

Boxes

International experience of turnarounds in the housing market

Low share of fixed-rate loans in the household sector

Low household saving

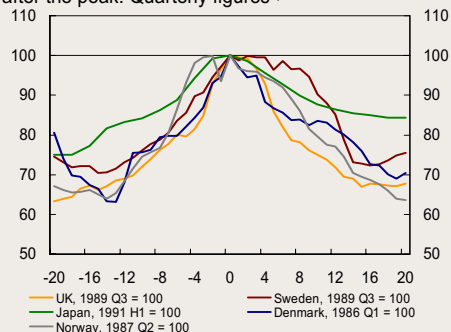
An analysis of banks' problem loans

International experience of turnarounds in the housing market

In most OECD countries, house prices have fluctuated around a rising trend since the 1970s. There have been some episodes of falling house prices and sharp falls in house price inflation. These coincided with economic downturns.

Most sharp house price falls took place in the periods 1980-82 and 1989-92.¹ Chart 1 shows developments in house prices in some of the OECD countries that experienced the widest fluctuations around 1990. The fall in house prices in these countries was relatively pronounced and persistent. In the late 1980s, high house price inflation coincided with strong growth in private consumption and high inflation in a number of countries. Monetary policy was tightened, contributing to lower demand in the economy, higher unemployment and a weaker housing market. Sweden, Finland and Norway experienced banking crises in the early 1990s.

Chart 1 Upturns and downturns in real house prices¹⁾ in selected countries. Peak in the period (quarter 0) = 100. Development 5 years before and after the peak. Quarterly figures²⁾



¹⁾ House prices are deflated by the consumer price index (CPI). In the UK house prices are deflated by the retail price index (RPI)

²⁾ Semi-annual figures for Japan

Sources: Reuters (EcoWin), Bank of International Settlements (BIS) and Norges Bank

From the mid-1990s, real house prices rose sharply in many countries. The rise in prices has been slower in several of the countries in recent years. So far, the landing has been fairly soft. Some of the possible factors are discussed below, with focus on the Netherlands, the UK and Australia, which are among the OECD countries with the most pronounced movements in house prices.

An important difference in relation to the house price cycles around 1980 and 1990 is that short-term and long-term interest rates, both nominal and real, are lower. Monetary policy in many countries has been changed from a fixed rate regime to an inflation targeting regime. This may contribute to smaller fluctuations than previously, which in isolation reduces the risk of a sharp fall in house prices.

Low interest rates ease debt-servicing and support house prices. On the other hand, high house prices have contributed to growth in household debt. If the strong debt growth continues, households will be more vulnerable to negative economic disturbances, and the slowdown in the housing market may be more pronounced.

Changes in the unemployment rate are an important factor with respect to the magnitude of both corrections in the housing market and the impact on the real economy.² The labour market is a decisive factor for income and expectations regarding future household income. It affects both private consumption and demand in the housing market. In recent years, the labour market has supported house prices. In many countries, unemployment was far higher in the early 1990s.

In the Netherlands, house price inflation has slowed markedly since the peak in 1999. From 2000 to 2003, economic growth was weak, private consumption declined and unemployment rose (see Chart 2). This pushed down housing demand. At the same time, there are physical constraints on residential construction in the Netherlands. This curbs the downside of house prices.

House price inflation in the UK has declined substantially since the peak in 2002-2003 (see Chart 3). Historically, the rise in house prices and growth in private consumption have been strongly correlated in the UK. In the most recent period of rapidly rising house prices, private consumption grew more moderately. This may indicate that the rise in house prices was driven by factors other than expectations relating to future income growth. A weaker relationship between house prices and private consumption

may reduce the spillover effects of the rise in house prices on the wider economy.³ It also increases the probability of a soft landing in the housing market. Increased labour migration from the new EU countries to the UK in recent years has also led to high housing demand, which may also have contributed to dampening the fall in house price inflation.

In Australia, real house prices increased by almost 70% between 1996 and 2003, but the rise has slowed substantially in recent years (see Chart 4). Housing investment fell and growth in private consumption slowed somewhat. Nonetheless, economic growth remained at a high level. Strong growth internationally, particularly in China, has increased demand for important Australian export goods. Solid profitability in the export industry has supported economic growth, and has reduced the negative interaction between the housing market and the real economy.⁴

Overall, lower interest rates, lower unemployment and more stable economic developments have so far contributed to less pronounced corrections in the housing market in recent years than in the periods around 1980 and 1990. Some factors specific to individual countries have also played a part. At the same time, the household debt burden has increased in many countries. Interest-only loans have eased debt-servicing, but imply depletion of financial buffers. This increases household vulnerability. Hence, the experience of fairly mild slowdowns in housing markets in several countries in recent years does not imply that the risk of a sharp downturn can be dismissed.

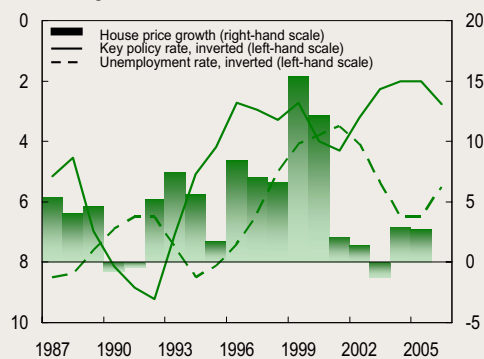
¹ "World Economic Outlook", April 2003, IMF.

² "World Economic Outlook", April 2007, IMF.

³ "Inflation Report", May 2004, Bank of England.

⁴ "2006 Article IV consultation with Australia", IMF.

Chart 2 Unemployment rate, key policy rate¹⁾ and real house price inflation²⁾. Netherlands. Annual figures. 1987 – 2006

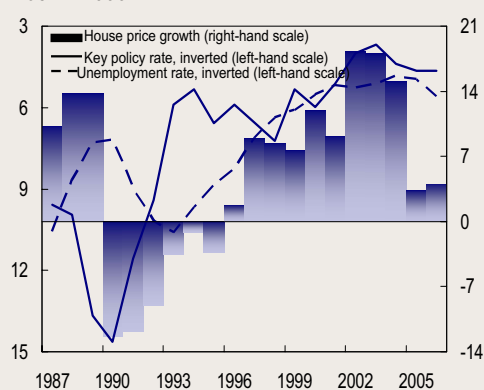


¹⁾ This series is the old Dutch rate for special loans continued with the ECB Refinancing Tender rate from January 1999

²⁾ Deflated by the CPI

Sources: Reuters (EcoWin), IMF and Norges Bank

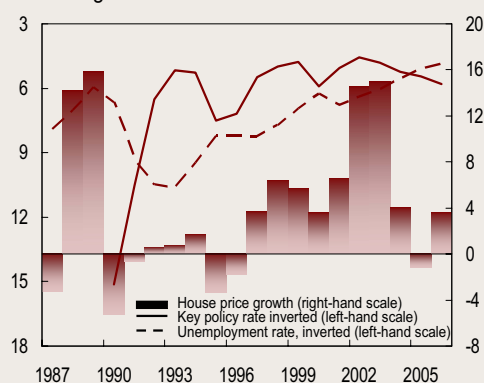
Chart 3 Unemployment rate, key policy rate and real house price inflation¹⁾. UK. Annual figures. 1987 – 2006



¹⁾ Deflated by the CPI

Sources: Reuters (EcoWin), IMF and Norges Bank

Chart 4 Unemployment rate, key policy rate and real house price inflation¹⁾. Australia. Annual figures. 1987 – 2006



¹⁾ Deflated by the CPI. Break in the series in 2002

Sources: Reuters (EcoWin), IMF and Norges Bank

Low share of fixed-rate loans in the household sector

As a result of rapid debt growth and a pronounced increase in net interest-bearing debt, a given interest rate change will have a stronger impact on household interest expenses now than previously. The short-term impact of an interest rate change on household interest expenses also depends on the share of fixed-rate loans in relation to total household debt and fixed-rate periods.

The share of household fixed-rate loans is low in Norway. At the end of the first quarter of 2007, fixed-rate loans accounted for only a little less than 8% of household loans (see Chart 1). Most fixed-rate loans have a residual fixed-rate period of less than five years. The share of fixed-rate loans in Norway is very low compared with other countries, such as Sweden and Denmark (see Chart 2). In Sweden, about 60% of household mortgages are fixed-rate loans. About 65% of these have a residual fixed-rate period of less than five years. In Denmark, long fixed-rate contracts are common. Mortgage rates are often fixed to maturity. At the end of 2006, the share of fixed-rate mortgages in Denmark was 45%. The share of fixed-rate mortgages in Sweden and Denmark has also exhibited a falling trend in recent years.

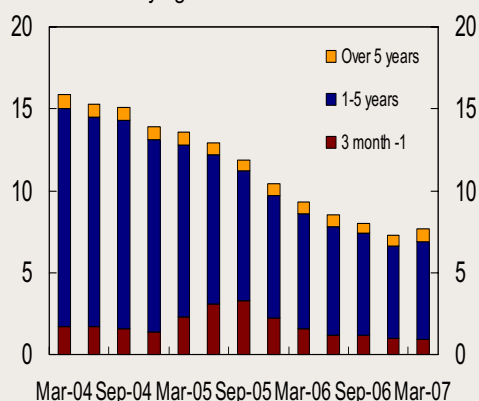
Why is the share of fixed-rate loans low in the household sector?

There may be various motives behind households' choice of a fixed or a floating interest rate. One

motive for choosing a fixed-rate loan may be predictable expenses. Another may be related to speculation. Borrowers seek to minimise interest expenses over the loan period. The difference in interest rates on loans with fixed and floating rates at the time of entering into the loan contract, and borrowers' interest rate expectations will have a bearing on the choice of fixed or floating rate. A third possibility may be that borrowers have a short-term approach and therefore give most weight to the size of the payments when entering into a loan contract.¹ A fourth possibility may be that households prefer a stable level of consumption over a lifetime. The fixed/floating rate interest structure that stabilises consumption depends partly on the correlation between interest rate changes and income growth.

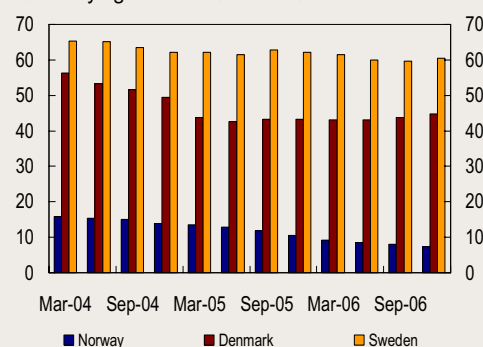
ECON Analyse interviewed a number of banks in Norway about borrowers' priorities when choosing a fixed or floating rate loan. The conclusion of the survey was that households place considerable emphasis on the difference between the interest rate on a fixed and floating rate loan when choosing interest terms.² Borrowers' expectations regarding the difference between fixed and floating rates in the future also play a part. One possible reason for the very low share of fixed-rate loans in Norway may be that in the past fixed-rate loans have not been a favourable option. This is because the general interest rate level in Norway has been on a falling trend for the past 20 years (see Chart 3).

Chart 1 Households' fixed-rate loans after residual fixed-rate period as a share of total household loans. Quarterly figures. 04 Q1 – 07 Q1



Source: Statistics Norway

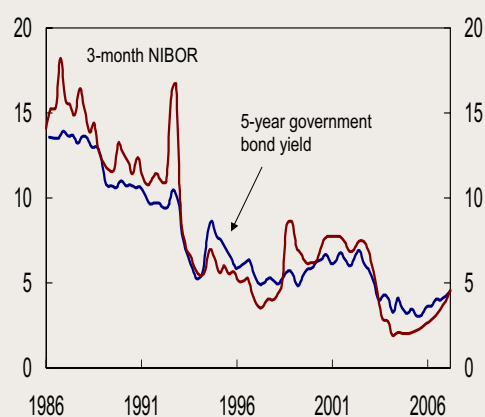
Chart 2 Fixed-rate loans with as a percentage of households' total loans.¹⁾ Quarterly figures. 04 Q1 – 06 Q4



¹⁾ For Denmark and Sweden the share of fixed-rate mortgages is reported as a percentage of total mortgages

Sources: Danmarks Nationalbank, Sveriges Riksbank and Norges Bank

Chart 3 5-year government bond yield and 3-month NIBOR. Quarterly figures. 86 Q1 – 07 Q1



Source: Norges Bank

There may also be supply-side factors in the credit market that explain the low share of fixed-rate loans in the household sector in Norway. One possible reason is weaker competition in the market for fixed-rate loans than for floating-rate loans. In Norway it is primarily banks that provide mortgages to households. The share of household fixed-rate loans is often high in countries where mortgage companies are the main source of housing loans. Mortgage companies finance their lending to a greater extent by issuing bonds.

Fixed-rate loans reduce borrowers' flexibility. Borrowers may want to change their loan repayment profiles. If the interest rate falls after entering into a fixed-rate loan contract, the borrower who wants to terminate a fixed-rate loan contract must pay a premium to compensate the lender for being unable to provide a new loan at the interest rate on which the financing is based. In Denmark, borrowers have the possibility of terminating a fixed-rate loan contract without paying a premium. This may be one of the reasons why the share of fixed-rate loans is considerably higher in Denmark than in Norway.

Advice and information provided by financial institutions are probably of considerable importance. A survey conducted by Kredittilsynet (Financial Supervisory Authority of Norway) in 2004 revealed that about half of borrowers had not received information about the effects of a potential rise in interest rates or about banks' fixed-rate loan products.³ Kredittilsynet's mortgage survey in autumn 2006 shows that 16 of 29 banks always provide information about the consequences of a rise in interest

rates when they grant loans. Banks' marketing of fixed-rate loans appears to have increased in the past half year.

Difference in prices for fixed-rate and floating-rate loans

Whatever the underlying motive for borrower's choice of fixed or floating rate, the difference between the interest rate on fixed and floating rate loans will have an influence. The interest rate offered by a lender in different loan contracts will depend on funding costs and lending margins. Funding fixed-rate loans by borrowing at floating rates will result in different interest rate profiles for lenders' assets and liabilities, and lenders will then be exposed to interest rate risk. To avoid this risk, they may, for example, finance fixed-rate lending by issuing bonds with a maturity as long as the loan term. Another, more common method of reducing interest rate risk, is to enter into interest rate swap agreements where lenders accept the money market rate and pay a fixed interest rate. The interest rates on these interest rate swaps (swap rates) can therefore be used as the banks' funding rate for fixed-rate loans. The difference between short-term rates and long-term rates will have a bearing on the interest rates banks offer borrowers in various loan agreements.

Long-term rates depend to a large extent on expectations concerning developments in short-term rates. If, at a given time, the short-term rate is expected to increase, the long-term rate at that time will be higher than the short-term rate. Long-term rates will also be affected by maturity premia that reflect uncertainty associated with interest rate expectations ahead. The size and sign of the maturity premium depend on the attitude towards interest-rate risk among the participants in the bond market.

If borrowers prioritise interest expenses at the beginning of the loan period, the slope of the yield curve may explain changes in the share of fixed-rate loans. Surveys from other countries indicate that there is a relationship between the slope of the yield curve and the share of households that choose fixed-rate loans. When the slope of the yield curve declines the share of fixed-rate loans increases.⁴

Chart 4 shows that the share of new fixed-rate loans in Norway was higher than normal in 1999 and 2003. In both these years, long-term rates were

lower than short-term rates. Long-term rates were also lower than short-term rates in 2001 and 2002, without an increase in household fixed-rate loans.

Lenders add a lending margin to their funding costs to cover administration costs, return on equity and credit risk premium. Competition in the lending market may affect required return on equity. It is assumed that administration costs are the same on fixed and floating-rate loans. Differences in margins will then reflect differences in credit risk or required return on equity. Data for some of the largest banks back to 2000 may indicate that margins have largely been smallest on floating-rate loans (see

Chart 5). Usually, differences in margins are not large, and there are also periods when margins are smallest on fixed-rate loans.

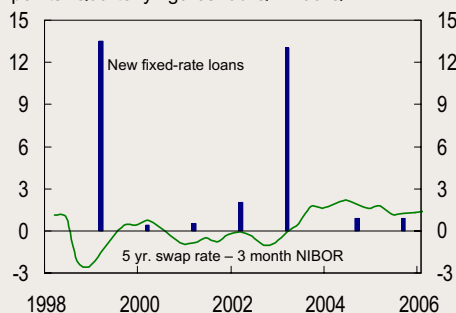
¹ A survey of households in the UK shows that borrowers prefer the loan contract that entails the lowest payments at the time of entering into the contract (see the report “The UK mortgage market: taking a longer term view” by D. Miles, March 2004).

² See the report “Rentebinding på boliglån i Norge” (Fixed-rate mortgages in Norway) from ECON Analyse, report 2005-029.

³ See “The Financial Market in Norway 2004: Risk Outlook”, from Financial Supervisory Authority of Norway, March 2005.

⁴ See the report “Rentebinding på boliglån i Norge” (Fixed-rate mortgages in Norway) from ECON Analyse, report 2005-029.

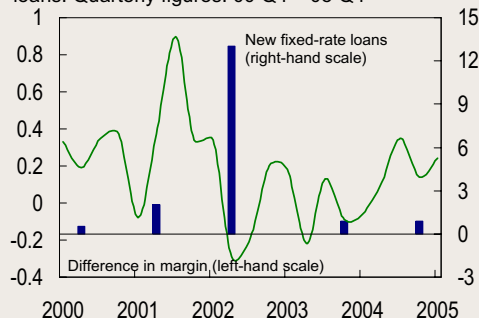
Chart 4 New fixed-rate loans¹⁾ as a percentage of total new loans and the difference between 5-year swap rate and 3-month NIBOR in percentage points. Quarterly figures. 98 Q1 – 06 Q4



¹⁾ Information about new fixed-rate loans is derived from Kredittilsynets mortgage survey which is based on reported data from a selection of banks for the first 100 paid mortgages after a given time for each bank

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

Chart 5 New fixed-rate loans¹⁾ as a percentage of total new loans and difference in margin between fixed-rate loans over 5 years and floating-rate loans. Quarterly figures. 00 Q4 – 05 Q4



¹⁾ Information about new fixed-rate loans is derived from Kredittilsynets mortgage survey which is based on reported data from a selection of banks for the first 100 paid mortgages after a given time for each bank

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

Low household saving

In the mid-1980s, the household saving ratio in Norway suddenly dropped to negative values, reducing household buffers against economic disturbances. When the macroeconomic situation deteriorated in the late 1980s, households reduced consumption sharply in order to service their debt. Weaker household demand resulted in lower turnover and reduced debt-servicing capacity in the corporate sector. Bank losses increased. Fluctuations in the saving ratio have therefore had consequences for both the real economy and financial stability. Since 2002, the household saving ratio (adjusted for estimated reinvested share dividends as a result of tax changes) has again declined. Possible factors underlying these developments are discussed in this box, in view of the importance of the saving ratio for household financial vulnerability.

Household saving varies substantially across countries. In France, Italy, Spain, Germany and Austria, household saving as a percentage of disposable income has been high since 1999 (see Chart 1). In Switzerland, the Netherlands, the UK and Sweden, the household saving ratio has been between 5% and 8%. The household saving ratio in Canada, Japan and Norway has been relatively low in recent years. There are also countries where the saving ratio has been negative in some years, such as Denmark, Australia, Finland and the US. In the light of different national statistical definitions and institutional arrangements, caution should be

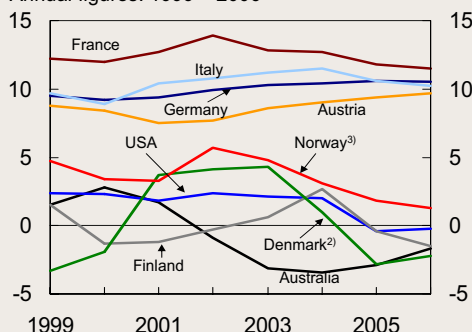
exercised in interpreting differences in saving ratio levels. Income that is used for the same purposes by households may be recorded in different ways.

Household saving ratios have fallen in most countries over the past 10-15 years. In many countries, house prices have risen sharply in the same period, with the result that housing wealth has increased (see Chart 2). A number of analyses show that wealth gains lead to lower private saving.¹

Interest-only loans have recently become more common, both in Norway and abroad. Loan maturities have increased, with the result that households repay their debt more slowly. These factors have probably contributed to the fall in the household saving ratio. Credit lines secured on dwellings have facilitated mortgage equity withdrawal. If households use the released equity on consumption, household saving might decrease. A tight labour market and expectations of a continued sound financial situation have probably also contributed to a low saving ratio.

Low interest rates make it more attractive to increase consumption and less attractive to save. Households' interest-bearing debt is higher than their interest-bearing assets. Lower interest rates accordingly result in lower net interest expenses and higher disposable income. It is uncertain how increased disposable income influences the saving ratio. If households smoothe their consumption over time,

Chart 1 Household saving ratio¹⁾.
Percentage of household disposable income.
Annual figures. 1999 – 2006

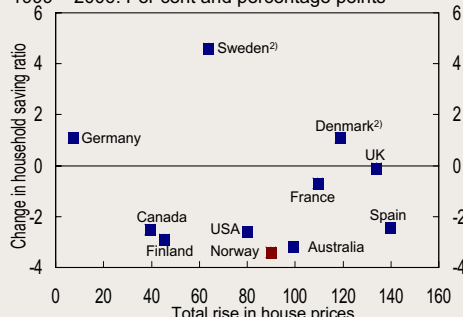


¹⁾ The calculation of household saving is adjusted for private pension benefits less pension contributions
²⁾ Gross savings

³⁾ Estimated reinvested dividends in the period 2000-2005 are excluded

Sources: OECD, Statistics Norway and Norges Bank

Chart 2 Total rise in house prices and change in household saving ratio¹⁾ in the period 1999 – 2006. Per cent and percentage points



¹⁾ The calculation of household saving is adjusted for private pension benefits less pension contributions. Estimated reinvested dividends in the period 2000-2005 are excluded from the saving ratio in Norway

²⁾ 2000-2006 for Sweden and 1999-2005 for prices on owner-occupied flats in Denmark

Sources: OECD, Reuters (EcoWin), Bank of Finland, Associations of Norwegian Real Estate Agents, ECON, Finn.no, Association of Real Estate Agency Firms and Norges Bank

temporarily increased income may contribute to a rise in the saving ratio.

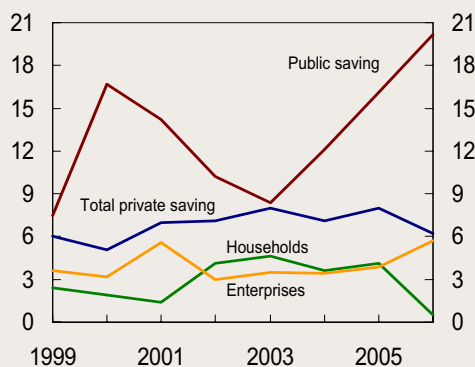
Lower household saving can be seen in the context of higher corporate saving. Households own a considerable share of the corporates, and are the ultimate beneficiaries of their saving. The corporate saving ratio has increased in recent years, and become higher than the household saving ratio in a number of countries, including Norway.² At the same time, extraordinary high dividend payments in Norway in the period 2000-2005 changed this underlying trend. The high dividends were motivated by expected changes in dividend taxation. The corporate saving ratio fell, while the household saving ratio increased (see Chart 3). The trend reversed again in 2006, when dividend tax was reintroduced.

Dividend tax may induce enterprises to use methods of profit disbursement to households other than dividend payments, particularly for dividends that exceed the allowance for risk-free market return. Other methods include write-downs of share capital and share buybacks, which appear to have become more widespread recently. In contrast to share dividends, share capital write-downs and share buybacks are not recorded as income in the institutional national accounts for households, and do not affect the household saving ratio as it is calculated in the national accounts. In case households consume some of the money stemming from share write-downs and share sells, the household saving ratio might fall.

Changes in age composition may affect the saving ratio. Incomes are often low when people are young and increase until middle age, before falling again at retirement. Given the household consumption-smoothing preference according to the lifetime hypothesis, household saving will be low at the outset, increase later in life and then decline with age. The share of the elderly in Norway's adult population rose steadily from the 1950s to the 1990s, but has declined from the 1990s up to the present. The share of elderly people is expected to increase sharply in the period to 2060. This may imply a falling saving ratio in the decades ahead. At the same time, microdata research in Norway does not indicate that the saving ratio falls among higher age groups.³ The inheritance motive may therefore modify the implications of the lifetime hypothesis.

Public saving can also influence overall private saving. The theory of Ricardian equivalence suggests that rational individuals will realise that increased public consumption today must be financed by means of higher taxes in the future. When public saving falls, the private sector will therefore increase saving in order to smooth consumption over time in anticipation of a rise in taxes. Studies carried out by the OECD have supported partial Ricardian equivalence, i.e. that a fall in public saving will be partly offset by increased private saving (see sources from 2004 in footnote 1). Public saving in Norway has increased substantially in recent years, while private saving has been more stable (see Chart 3). At the same time, the changes in public saving have been partly offset by changes in private saving (see Chart

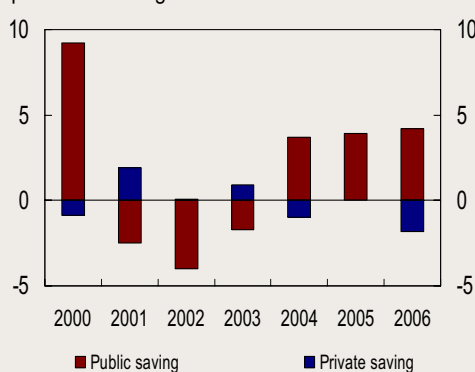
Chart 3 Private and public saving. Percentage of gross domestic product. Annual figures. 1999 – 2006



¹⁾ Reinvested dividends in the period 2000-2005 are included in the household saving ratio

Sources: Statistics Norway and Norges Bank

Chart 4 Private and public saving as a percentage of GDP. Change from previous year. Percentage points. Annual figures. 2000 – 2006



¹⁾ The change of 0.9 percentage point in private saving in 2005 is not shown in the chart

Sources: Statistics Norway and Norges Bank

4). By estimating a model for 16 countries over the period 1970-2002, the OECD (see sources from 2004 in footnote 1) finds that private saving compensates for 50% of the changes in public saving in the short term when allowance is made for income, interest rate and wealth effects, and about 70% of the changes in the long term.

In addition to the level of public saving, future public obligations will also have implications for private saving. Cutbacks in pension benefits would normally lead to higher household saving.

¹ Brodin, P. and Nymoen, R. (1992): "Wealth Effects and Exogeneity: the Norwegian Consumption Function 1966 (1) – 1989 (4)", *Oxford Bulletin of Economics and Statistics*, 54, 3, p. 431-454, de Mello, L., Kongsrud, P. and Price, R. (2004): "Saving Behaviour and the Effectiveness of Fiscal Policy", OECD, Economics Department Working Papers, No. 397 and Chapter V in OECD (2004): "Economic Outlook" No. 76, December

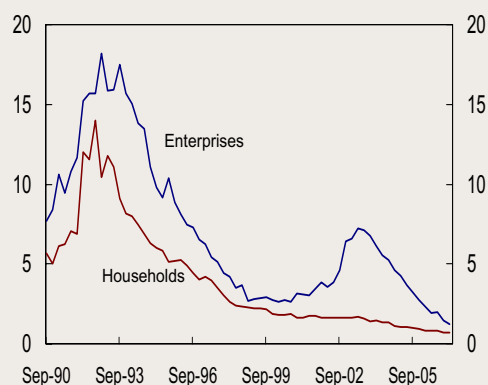
² See Chapter IV in IMF (2006): *World Economic Outlook*, April

³ Halvorsen, Elin (2003): "A Cohort Analysis of Household Saving in Norway", Statistics Norway, Research Department, Discussion Papers No. 354 and Halvorsen, Elin (2003): "Hvorfor sparer de eldre så mye", (Why do the elderly save so much?) Statistics Norway, Samfunnsspeilet no. 1, 2003.

An analysis of banks' problem loans

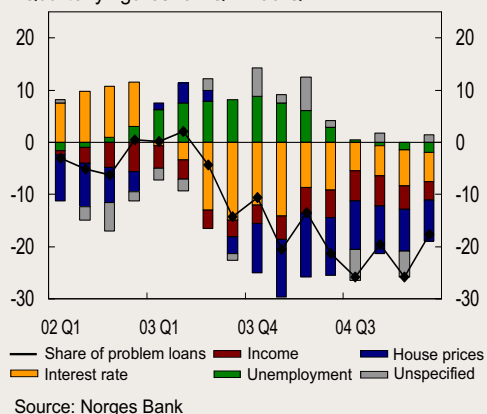
Banks' problem loans consist of non-performing loans and other particularly doubtful loans. There is a close relationship between banks' problem loans and recorded loan losses. Chart 1 shows developments in problem loans as a share of overall lending to households and enterprises, respectively. At present, the share of problem loans is very low. However, the magnitude of problem loans is highly sensitive to cyclical developments and will normally increase during economic downturns. In the following we analyse developments in problem loans using empirical models of banks' problem loans broken down on households and enterprises.¹ The models are estimated using quarterly data for the period 1993-2005 for households and 1992-2005 for enterprises.

Chart 1 Banks' problem loans to households and enterprises. Percentage of total lending to each sector. Quarterly figures. 90 Q3 – 07 Q1



Source: Norges Bank

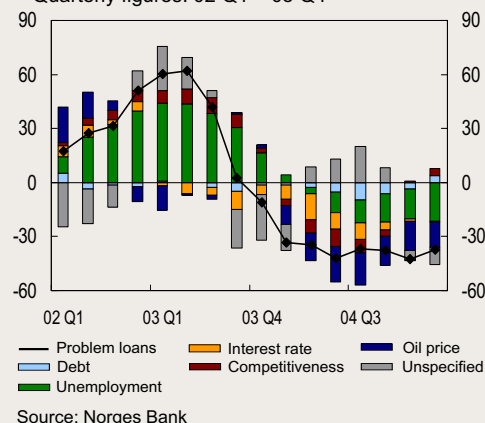
Chart 2 Annual percentage change in the share of problem loans and calculated contributions from explanatory variables. Households. Percentage points. Real terms. Quarterly figures. 02 Q1 – 05 Q4



For households, banks' problem loans are modelled as a share of total loans to the sector. The model includes the effects of household real disposable income, real house prices, unemployment, and real interest rates. Chart 2 shows the estimated contributions of the explanatory variables in the model to developments in the share of problem loans in the period 2002 to 2005. Apart from a slight increase in late 2002 and in 2003, the share of problem loans has declined since the early 1990s. The increase was largely due to a rise in real interest rates in 2002, and increasing unemployment in the period 2001-2003. The share of problem loans declined from 2004 as a consequence of lower real interest rates and unemployment. In isolation, higher real income and real house prices have contributed to a reduction in problem loans for virtually the entire period. This effect has to some extent become more pronounced in the past two years.

Banks' problem loans to enterprises are modelled at constant 2003 NOK. The model includes the effects of enterprises' debt to banks at 2003 NOK, unemployment (represents domestic demand), real interest rates, competitiveness and real oil prices. Problem loans associated with enterprises increased sharply through 2002 and 2003. Chart 3 shows that the increase in unemployment, i.e. weaker domestic demand, was the main factor behind this increase, although low oil prices and weakened competitiveness also made a contribution. In the period 2004-2005, problem loans were sharply reduced, largely owing to lower unemployment and a decline in real interest rates. We also see that oil prices have been

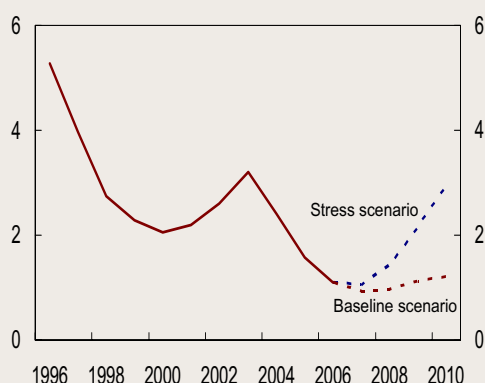
Chart 3 Annual percentage change in problem loans and calculated contributions from explanatory variables. Enterprises. Percentage points. Real terms. Quarterly figures. 02 Q1 – 05 Q4



an important factor behind the decline in problem loans. Oil prices rose sharply during this period, from about USD 30 per barrel at the beginning of 2004 to USD 60 per barrel at end-2005. The increase in oil prices has had a major impact on the level of activity and investment in the petroleum sector, but has also had spillover effects on suppliers to this industry and has thus had a wide impact on the mainland economy.

We have made projections of banks' problem loans based on an alternative stress scenario to illustrate a less favourable macroeconomic situation. The stress scenario is compared with a baseline scenario for problem loans based on macroeconomic developments as described in *Monetary Policy Report 1/07*. In the stress scenario, the key policy rate increases faster than in the baseline scenario, to about 8% at the end of the projection period. Unemployment increases faster than in the baseline scenario, and accounts for about 4.5% of the labour force in 2010. Growth in household disposable income is markedly lower than in the baseline scenario. In 2009 and 2010, growth in real disposable income is projected at close to zero. House prices fall by about 30% from the current level in the course of 2-3 years. Oil prices are projected to fall by about 25% in the same 2-3 year period. The real exchange rate strengthens slightly. Such a development may occur against the background of a sharp rise in inflation coupled with a pronounced slowdown in growth in both the global and domestic economy. This will lead to a sharp increase banks' problem loans compared with the baseline scenario (see Chart 4).

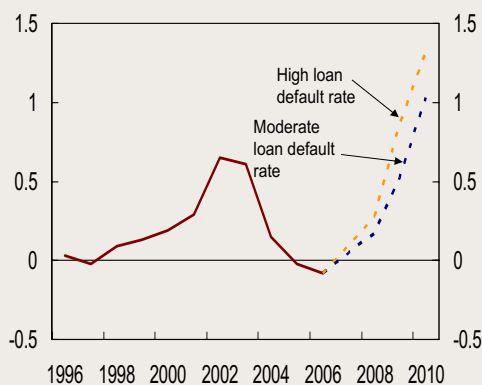
Chart 4 Banks' problem loans. Percentage of total lending. Annual figures. 1996 – 2010¹⁾



¹⁾ Projections based on baseline scenario and stress scenario respectively for 2007 – 2010

Source: Norges Bank

Chart 5 Bank losses. Stress scenario. Percentage of total lending. Annual figures. 1996 – 2010¹⁾



¹⁾ Projections based on stress scenario for 2007 – 2010

Source: Norges Bank

The problem loans associated with households will increase from today's very low level. A sharp rise in real interest rates and a fall in house prices make a strong contribution in 2007 and 2008. Somewhat further out in the projection period, higher unemployment and falling household real disposable income also contribute to increasing the share of problem loans. For households, the share of problem loans is estimated to be about 3 times higher in the stress scenario than in the baseline scenario at the end of 2010.

For enterprises, problem loans show a marked increase. In 2007, higher real interest rates, lower oil prices and continued high lending growth will be the primary factors contributing to the increase in problem loans. Lending growth will be rapidly reduced as the economic outlook deteriorates. Rising unemployment will make a negative contribution from 2008. For enterprises, the share of problem loans is estimated to be more than twice as high as in the baseline scenario at the end of 2010.

Weaker macroeconomic developments, as illustrated in this stress scenario, will influence the financial position of both households and enterprises. A number of borrowers will encounter debt-servicing problems. Bank losses will increase. The size of the losses will depend on the loan default rate, i.e. the share of problem loans that become recorded losses. In the stress scenario, house prices and commercial property prices are assumed to show a sharp fall. This will result in a pronounced rise in the loan default rate compared with the baseline scenario. In this stress scenario, we estimate bank losses given two different paths for loan default rates; one where the loan default rate increases moderately to 35% of the problem loans in 2010, and one where the loan default rate increases to a higher level of 45% in 2010. In the scenario with a moderate loan default rate, losses will account for about 1% of total loans in 2010 (see Chart 5). In the case with a high loan default rate, losses will account for 1.3% of total loans.

¹ A description of the models is provided in *Economic Bulletin* 2/07 (to be published in July): "An analysis of banks' problem loans", by Berge and Boye.