer regime, an additional capital requirement can be imposed on banks if systemic risk in the economy increases, due for example to high asset prices and a high credit volume. This countercyclical buffer will apply to all banks, since systemic risk also can affect banks that have not experienced very high lending growth. While the countercyclical buffer regime may also act as a brake on the portion of credit growth generated by banks, it is probably based on the assumption that the capital conservation buffer will be put into effect before credit growth becomes excessive. The most important effect of the countercyclical buffer regime will normally be to better equip banks to absorb losses, should the need arise.

The countercyclical buffer will not be an absolute amount, but will be part of a capital buffer on top of the minimum requirement (see Box 2). Banks without a sufficient capital buffer will still be permitted to operate, but will face constraints on dividend payments and other discretionary distributions. The capital conservation buffer of 2.5% of banks' assets will apply at all times. The countercyclical capital buffer may be from zero to 2.5%, as determined by national supervisory authorities, and will apply to all bank lending to borrowers located in their jurisdiction. Foreign banks and their branches will be subject to capital buffer requirements for lending to the host country that are set by host country authorities but enforced by home country regulators.

1 Norges Bank has already conducted similar analyses using a broad set of indicators (see Magdalena D. Riiser (2005): House prices, equity prices, investment and credit – what do they tell us about banking crises? A historical analysis based on Norwegian data. *Economic Bulletin* 3/2005, Magdalena D. Riiser (2008): Asset prices, investment and credit – what do they tell us about financial vulnerability? *Economic commentaries* 6/2008, and Magdalena D. Riiser (2010): Asset prices, investment, credit and financial vulnerability. *Economic Commentaries 4/2010.*)

2 Press release, 12 September 2010.

Box 4 Crisis resolution – systemically important banks

A crisis in a small bank can usually be resolved by a sale or closure without jeopardising financial stability. On the other hand, a crisis management framework is required for a bank where, in the interests of financial stability, elements of that bank's operations cannot be permitted to fail. These banks may be referred to as systemically important banks.

In the absence of a suitable framework for banking crisis resolution, governments have often supported systemically important banks in trouble. With the US investment bank Lehman Brothers as an important exception, this is also what happened during the most recent crisis. If owners, management and creditors of systemically important banks assume that they will be protected by governments, they will take excessive risks. This is referred to as moral hazard and is implicit in all insurance schemes. Table 6 in Annex 3 shows that as a consequence of high expectations of support, large banks receive better credit ratings and thus cheaper funding.[1]

To reduce risk-taking in systemically important banks, it is important to establish a crisis resolution framework in which key banking services can continue to operate, while those that have contributed to risk-taking absorb losses. If governments succeed in this, owners and managers are expected to exercise greater caution. In addition, banks' creditors will be expected to monitor banks' risk taking and price banks' funding to more accurately reflect banks' risk taking.

Norway has long had a unique framework for managing banking crises, based on its experiences from the 1988 – 1993 banking crisis and summarised in the Guarantee Schemes Act of 1996. The Norwegian framework for banking crisis resolution was not really put to the test during the financial crisis. Banks' operations and the operation of the financial system have changed since the Guarantee Schemes Act entered into force. International experience suggests that the Norwegian crisis resolution framework should be assessed to consider whether more suitable tools can be introduced for resolving crises.

Norges Bank is proposing the following changes to the Norwegian framework for banking crisis resolution:[2]

- All banks should be required to establish plans to recapitalise in the event of a crisis or to close without threatening financial stability.
- Introduction of clear rules for the timing of intervention by the authorities and for use of the banking crisis resolution tool kit on troubled banks.
- Greater clarity than in current law on the power of the banking crisis resolution authority to split up a problem bank and deal with its parts differently.
- Empowering the banking crisis

resolution authority to establish a bridge financial institution to which important bank functions can be transferred temporarily.
- Routines for more expeditious payment of insured deposits.
- A further examination of mandatory conversion of debt into equity to enable banks to absorb larger losses.

These proposals will provide the authorities with tools for resolving crises also in systemically important banks. By splitting up such banks and transferring important functions to bridge financial institutions, losses can be imposed on creditors, while financial stability is assured. Solid plans for how individual banks can and should be wound up play an important role in such crisis resolution.

Norges Bank's assessments of the need for changes in the Norwegian framework for banking crisis resolution are in line with new international proposals. The G20 has recently issued overarching recommendations for resolving crises in systemically important banks, and the European Commission has made recommendations for a tool kit for banking crisis resolution.

The more capital a bank has, the greater the losses it can absorb without getting into serious financial trouble. The G20 recommends that systemically important banks have greater capacity for absorbing losses than the capital adequacy standards to apply to all banks. Loss absorbing capacity can also be boosted by setting stricter standards for when and how various capital instruments shall bear losses. Earlier this autumn the Basel Committee on Banking Supervision presented a proposal to ensure loss absorbency of hybrid capital at the point of non-viability of internationally active banks, as an alternative to bankruptcy/resolution proceedings and liquidation. Norges Bank and Finanstilsynet (Financial Supervisory Authority of Norway) endorsed the proposal in a joint consultative statement.[3] The proposal will help to boost systemically important banks' capacity to absorb losses. This summer the US imposed stricter capital regulations and requirements for approved recovery and resolution plans on systemically important financial institutions (SIFIs). At the same time, US authorities were empowered to require reorganisation of the SIFI if its recovery and resolution plan is unsatisfactory. Both DnB NOR and Nordea Bank Norge have large enough total assets to be defined as systemically important in Norway under the US rules. In Switzerland an expert group has proposed that the two largest Swiss banks have a capital adequacy ratio of 19% from 2019, of which approximately half must be composed of equity.

1 This implicit subsidy of bank funding is an argument in favour of taxing market funding of banks that the market expects will be supported in the event of financial difficulties (see Sigbjørn Atle Berg (2010): Særskatt på finansinstitusjoner og avgifter til sikringsfond (Special tax on financial institutions and fees to guarantee funds), *Penger og kreditt* 2/2010 (to be published mid-December 2010).
2 The recommendations are described in detail in an enclosure to Norges Bank's letter to the Ministry of Finance in connection with *Financial Stability report* 2/2010.
3 See http://www.norges-bank.no/templates/article____77453.aspx

Box 5 Effects of persistently low interest rates

In Norway and many other countries, central bank interest rates, short-term rates and long-term government bond yields are unusually low (see Chart 1). The level of these interest rates also has an impact on other financial instruments. Various economic effects of a persistently low interest rate level are discussed below.[1]

The effects on the level of household debt in Norway

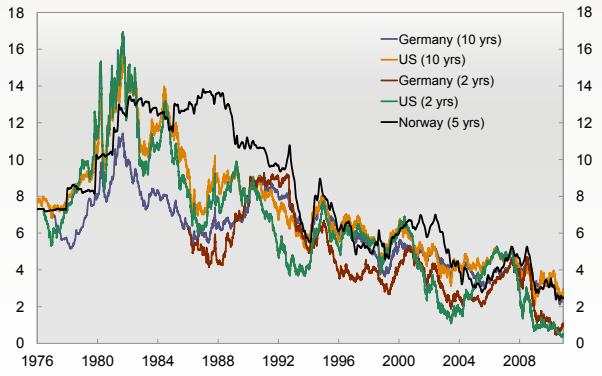
There are prospects for fairly solid growth in demand for goods and services in Norway in the years ahead. The global downturn has had little impact on Norwegian households in terms of unemployment, and the growth outlook is favourable compared with a number of other countries. Low interest rates are favouring current consumption, including housing consumption. Expectations of low interest rates ahead may contribute to higher debt growth. Periods of low interest rates may also induce households to lower their interest rate expectations. Low long-term interest rates in international financial markets, combined with signals from central banks that interest rates will kept low for an extended period, may reinforce expectations of lower rates.

A large share of demand will be met by foreign imports because the real krone exchange rate is strong. Housing services can only be produced domestically. With strong growth in demand, there is a risk that house prices start to rise further from already high levels with an attendant increase in household debt accumulation.

A stylised example can illustrate to what extent the household debt burden may increase should households act on the assumption that interest rates will remain persistently low. In the period 1986-2004, household interest expenditure as a percentage of income averaged 11 %. Chart 2 shows the size of household debt burdens at different interest rate levels given that the 11 % average remains unchanged going forward. If households believe that the long-term interest rate level will be 3-4 per cent ahead, the household debt burden, under the assumption that households are free to adjust, could increase to around 300–400 %.[2]

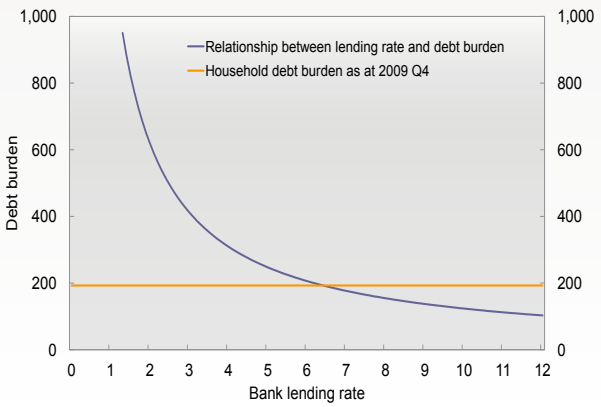
Debt accumulation of this magnitude will span a long period and interest rates would have to remain low for a long time. The calculations illustrate, however, that Norwegian households are not necessarily prone to accumulating debt at a slower pace. The result may be growing pressures in the housing market and the risk of bubbles. Increased house prices imply higher collateral values for banks, which in turn provide households with

Chart 1 Yields on government bonds in Germany, US and Norway. Time to maturity in brackets. Per cent. Daily figures. 1 Jan 1976 – 23 Nov 2010



Source: Thomson Reuters

Chart 2 Relationship between bank lending rate and debt burden[1] with an interest burden[2] of 11%



1) Debt as percentage of disposable income

increased borrowing capacity. High debt burdens may increase households' vulnerability to unexpected interest rate hikes, pronounced income shortfalls or an abrupt turnaround in the housing market.

Several conditions may restrain the rate of household debt accumulation. A portion of households had to reduce consumption when the interest rate rose to a more normal level in the period to summer 2008. As a result, households may now have factored in the possibility of a higher interest rate level ahead and recognised the need for building up financial buffers. Moreover, Finanstilsynet issued new guidelines on prudent lending standards in March 2010. Credit growth figures and Norges Bank's bank lending survey indicate that this is having an impact on banks' lending standards.

Challenges facing life insurance companies and pension funds

Persistently low government bond yields are posing challenges to life insurance companies and pension funds, which must meet annual return guarantees. Such companies have large holdings of government bonds and other types of bonds. The investment horizon is often substantially longer than the maturity on the bonds in their portfolios. This means that the bonds must be rolled over fairly frequently over the life of the obligations. Persistently low interest rates will, among other things, lead to a fall in the return on the bond portfolio as holdings are rolled over to lower rates.

A persistently low interest rate level heightens the risk that these companies are not able to generate sufficient returns for paying guaranteed returns. Low interest rates also make it difficult for the companies to build up capital buffers. If the companies do not manage to achieve a sufficient return on their investment portfolios, they will have to draw on their buffer capital and ultimately also on their equity capital to fulfil their payment obligations vis-à-vis customers. Alternatively, higher returns could be realised by raising the share of equities. However, this increases risk and the vulnerability of equity exposures to losses.

In Norway, the companies will be helped somewhat by, for example, higher returns on their real estate portfolios and portfolios of bonds held to maturity relative to today's market rates and the guaranteed return rate. In addition, the level of the guaranteed return is gradually declining.[3]

Risk of renewed search for higher returns

Generally, low returns on government bonds will fuel incentives to invest in risky assets. In the years leading up to the financial crisis, investors' search for yield led to idle capital finding its way to subprime segments of the US housing market, resulting in sizeable losses for investors. Such misallocation of capital may also arise if investors underestimate the risk linked to alternative investments.

There are now heightened concerns that large capital flows to emerging market economies may have adverse effects. Capital flows into funds that invest in emerging market economies have been record-high in 2010. Capital flows are being driven by prospects for continued robust growth in several emerging market economies, while interest rates are low in the US and other European countries and growth prospects subdued. High capital inflows exert pressure on exchange rates, intensify the risk of financial bubbles and may also lead to adverse market effects and volatility if various factors were to trigger a sudden reversal in capital flows.

1 See also box on persistently low interest rates in *Monetary Policy Report* 3/2010.
2 See also Berge and Vatne (2009): Are household debt-to-income ratios too high?, *Economic Commentaries* 4/2009, Norges Bank.
3 In Norway, Finanstilsynet sets the maximum rate of return. See "Finanstilsynet har besluttet å sette ned beregningsrenten i livsforsikring" (Finanstilsynet has decided to reduce the allowed maximum guaranteed return for life insurance companies), Press Release 32/2010, Finanstilsynet.

Annex 1

Glossary

Baseline scenario: The baseline scenario in the *Monetary Policy Report* represents the developments Norges Bank considers most probable under a number of assumptions. The baseline scenario derives from a macroeconomic model, supplemented by discretionary assessment.

Corporate market: Sectors 710 – 790, which include non-financial private enterprises and the self-employed.

Covered bonds (OMF): Debt instruments secured by a cover pool to which investors have a preferential claim in the event of default. The cover pool can include residential mortgages, commercial property loans and public sector debt.

Customers: Sector term used for banks' customers and includes sectors 110, 380 – 890 and 941 – 990. In addition to the sectors included in the retail and corporate markets, customers also include the central and local government sector as well as foreign non-financial sectors.

Deposit margin: The difference between the 3-month effective NIBOR rate and the average deposit rate.

Deposit-to-loan ratio: Deposits from a customer group as a percentage of lending to the same group.

Disposable income: Household disposable income is defined as: all forms of income less taxes, interest expenses and other expenses (Other expenses comprise a number of components such as transfers abroad, payments to group pension schemes etc.). Norges Bank corrects disposable income for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2013.

Interest margin: The difference between a bank's average lending rate and average deposit rate for a given customer group. The interest margin can be split into the deposit margin and the lending margin.

Lending margin: Difference between the average lending rate and the 3-month effective NIBOR rate.

NIBOR (Norwegian Inter Bank Offered Rate): NIBOR or the money market rate is the interest rate on interbank loans. Supply and demand in the money market determine money market rates. NIBOR is a currency swap rate.

OMF covered bond mortgage company: Mortgage company entitled to issue OMF covered bonds.

Private and municipal sector: Sectors 510 – 890, which include the institutional sectors local government, public non-financial enterprises, private non-financial enterprises and households.

Retail market: Sector 810, which comprises wage earners, pensioners, benefit recipients, students etc.

Stress scenario: Stress alternative for the Norwegian economy under which the occurrence of number of unexpected economic shocks is assumed. Although the stress scenario is not the most probable alternative to the baseline scenario, it represents an analysis of relevant risk factors that can lead to problems for banks.

Swap arrangement: Arrangement whereby banks obtain government securities in exchange for covered bonds (OMF) for an agreed period. Norges Bank administers the arrangement on behalf of the Ministry of Finance.

Total risk-weighted assets: Total risk-weighted assets comprise the denominator in the calculations of financial institutions' equity capital, Tier 1 capital and capital adequacy ratios. The risk weights that may be used in the calculations are set out in the Basel II capital adequacy standards.

Annex 2

Boxes 2006 – 2010

2/2010
Projections of bank earnings – changes since the May *Financial Stability* report
New regulation of bank capital and liquidity
Discretionary countercyclical measures
Crisis resolution – systemically important banks
Effects of persistently low interest rates

1/2010
Projections of bank earnings – changes since the December *Financial Stability* report
Macroprudential supervision and systemic risk
Finanstilsynet's new guidelines for prudent lending – effects on household debt
Consequences of Solvency II for banks
New accounting rules for valuation of financial assets

2/2009
Measures under discussion aimed at improving financial regulation
Capital requirements during the banking crisis in the early 1990s
Difficulties in comparing banks' capital adequacy
In favour of wider use of central counterparties
Payment systems have functioned effectively
Shipping – a vulnerable sector

1/2009
The background for the financial crisis
Then and now – a comparison with the banking crisis of 1988–1993

2/2008
Banks' capital requirements
How vulnerable is the financial system? An analysis using gap indicators
Stress-testing of bank losses and results

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

Annex 3

Table 1 Key figures for Norwegian limited companies.[1)]
Per cent

	Share of debt[2)]		Operating margin[3)]		Return on total assets[4)]		Equity ratio[5)]	
	2008	2009	2008	2009	2008	2009	2008	2009
Agriculture, forestry and affiliated services	0.2	0.2	3.8	4.0	2.4	4.6	32.4	34.7
Fishing, hunting and fish-farming	3.3	3.5	11.4	15.8	0.0	6.9	27.1	31.6
Manufacturing	7.3	6.6	6.3	3.8	1.7	4.2	33.8	39.4
Oil services	4.3	4.4	16.7	11.7	4.4	5.0	33.6	34.4
Utilities	2.9	2.4	27.1	26.1	9.7	9.8	43.6	44.9
Construction	8.3	7.4	5.8	6.2	4.3	5.8	25.9	30.4
Retail trade	6.5	5.4	2.7	3.3	5.6	8.0	29.0	32.7
Shipping	13.2	13.5	12.5	2.4	-1.0	2.7	36.9	46.6
Transport except shipping	3.4	4.3	7.5	7.6	5.6	6.3	25.6	25.5
Hotel, restaurant and travel	0.8	0.8	3.9	3.3	3.2	4.8	24.5	28.1
Business services	9.7	8.8	8.4	6.5	2.2	4.7	35.5	37.1
Commercial property	40.2	42.8	54.0	88.2	-0.6	3.6	38.7	43.6
Total	100.0	100.0	7.2	6.7	2.3	5.0	34.8	39.0

1) Excluding oil and gas extraction, banking and insurance, and public sector.
2) The industry's share of enterprises' total debt to credit institutions
3) Operating margin as a percentage of turnover
4) Profits before tax as a percentage of total assets at year-end
5) Book equity as a percentage of total assets

Source: Norges Bank

Table 2 Structure of the Norwegian financial industry as of 30 September 2010

	Number	Lending (NOK bn)	Total assets (NOK bn)	Tier 1 capital ratio (%)	Capital ratio (%)
Banks (excluding branches of foreign banks)	134	1 658	3 086	10,3	12,5
Branches of foreign banks	11	325	568		
Mortgage companies (including branches of foreign companies)	30	968	1 373	10,5	12,1
Finance companies (including branches of foreign companies)	51	93	109	12,2	13,0
State lending institutions	3	229	242		
Life insurance companies (excluding branches of foreign companies)*	12	46	842	11,8	14,9
Non-life insurance companies (excluding branches of foreign companies)*	44	1	151	37,6	37,8
Memorandum:			(NOK bn)		
Market value of equities, Oslo Stock Exchange			1 499		
Outstanding domestic bonds and short-term paper debt			1 616		
Issued by public sector and state-owned companies			661		
Issued by banks			294		
Issued by other financial institutions			407		
Issued by other private enterprises			97		
Issued by non-residents			157		
GDP Norway, 2009			2 408		
GDP mainland Norway, 2009			1 854		

* Capital ratio and Tier 1 capital ratio as of June 2010

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

Table 3 Market shares of banks and covered bond mortgage companies[1] in Norway as of 30 September 2010. Per cent

	Gross lending to		Deposits from	
	Retail market	Corporate market	Retail market	Corporate market
DnB NOR Bank[2]	31.8	32.8	32.3	35.5
Subsidiaries of foreign banks in Norway[3]	12.8	18.8	9.0	18.1
Branches of foreign banks in Norway[4]	10.9	17.8	8.2	14.9
SpareBank 1-alliansen[5]	19.2	14.9	19.4	13.9
Terra-Gruppen[6]	8.8	4.1	11.2	5.7
Other savings banks[7]	13.4	9.6	15.0	9.9
Other commercial banks[8]	3.2	2.0	5.0	2.2
Total	100.0	100.0	100.0	100.0
Total market (in NOK bn)	1 607	1 058	701	570

1) The market shares are calculated by summing the balance sheet items for the institutions in the different groups.
2) DnB NOR Bank, Nordlandsbanken, DnB NOR Boligkreditt and DnB NOR Næringskreditt
3) Nordea Bank Norge, Santander Consumer Bank, SEB Privatbanken and Nordea Eiendomskreditt
4) Fokus Bank filial av Danske Bank, Handelsbanken, SEB, Swedbank, Handelsbanken Eiendomskreditt, BNP Paribas, Skandiabanken + 5 other branches
5) SpareBank 1 SR-Bank, SpareBank 1 SMN, SpareBank 1 Nord-Norge, Sparebanken Hedmark + the 14 other savings banks in SpareBank 1-alliansen, SpareBank 1 Boligkreditt, BN Bank, Bank 1 Oslo, SpareBank 1 Næringskreditt and BN Boligkreditt
6) Terra BoligKreditt, Terra Kortbank and the 76 savings banks which are owners of Terra-Gruppen AS
7) Sparebanken Vest, Sparebanken Møre, Sparebanken Sør, Sparebanken Pluss, Sandnes Sparebank, Sparebanken Sogn og Fjordane + 14 other savings banks and 10 residential mortgage companies
8) Storebrand Bank, Landkreditt Bank, Gjensidige Bank, Storebrand Kredittforetak + 9 other commercial banks, 1 other residential mortgage company and 1 commercial mortgage company

Source: Norges Bank

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

	Q3 09		Q4 09		Q1 10		Q2 10		Q3 10[2)]	
	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA
Net interest income	10.47	1.34	10.17	1.30	9.97	1.28	10.12	1.28	11.73	1.48
Other operating income	5.62	0.72	5.38	0.69	4.77	0.61	6.42	0.81	5.71	0.72
Commission income	2.55	0.33	2.50	0.32	2.44	0.31	2.62	0.33	2.67	0.34
Securities, FX and derivatives	2.21	0.28	2.47	0.32	1.76	0.23	1.32	0.17	2.25	0.28
Other operating expenses	7.47	0.96	7.95	1.02	6.89	0.89	7.74	0.98	8.46	1.07
Personnel expenses	4.38	0.56	4.54	0.58	3.56	0.46	4.37	0.55	4.82	0.61
Operating result before losses	8.61	1.10	7.61	0.97	7.86	1.01	8.80	1.11	8.97	1.13
Losses on loans and guarantees	2.31	0.30	1.14	0.15	0.81	0.10	1.15	0.14	0.63	0.08
Pre-tax profit	6.71	0.86	4.78	0.61	7.04	0.91	9.88	1.25	7.22	0.91
After-tax profit	4.79	0.61	3.38	0.43	5.27	0.68	7.67	0.97	5.50	0.69
Capital ratio (%)	12.1		13.1		13.1		12.5		12.5	
Tier 1 capital ratio (%)	9.5		10.5		10.6		10.1		10.3	

1) All banks with the exception of branches of foreign banks in Norway. Results as a percentage of average total assets (ATA) are annualised
2) DnB NOR Finans merged with DnB NOR Bank in September 2010

Source: Norges Bank

Table 5 Results and capital adequacy in Norwegian banks[1)]

	2007		2008		2009		2009 Q1- Q3		2010 Q1-Q3 2)	
	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA	NOK bn	% ATA
Net interest income	36.72	1.50	43.16	1.55	41.01	1.32	30.84	1.33	31.83	1.35
Other operating income	18.47	0.75	10.69	0.38	23.38	0.75	18.00	0.78	16.90	0.72
Commission income	10.24	0.42	9.34	0.34	9.45	0.31	6.95	0.30	7.74	0.33
Securities, FX and derivatives	3.58	0.14	-1.42	-0.05	12.70	0.40	10.23	0.45	5.34	0.22
Other operating expenses	28.17	1.15	29.57	1.06	30.70	0.99	22.74	0.98	23.09	0.98
Personnel expenses	15.61	0.64	16.72	0.60	17.71	0.57	13.18	0.57	12.75	0.54
Operating result before losses	27.02	1.10	24.28	0.87	33.70	1.09	26.10	1.13	25.63	1.09
Losses on loans and guarantees	-0.01	0.00	5.41	0.19	7.29	0.24	6.15	0.27	2.59	0.11
Pre-tax profit	27.42	1.12	18.28	0.66	24.80	0.80	20.02	0.86	24.14	1.02
After-tax profit	20.78	0.85	13.02	0.47	17.59	0.57	14.21	0.61	18.44	0.78
Capital ratio (%)	11.7		11.2		13.1		12.1		12.5	
Tier 1 capital ratio (%)	9.3		8.6		10.5		9.5		10.3	

1) All banks with the exception of branches of foreign banks in Norway
2) DnB NOR Finans merged with DnB NOR Bank in September 2010

Sources: 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 2010 Q3. Consolidated figures.

	Financial strength	Short-term	Long-term	Total assets (NOK bn)	Tier 1 capital ratio (%)	Capital ratio (%)	Share of interim profits (%)	Return on equity		
								2008	2009	2010 Q1-Q3
Nordea Bank	C+	P-1	Aa2	4 787	10.1	11.8	0	15.3	11.3	11.0
Danske Bank	C	P-1	Aa3	3 594	14.4	17.4	100	1.0	1.7	3.4
SEB	C-	P-1	A1	1 964	12.7	12.7	100	13.1	1.2	4.4
Handelsbanken	C+	P-1	Aa2	1 907	9.1	12.0	0	16.2	12.6	12.8
DnB NOR	C	P-1	Aa3	1 863	9.2	11.7	0	12.4	10.6	12.4
Swedbank	D+	P-1	A2	1 609	10.8	13.3	100	15.2	-12.5	6.9
Nordea Bank Norge	C	P-1	Aa2	511	7.9	10.2	0	17.6	10.1	15.7
SpareBank 1 SR-Bank	C-	P-1	A1	130	9.3	11.6	50	8.0	17.5	15.1
Sparebanken Vest	C-	P-1	A2	105	10.6	11.5	50	4.9	8.0	12.2
SpareBank 1 SMN	C-	P-1	A1	95	10.6	12.8	50	11.9	16.2	13.9
SpareBank 1 Nord-Norge	C	P-1	A1	68	9.8	11.0	0	8.1	18.2	15.5

1) Rating as of 22 November 2010. 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 Tier 1 capital ratio and capital ratio varies across 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

	2009	Q3 09	Q3 10
Cash and deposits	9.9	9.2	7.8
Securities (current assets)	19.3	19.1	20.8
Gross lending to households, municipalities and non-financial enterprises	53.7	54.4	53.7
Other lending	10.0	9.8	10.3
Loan loss provisions	-0.4	-0.4	-0.4
Fixed assets and other assets	7.5	8.0	7.8
Total assets	100.0	100.0	100.0
Customer deposits	43.1	42.3	44.4
Deposits/loans from domestic credit institutions	3.1	3.3	3.1
Deposits/loans from foreign credit institutions	15.2	14.3	11.9
Deposits/loans from Norges Bank	1.6	1.4	2.1
Other deposits/loans	6.3	6.2	6.3
Notes and short-term paper debt	3.1	3.2	3.7
Bond debt	15.5	16.4	15.0
Other liabilities	3.9	4.9	4.9
Subordinated loan capital	2.3	2.2	2.2
Equity	5.9	5.7	6.4
Total equity and liabilities	100.0	100.0	100.0
Memorandum:			
Total assets (NOK bn)	3 132	3 120	3 086

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

Source: Norges Bank

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

	2009	Q3 09	Q3 10
Balance sheet. Percentage distribution			
Cash and deposits	3.2	4.2	3.1
Securities (current assets)	2.4	3.7	3.9
Gross lending	93.6	91.6	92.6
Loan loss provisions	0.0	0.0	0.0
Fixed assets and other assets	0.7	0.5	0.4
Total assets	100.0	100.0	100.0
Notes and short-term paper debt	0.1	0.1	0.1
Bond debt	66.6	69.2	72.1
Loans	27.1	24.9	21.1
Other liabilities	1.1	0.7	1.9
Subordinated loan capital	0.6	0.6	0.5
Equity	4.5	4.5	4.3
Total equity and liabilities	100.0	100.0	100.0
Profit/loss. Percentage of ATA (annualised)			
Net interest income	0.98	1.04	0.84
Operating expenses	0.21	0.22	0.23
Losses on loans and guarantees	0.01	0.01	0.01
Pre-tax profit	0.45	0.40	0.44
Memorandum:			
Repayment loans (NOK bn)	396	357	510
Total assets (NOK bn)	594	550	783
of which residential mortgage companies	560	530	740
of which commercial mortgage companies	34	20	43

1) Mortgage companies with the right to issue OMF covered bonds in accordance with the regulation that came into force on 1 June 2007. In December 2009 the figures are for 22 companies of which 17 companies are residential mortgage companies, in September 2009, the figures are for 19 companies of which 16 companies are residential mortgage companies, and in September 2010, the figures are for 23 companies of which 18 companies are residential mortgage companies.

Source: Norges Bank

Table 9 Stress testing bank losses and profits. Projections in stress scenario (baseline scenario[1]) in brackets)

	2010		2011		2012		2013	
Macroeconomic scenario. Percentage change from previous year unless otherwise stated								
Mainland GDP[2]	1¼	(1¾)	-¼	(3)	1¾	(3)	2¼	(2¾)
CPI	2¼	(2¼)	¾	(1¼)	1¼	(2)	1½	(2¼)
Annual wage growth	3¼	(3½)	3½	(3¾)	3¼	(4¼)	3	(4½)
Registered unemployment (percentage of the labour force)	3	(3)	3	(2¾)	3½	(2½)	3½	(2½)
Exchange rate (Level. Import-weighted index, 44 countries)	90¾	(90¼)	91½	(90¾)	91¼	(90½)	91¾	(91½)
Oil price, USD per barrel (level)	64	(79)	50	(85)	50	(88)	52	(88)
Bank lending rates (level)	4¾	(4½)	4½	(4½)	3¾	(5)	3¾	(6)
House prices	6	(7¾)	-10	(4¾)	-4	(4)	2½	(3¾)
Credit to households[3]	6¼	(6¾)	3¾	(7)	2½	(6¾)	2¼	(6½)
Credit to non-financial corporations[3]	2¼	(2½)	-1½	(4½)	0	(6)	½	(6)
Bank losses and profits								
Problem loans households[4] (percentage of lending to the sector)	1.3	(1.3)	1.5	(1.2)	1.4	(0.9)	1.3	(0.8)
Problem loans non-financial enterprises[4] (percentage of lending to the sector)	4.0	(3.4)	4.6	(3)	6.1	(3)	6.6	(3)
Problem loans total[4] (percentage of gross lending)	2.2	(2)	2.5	(1.8)	2.9	(1.6)	2.9	(1.5)
Loan losses (percentage of gross lending)	0.6	(0.2)	1.3	(0.2)	1.6	(0.1)	1.6	(0.1)
Pre-tax results (percentage of average total assets)	0.6	(0.9)	0.1	(0.9)	-0.1	(1.0)	0.2	(0.9)
Net interest income (percentage of average total assets)	1.2	(1.2)	1.0	(1.2)	1.0	(1.3)	1.3	(1.2)
Tier 1 capital (percentage of risk-weighted assets)	9.0	(9.3)	8.9	(9.4)	8.6	(9.5)	8.6	(9.5)

1) Norway's five largest banks and Nordea Bank Norge
2) Baseline scenario for CPI, annual wage growth, registered unemployment, oil price, exchange rate and mainland GDP are from *Monetary Policy Report* 3/2010
3) Change in stock measured at end-year
4) Non-performing loans and other loans that banks regard as particularly doubtful. All banks excluding branches of foreign banks in Norway

Sources: Statistics Norway, Technical Reporting Committee on Income Settlements, Thomson Reuters, Association of Real Estate Agency Firms, ECON Pöyry, Finn.no, Association of Real Estate Agents and Norges Bank

Table 10 Key figures

	Average 1987 – 1993	Average 1994 – 2008	2009	Projections 2010	2011	2012 – 2013
Households						
Debt burden[1)]	141	145	193	196	201	208
Interest burden[2)]	9.7	5.8	5.3	5.1	5.5	6.9
Borrowing rate[3)] after tax	9.1	4.9	3.1	3.0	3.0	3.8
Real interest rate after tax[4)]	4.3	2.8	0.9	0.7	1.8	1.7
Net financial wealth[5)]	8	44	25			
Rise in house prices[6)]	-1.3	10.0	2.7	8	5	4
Enterprises						
Debt burden[7)]	1 087	874	833			
Interest burden[8)]	44	30	30			
Return on total assets[9)]	3	5	5			
Equity-to-assets ratio[10)]	27	36	39			
Banks[11)]						
Profit/loss[12)]	-0.4	1.1	0.8	1.0		
Interest margin[13)]	5.2	2.9	2.4	2.5		
Non-performing loans[14)]		1.8	1.5	1.8		
Loan losses[15)]	2.3	0.2	0.4	0.2		
Lending growth[16)]	4.7	10.8	-7.7	-1.5		
Return on equity[17)]		14.9	10.9	14.2		
Equity ratio[18)]		7.2	5.9	6.4		
Tier 1 capital ratio[19)]	6.3	9.4	10.5	10.3		

1) Loan debt as a percentage of disposable income adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2013
2) Interest expenses after tax as a percentage of disposable income adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2013 plus interest expenses
3) Banks' lending rates to households. Banks and covered bond mortgage companies from 2002 onwards
4) Lending rates adjusted for inflation measured by the CPI
5) Households' total financial 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 – 2012
6) Based on house prices from Association of Norwegian Real Estate Agents, 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. Exlusive bank/insurance, public sector and extraction of oil/gas. Figures include only enterprises with debt
8) Enterprises' total interest costs as a percentage of profits before tax, interest costs, writedowns and depreciation. Limited enterprises in Norway, excluding bank/insurance, public sector and extraction of oil/gas. Figures include only enterprises with debt
9) Enterprises' profits before tax as a percentage of total assets. Limited enterprises in Norway, excluding bank/insurance, public sector and extraction of oil/gas
10) Book equity as a percentage of total assets. Limited enterprises in Norway, excluding bank/insurance, public sector and extraction of oil/gas
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 2010 Q1-Q3 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 for 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 the private and municipal sector 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) Equity in per cent of assets for all Norwegian banks except branches of foreign banks in Norway
19) Regulatory Tier 1 capital to risk-weighted assets for all Norwegian banks except branches of foreign banks in Norway. The average for the period 1991 – 1993 is applied to the years 1987 – 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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