NORGES BANK

Monetary Policy Report

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March

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Monetary Policy Report
1/2009

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Norges Bank

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Monetary Policy Report

The *Report* is published three times a year, in March, June and October/November. The *Report* assesses the interest rate outlook and includes projections for developments in the Norwegian economy and analyses of selected themes.

At its meeting on 17 December, the Executive Board discussed relevant themes for the *Report*. At the Executive Board meeting on 12 March, the economic outlook was discussed. On the basis of this discussion and a recommendation from Norges Bank's management, the Executive Board adopted a monetary policy strategy for the period to the publication of the next *Report* on 17 June 2009 at the meeting held on 25 March. The Executive Board's summary of the economic outlook and the monetary policy strategy are presented in Section 1. In the period to the next *Report*, the Executive Board's monetary policy meetings will be held on 6 May and 17 June.

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The *Monetary Policy Report* is based on information in the period to 19 March 2009

The monetary policy strategy in Section 1 was approved by the Executive Board on 25 March 2009

Monetary policy in Norway

Objective

The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of approximately 2.5% over time.

Implementation

Norges Bank operates a flexible inflation targeting regime, so that weight is given to both variability in inflation and variability in output and employment. In general, the direct effects on consumer prices resulting from changes in interest rates, taxes, excise duties and extraordinary temporary disturbances are not taken into account.

Monetary policy influences the economy with a lag. Norges Bank sets the interest rate with a view to stabilising inflation close to the target in the medium term. The horizon will depend on disturbances to which the economy is exposed and the effects on prospects for the path for inflation and the real economy.

The decision-making process

The main features of the analysis in the *Monetary Policy Report* are presented to the Executive Board for discussion at a meeting about two weeks before the *Report* is published. Themes of relevance to the *Report* have been discussed at a previous meeting. On the basis of the analysis and discussion, the Executive Board assesses the consequences for future interest rate developments, including alternative strategies. The final decision to adopt a monetary policy strategy is made on the same day as the *Report* is published. The strategy applies for the period up to the next *Report* and is presented at the end of Section 1 in the *Report*.

The key policy rate is set by Norges Bank's Executive Board. Decisions concerning the interest rate are normally taken at the Executive Board's monetary policy meeting every sixth week. The analyses and the monetary policy strategy, together with assessments of price and cost developments and conditions in the money and foreign exchange markets, form a basis for interest rate decisions.

Communication of the interest rate decision

The monetary policy decision is announced at 2pm on the day of the meeting. At the same time, the Executive Board's monetary policy statement is published. The statement provides an account of the main aspects of economic developments that have had a bearing on the interest rate decision and the Executive Board's assessments. The Bank holds a press conference at 2:45 pm on the same day. The press release, the Executive Board's monetary policy statement and the press conference are available on www.norges-bank.no.

Reporting

Norges Bank reports on the conduct of monetary policy in the *Monetary Policy Report* and the *Annual Report.* The Bank's reporting obligation is set out in Section 75c of the Constitution, which stipulates that the Storting shall supervise Norway's monetary system, and in Section 3 of the Norges Bank Act. The *Annual Report* is submitted to the Ministry of Finance and communicated to the King in Council and to the Storting in the Government's Kredittmeldingen (Credit Report). The Governor of Norges Bank provides an assessment of monetary policy in an open hearing before the Standing Committee on Finance and Economic Affairs in connection with the Storting deliberations on the Credit Report.

Editorial

Monetary policy is working effectively

The current global economic downturn is the deepest in the post-war period, in spite of government authorities' aggressive use of various measures. Key rates have been cut considerably and, in some countries, have been set close to zero. The central banks in the US and the UK are purchasing various types of securities to supply liquidity and improve access to funding. In a number of countries, equity capital is being injected into the banking system and government budget deficits are surging.

The crisis is having a negative impact on most markets and countries, including Norway. In order to mitigate the impact on the Norwegian economy, it is appropriate to reduce the key policy rate further.

We have already made substantial cuts in the key policy rate. In the period ahead, we will take a more gradual approach in order to assess the effect of the action already taken. If the situation develops as expected, the key policy rate may move down towards 1 per cent in the second half of 2009.

However, actual developments may differ from those envisaged. The cyclical turnaround may occur more rapidly than expected. As a result of the low interest rate, domestic saving may not pick up as expected, or the krone may depreciate considerably. The key policy rate may then be set higher than currently projected. On the other hand, there is a risk that the downturn in Norway will be more pronounced and more prolonged, or that the krone will appreciate substantially. In this case, even stronger measures may be necessary.

The interest rate is being set at a low level to cushion the decline in activity and prevent inflation from falling too far. Norges Bank has for a number of years emphasised the importance of anchoring inflation expectations to the target of 2.5 per cent, and has succeeded in achieving this objective. As a result, monetary policy is now working effectively.

Jan F. Qvigstad
25 March 2009

1 Monetary policy assessments and strategy

The economic situation

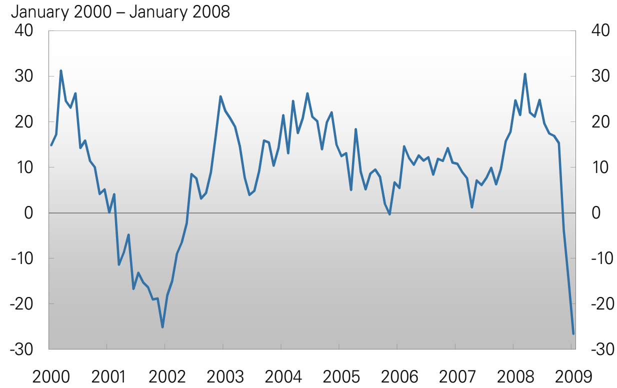
The current global economic downturn is the deepest in the post-war period. The turnaround was abrupt and pronounced, and is having a negative impact on markets for most goods and services. The Lehman Brothers bankruptcy in mid-September 2008 sparked a crisis of confidence in financial markets, resulting in high risk premiums on loans. Credit standards for household and corporate loans have been tightened considerably. Business and consumer confidence indicators are at record-low levels in many countries. Households have reduced their consumption and firms have cut output and investment.

In both advanced and emerging market economies (EMEs), industrial output and trade fell sharply towards the end of last year (see Chart 1.1). Total output in the US, Japan and the euro area declined markedly (see Chart 1.2). Unemployment is rising rapidly. For a long period, there were hopes that growth in China and other EMEs would hold up, but these have also been severely affected.

The turnaround in Norway had already occurred just over a year ago, but in the period to autumn last year, it appeared that capacity utilisation in the Norwegian economy would gradually decrease to a normal level. As the global economic outlook deteriorated, it became clear that the slowdown in the Norwegian economy would occur more rapidly and be more pronounced than envisaged in October. In November, regional network contacts reported an abrupt and marked turnaround in activity. Norges Bank's bank lending survey also showed that banks were tightening credit standards substantially, particularly for corporate loans.

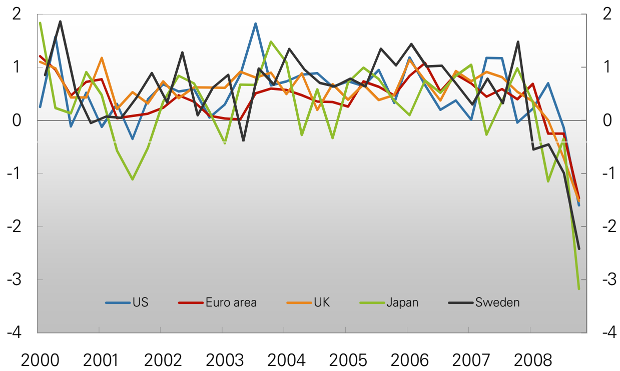
After a prolonged upturn, both output and employment are now falling in Norway. The export sector is being particularly hard hit by the global downturn. Traditional

Chart 1.1 Indicator for world trade. Sum of exports and imports in the US, Japan, Germany and China in USD. 12-month change. Per cent. January 2000 – January 2008



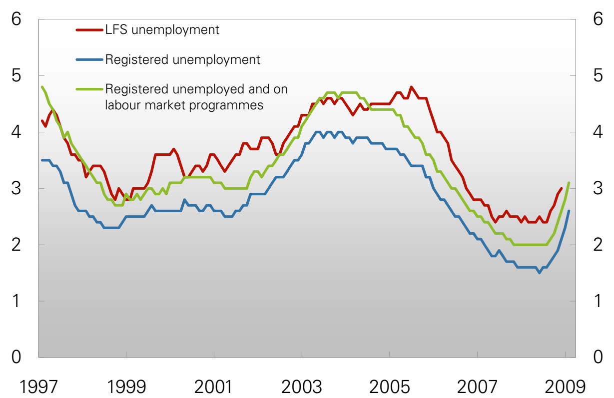
Sources: Thomson Reuters and Norges Bank

Chart 1.2 GDP in industrial countries. Change from previous quarter. Per cent. 2000 Q1 – 2008 Q4



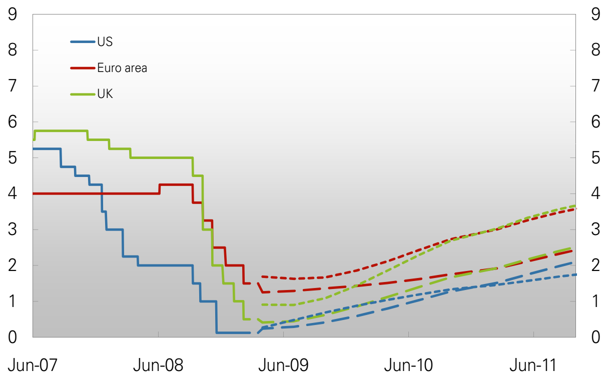
Source: Thomson Reuters

Chart 1.3 Unemployed. Percentage of labour force. Seasonally adjusted. February 1997 - February 2009



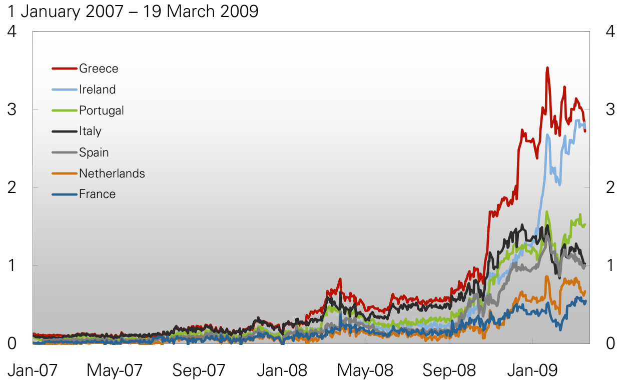
Sources: Statistics Norway, Norwegian Labour and Welfare Administration (NAV) and Norges Bank

Chart 1.4 Key rates and estimated forward rates on 17 December 2008 and 19 March 2009.[1)] Per cent. 1 June 2007 – 31 December 2012



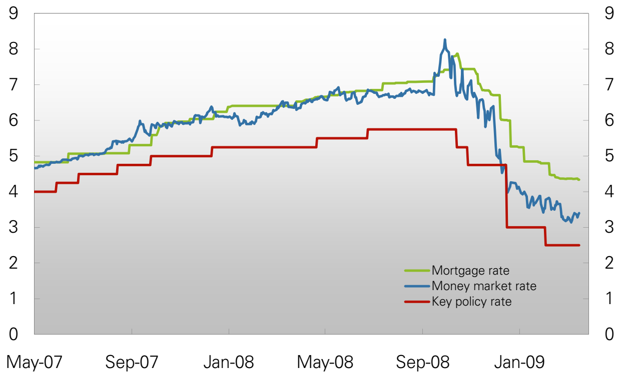
1) Dotted lines show estimated forward rates as at 17 December 2008. Broken lines show forward rates as at 19 March 2009. Forward rates are based on Overnight Indexed Swap (OIS) interest rates.
Sources: Thomson Reuters and Norges Bank

Chart 1.5 Interest rate premiums on government debt. Compared with Germany, 5-year government bonds. Percentage points.
1 January 2007 – 19 March 2009



Source: Thomson Reuters

Chart 1.6 Key policy rate, money market rate[1)] and banks' lending rate on new loans[2)]. Per cent. 3 May 2007 – 19 March 2009



1) 3-month NIBOR (effective).
2) Interest rate on new mortgage loans of NOK 1 million within 60% of purchase price with floating interest rate. Figures for the 20 largest banks, weighted according to market share.
Sources: Norsk familieøkonomi AS and Norges Bank

exports have fallen sharply since last autumn. Households have lowered their expectations concerning developments ahead, but the downward trend in expectations has slowed. Spending on goods continues to decline, while house prices have edged up in the past two months. Demand for new housing is lower and housing investment has fallen markedly. Corporate investment growth has also slowed. Unemployment is still low, but is rising rapidly (see Chart 1.3). Norges Bank's regional network reports that the labour supply is no longer a constraint on production. The enterprises in the network are expecting output and employment to fall further over the next six months.

Government authorities the world over are taking extensive action to boost demand for goods and services, improve banks' financial strength and enable credit markets to function. In recent months, key rates have been aggressively cut at a rapid pace and are approaching zero in a number of countries (see Chart 1.4). The fiscal measures implemented are resulting in substantial government borrowing, which has pushed up risk premiums on government debt in most countries (see Chart 1.5).[1]

Norges Bank reduced the key policy rate by 0.5 percentage point on both 15 and 29 October, by 1.75 percentage points on 17 December and by a further 0.5 percentage point to 2.5% on 4 February. Norges Bank has also stepped up its supply of liquidity to banks in the form of short-term and long-term loans. The government has given banks access to liquid government paper in exchange for bonds issued by the banks. The government has also provided increased loans and guarantees for Norwegian exports and expanded lending limits for state banks. The Government Pension Fund - Norway has also been allowed to increase its bond purchases. The authorities plan to supply risk capital to Norwegian banks. In order to curb the fall in activity in the Norwegian economy, government expenditure will be increased by over 10% this year.

The measures have been effective. Money market rates, which for a period were above 8%, are now approximately 3½% (see Chart 1.6).[2] Banks' lending rates have decreased considerably. Credit flows have improved, but

1 For more details, see *Economic Commentary* 1/2009 "Higher risk premiums on government debt".

2 For more details, see *Economic Commentary* 2/2009 "Relationship between key rates and money market rates".

access to credit is still difficult for enterprises. Money market premiums have fallen. In 2009 Q1, risk premiums on three-month interest rates in Norway stood at 1.2 percentage points. Norwegian money market premiums are expected to edge down ahead in line with premiums in global markets (see Chart 1.7). Towards the end of the projection period, it is assumed that risk premiums will be 0.35 percentage point, somewhat higher than before the turbulence started in autumn 2007.

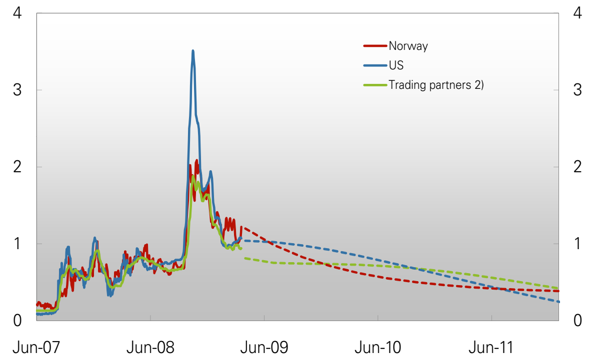
Global equity markets recovered somewhat after plummeting in October last year, but have fallen back again so far this year. Overall the Oslo Stock Exchange is approximately unchanged since the October *Monetary Policy Report* (see Chart 1.8).

In periods of substantial uncertainty, investors seek to repatriate investments denominated in foreign currencies. In addition, large liquid currencies are perceived as safer than small illiquid currencies. This led to elevated demand for USD and JPY last autumn. As a result of substantial fluctuations in the krone exchange rate and low risk appetite, the Norwegian krone fell to a record-low level in December last year. The krone has appreciated since then. Measured in terms of an import-weighted currency basket (I-44), the krone has appreciated by more than 9% since mid-December, but is still about 4% weaker than in August last year (see Chart 1.9).

Prices for oil and other commodities fell markedly through autumn. Oil prices have fluctuated around USD 45 per barrel in March. Oil futures prices have fallen and indicate an oil price of around USD 55 per barrel in 2010. The decline in other commodity prices also seems to have come to a halt since the end of 2008. The fall in energy prices has contributed to a sharp fall in inflation among our trading partners, and in a number of countries inflation is approaching zero. Inflation expectations have fallen considerably.

Total consumer prices in Norway rose by 3.8% from 2007 to 2008. Consumer price inflation picked up through the year and reached a peak in October of 5.5%, primarily due to changes in electricity prices. Consumer price inflation slowed markedly thereafter and was 2.5% in February

Chart 1.7 Difference between 3-month money market rate and key policy rate expectations in the market[1]. Percentage points. 5-day moving average. Historical (from 1 June 2007) and ahead (as at 19 March 2009)

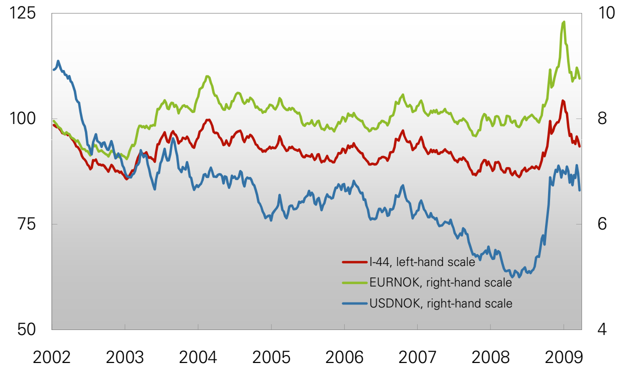


1) The expected key rate is derived from Overnight Indexed Swap (OIS) interest rates. For Norway, the estimates are based on Norges Bank's projections for money market- and key policy rates.
2) UK, Euro area, Japan, Sweden and US
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 1.8 Developments in equity markets. Index,1 January 2007 = 100. 1 January 2007 - 19 March 2009

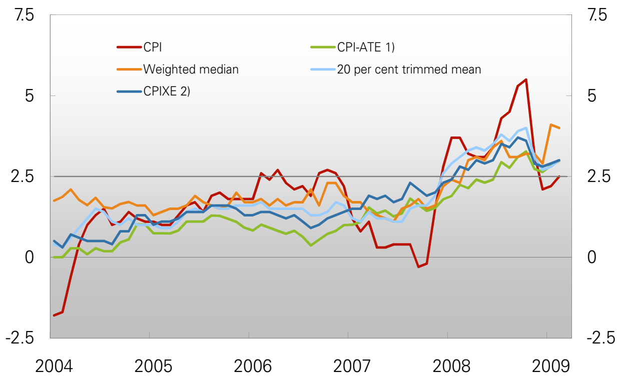
Source: Thomson Reuters

Chart 1.9 Exchange rates.[1] The import-weighted exchange rate index (I-44), 1995 = 100, EURNOK and USDNOK. Week 1 2002 – Week 12 2009



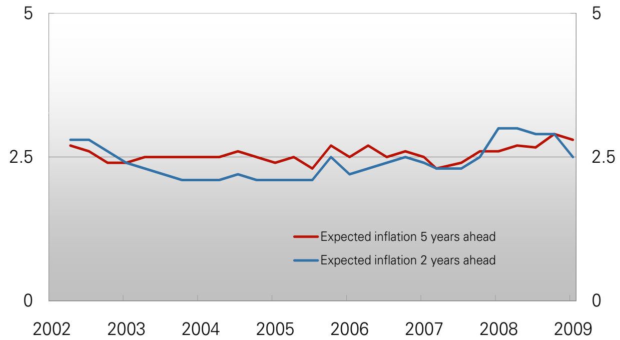
1) A rising curve denotes a weaker krone exchange rate.
Source: Norges Bank

Chart 1.10 Consumer prices. 12-month change. Per cent. January 2004 – February 2009



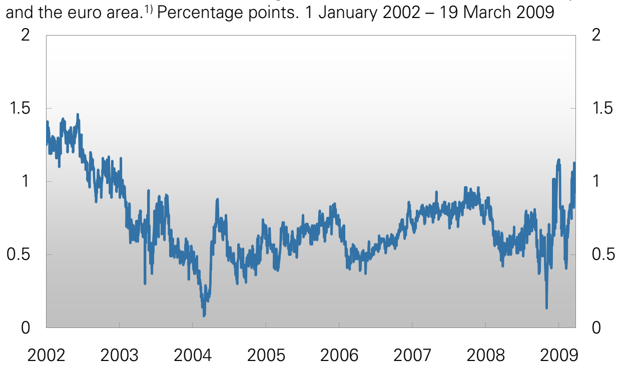
1) CPI adjusted for tax changes and excluding energy products
2) CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo* 2008/7 from Norges Bank for a description of the CPIXE.
Sources: Statistics Norway and Norges Bank

Chart 1.11 Expected consumer price inflation 2 and 5 years ahead.[1)] Per cent. 2002 Q2 – 2009 Q1



1) Average of expectations of employer/employee organisations and experts (financial industry experts, macro analysts and academics).
Sources: TNS Gallup and Perduco

Chart 1.12 Differential between long-term forward interest rates in Norway and the euro area.[1)] Percentage points. 1 January 2002 – 19 March 2009



1) 5-year forward rates 5 years ahead.
Sources: Thomson Reuters and Norges Bank

(see Chart 1.10). Underlying inflation also slowed through autumn last year. In February, underlying inflation stood at approximately 3%. The rise in prices has been somewhat sharper than expected recently, particularly for imported consumer goods. The effect of the strong fall in the value of the krone in autumn 2008 has probably fed through to prices more rapidly than usual.

According to an expectations survey by Perduco AS, the slower rise in prices has not affected long-term inflation expectations to any great extent. On average inflation expectations five years ahead among experts in the financial industry, the social partners and academia were virtually unchanged from 2008 Q4 to 2009 Q1 (see Chart 1.11).

An indicator of inflation expectations in financial markets can be derived from developments in the long-term forward rate differential between Norway and the euro area. Because of a higher inflation target in Norway, this differential will normally be around ½ – 1 percentage point, depending on risk premiums in the bond market. The differential has been in this range in recent years, but has fluctuated somewhat since last autumn (see Chart 1.12).

The outlook ahead and monetary policy assessments

The operational target of monetary policy in Norway is low and stable inflation with annual consumer price inflation of close to 2.5% over time (see Chart 1.13). Inflation is slowing. There are prospects that inflation will continue to slow ahead. It is therefore appropriate to set the interest rate at a low level so that inflation does not substantially undershoot the target. Lower interest rates are curbing the decline in output and employment.

Firms and households, employers and employees can act on the assumption that inflation over time will remain close to 2.5%. Norges Bank has over a number of years focused on anchoring inflation expectations to the target and on being predictable, with a recognisable response pattern. This may bolster confidence that inflation will remain close to target. The key policy rate was low when inflation was low and was raised when inflationary pressures increased.

Anchoring inflation expectations to the target also provides the necessary leeway in monetary policy, without which monetary policy cannot make any substantial contribution to stabilising output and employment. In small countries where there was no confidence that inflation would remain stable, the authorities have had to raise interest rates considerably to prevent an uncontrolled depreciation of the currency. This amplifies the impact on output. In some other countries, there are prospects that inflation will slow to zero. The real interest rate will then remain high even if the key rate is lowered, reducing the effectiveness of monetary policy.

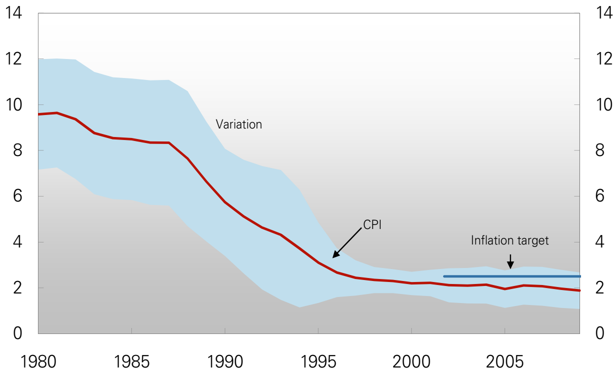
Global developments and the outlook for the Norwegian economy deteriorated sharply after the previous *Monetary Policy Report* was published in October last year. The interest rate forecast was updated in December. It was then envisaged that the key policy rate would fall towards 2% in mid-2009.

On balance, there are prospects that activity in the Norwegian economy will decline more sharply than previously assumed. It appears that the global downturn will be even deeper than was expected in December. Activity among our trading partners is expected to contract by 3% in 2009, which will be the sharpest decline in the post-war period. It will take time for growth to pick up (see box on page 37). A contraction abroad will result in a substantial decline in Norwegian exports ahead. Moreover, due to the marked fall in commodity prices, prices for many Norwegian export goods are now very low. A weak krone may help to maintain profitability in Norwegian export enterprises (see Chart 1.14).

Weaker developments in export industries will have repercussions for other Norwegian business sectors. Limited access to capital and lower capacity utilisation may lead to a marked fall in corporate investment ahead. Petroleum investment will hold up this year, but will then probably decline.

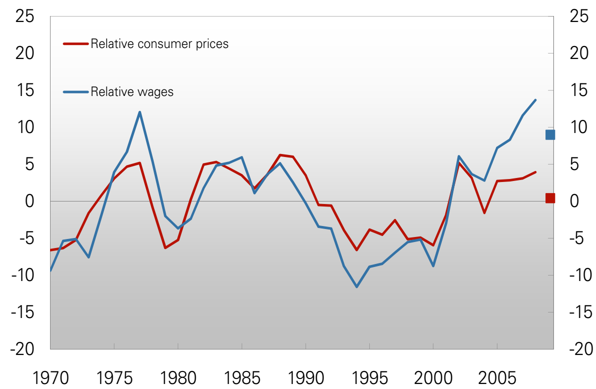
Inflation was higher than expected in February, probably because the krone depreciation in autumn last year fed through to prices more quickly than usual. It nevertheless appears that underlying inflation will fall more steeply and

Chart 1.13 Inflation. Moving 10-year average[1] and variation[2] in CPI[3]. Per cent. 1980 – 2009



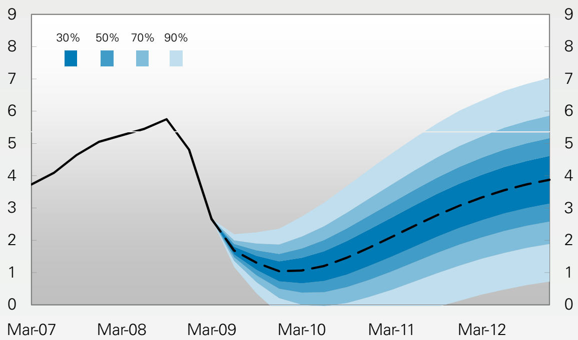
1) The moving average is calculated 7 years back and 2 years ahead.
2) The band around the CPI is the variation in the CPI adjusted for tax changes and excluding energy products in the average period, measured by +/- one standard deviation.
3) Projections for 2009 - 2011 from this *Report* form the basis for this estimate.
Sources: Statistics Norway and Norges Bank

Chart 1.14 Real exchange rate. Deviation from mean 1970 – 2008. Per cent. 1970 – 2009[1]



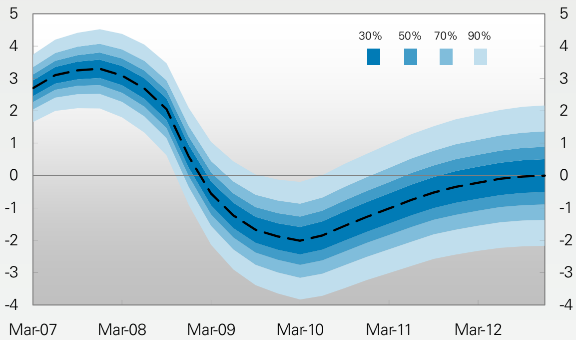
1) Data for 2009 based on observations to 19 March. The squares show the average for this period. A rising curve indicates weaker competitiveness
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements, Ministry of Finance and Norges Bank

Chart 1.15a Projected key policy rate in the baseline scenario with fan chart. Quarterly figures. Per cent. 2007 Q1– 2012 Q4



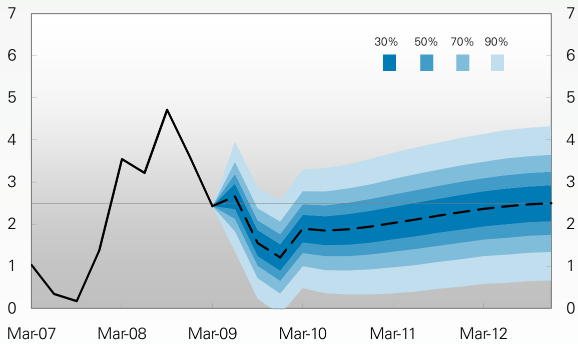
Source: Norges Bank

Chart 1.15b Estimated output gap in the baseline scenario with fan chart. Quarterly figures. Per cent. 2007 Q1 – 2012 Q4



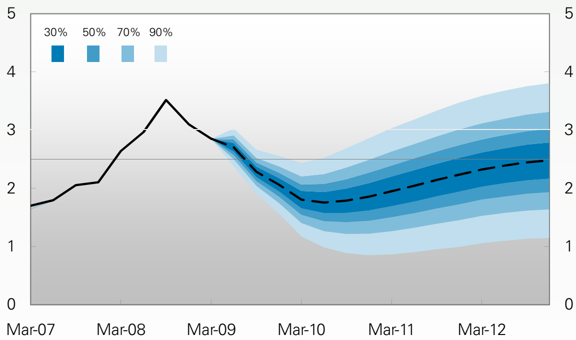
Sources: Statistics Norway and Norges Bank

Chart 1.15c Projected CPI in the baseline scenario with fan chart. 4-quarter change. Per cent. 2007 Q1 – 2012 Q4



Sources: Statistics Norway and Norges Bank

Chart 1.15d Projected CPIXE[1)] in the baseline scenario with fan chart. 4-quarter change. Per cent. 2007 Q1 – 2012 Q4



1) CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo* 2008/7 from Norges Bank for a description of the CPIXE.
Sources: Statistics Norway and Norges Bank

at a faster pace than previously expected. In Norway, inflation will be curbed by lower capacity utilisation. Weaker corporate earnings and a rise in unemployment will probably result in lower pay increases this year and next. At the same time, productivity growth is expected to pick up, which will curb the rise in enterprises' costs. Global inflation is also slowing more than expected. Combined with a lower rise in costs and lower futures prices for oil and energy, this will push down underlying inflation.

Prospects of weaker growth and lower-than-expected inflation imply a lower interest rate than envisaged in December. There is also a risk that the global downturn will be deeper and more prolonged than expected. If this proves to be the case, growth in the Norwegian economy will not pick up as quickly and inflation will fall more sharply than we currently assume. The objective of avoiding a pronounced downturn in the Norwegian economy indicates in isolation that the interest rate should be rapidly reduced to a low level.

On the other hand, we have already made substantial cuts in the key policy rate. With a low interest rate, households may save less and the turnaround in Norway may occur more rapidly than we assume. This indicates in isolation that changes in the interest rate should be gradual or that further interest rate cuts should be put on hold.

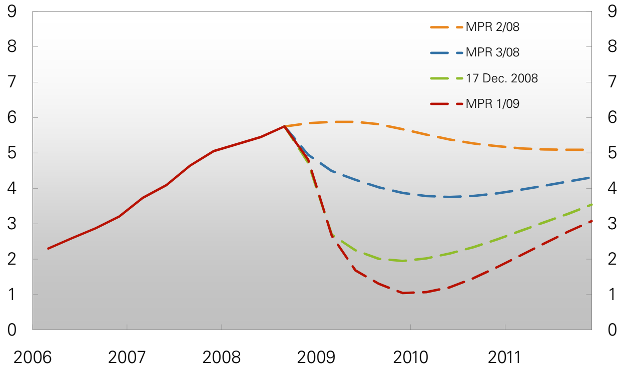
Overall, the outlook and balance of risks suggest that the key policy rate should be gradually reduced further to a level of around 1% in the second half of 2009 (see Chart 1.15a-d). This is about one percentage point lower than in Norges Bank's forecast from 17 December last year (see Chart 1.16). The factors contributing to changes in the interest rate forecast are discussed in a box, see page 19.

With such an interest rate forecast, our analysis indicates that growth in the Norwegian economy will be positive from the second half of this year. Growth will be driven by a rise in private consumption as a result of a low key policy rate, growth in real wages and higher government transfers. Activity in the Norwegian economy will be underpinned by strong growth in government spending. The projections are based on the assumption that Norges Bank's interest rate changes will translate into lower lending rates for households and businesses. At the same time, tighter credit standards in banks are making monetary policy somewhat less effective than normal. In our calculations, we have taken into account that the krone may depreciate as a result of a lower interest rate path than previously projected (see Chart 1.17). We estimate a krone exchange rate of 95, measured by the I-44, in the second quarter. The krone is expected to be relatively stable thereafter. A considerably sharper-than-assumed depreciation of the krone may influence inflation expectations and affect interest rate setting. If, on the other hand, the krone should appreciate substantially and inflation fall markedly, stronger measures may be necessary.

Household debt is high, and households will probably want to reduce debt and increase saving. However, lower interest rates reduce interest payments for indebted households and increase their disposable income. Access to bridge financing for house purchases will become easier, and this may stabilise house prices. Private consumption is expected to pick up after a period. The decline in interest rates will also make it easier for enterprises to service debt and fewer enterprises will fail.

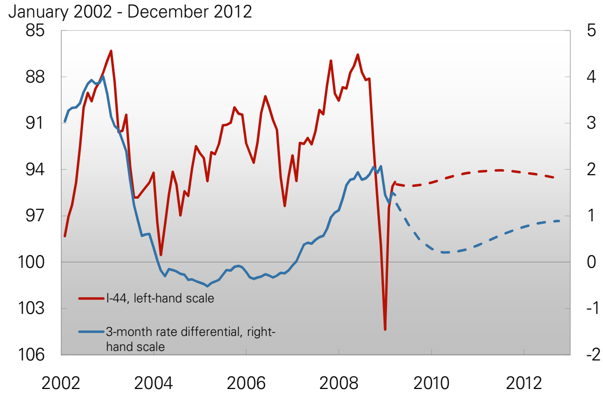
It will take time for export markets to improve. It will also take time for investment in Norway to pick up. Lower interest rates, tax cuts already implemented and the various measures for the banking sector are expected to gradually lead to a recovery in investment.

Chart 1.16 Key policy rate in the baseline scenario in MPR 2/08, MPR 3/08, 17 December 2008 and MPR 1/09. Per cent. 2006 Q1 – 2011 Q4



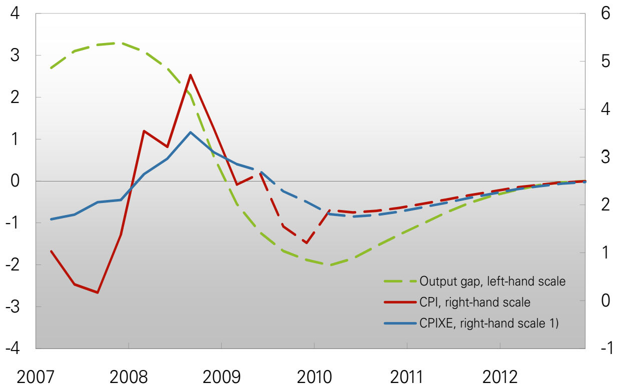
Source: Norges Bank

Chart 1.17 Three-month money market rate differential between Norway and trading partners[1)] and the import-weighted exchange rate index (I-44)[2)]. Monthly (historical) and quarterly figures (ahead). January 2002 - December 2012



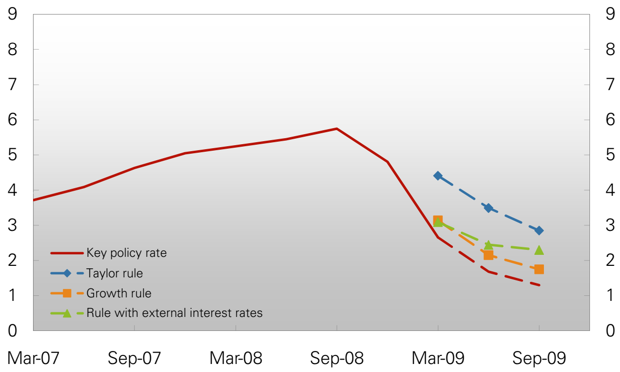
1) The differential between money market rates in the baseline scenario and a weighted average of forward rates among trading partners in the period 6 - 19 March 2009
2) A rising curve indicates a stronger krone exchange rate
Sources: Thomson Reuters and Norges Bank

Chart 1.18 Projected inflation and output gap in the baseline scenario. Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



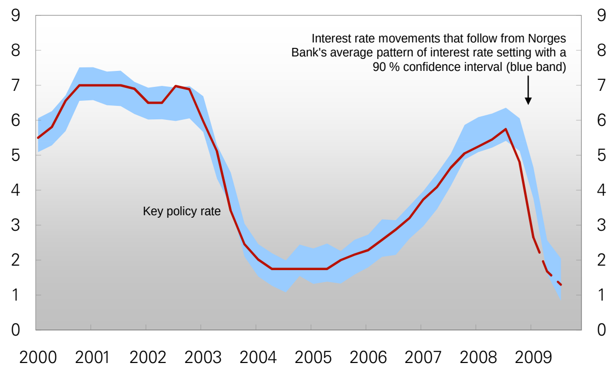
1) CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo* 2008/7 from Norges Bank for a description of the CPIXE.
Sources: Statistics Norway and Norges Bank

Chart 1.19 Key policy rate, Taylor rule, growth rule and rule with external interest rates.[1] Per cent. 2007 Q1 – 2009 Q3



1) The calculations are based on Norges Bank's projections for the output gap, consumer prices adjusted for tax changes and excluding temporary changes in energy prices (CPIXE) and 3-month money market rates. To ensure comparability with the key policy rate the simple rules are adjusted for risk premiums in 3-month money market rates.
Sources: Statistics Norway and Norges Bank

Chart 1.20 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.[1] Per cent. 2000 Q1 – 2009 Q3



1) Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and key policy rates among trading partners. See Staff Memo 2008/03 for further discussion.
Source: Norges Bank

Higher unemployment and lower corporate profitability, combined with lower inflation, may push down wage growth towards 4% this year and somewhat below 4% next year. Wage growth may not pick up again until the end of the projection period, as a result of higher capacity utilisation and a reduction in unemployment. Inflation is projected to fall below 2% in 2010, before gradually moving up towards 2.5% towards the end of the projection period as the output gap gradually closes. There is a risk that the structural changes brought about by the crisis may result in persistently lower productivity growth. If this proves to be the case, economic growth may be lower than currently assumed even if capacity utilisation proves to be approximately as expected. It appears that inflation will remain considerably lower in the years ahead than indicated by the December analysis. Both the objective of stabilising inflation around the target and the objective of stable developments in output and employment suggest that the interest rate should be low (see Chart 1.18).

Interest rate setting can also be assessed using simple monetary policy rules that prescribe an interest rate path based on actual inflation and output. The calculations are based on projections for inflation and output in this *Report*. The Taylor rule is based on the output gap and inflation. The growth rule is based on GDP growth and inflation. The rule involving external interest rates also takes into account the fact that changes in the interest rate level among our trading partners may result in changes in the exchange rate, thereby influencing the inflation outlook. In the calculations, we have taken account of actual and expected money market premiums. The different rules yield somewhat divergent results, but all of them indicate a decline in the interest rate (see Chart 1.19). The interest rate forecast in this *Report* is somewhat lower than indicated by these simple rules. These rules will not capture possible restrictions in the supply of credit that may affect the monetary policy transmission mechanism.

Norges Bank has estimated a simple interest rate rule based on the Bank's previous interest rate setting.[3] The rule includes developments in inflation, wage growth,

3 See *Staff Memo* 2008/3 from Norges Bank.

mainland GDP and central bank key rates abroad. The interest rate in the previous period is also important. The key rate is now below the lower end of the interval projected (see Chart 1.20). Norges Bank has given weight to staving off particularly adverse outcomes and therefore brought forward the decrease in the key policy rate last autumn.

Forward interest rates can provide another cross-check of the interest rate forecast. Under certain assumptions about risk premiums, estimated forward interest rates may reflect market interest rate expectations. Estimated forward rates indicate that financial market participants expect a further interest rate decline. Our projections are nevertheless somewhat lower than estimated forward interest rates (see Chart 1.21).

Uncertainty surrounding the projections

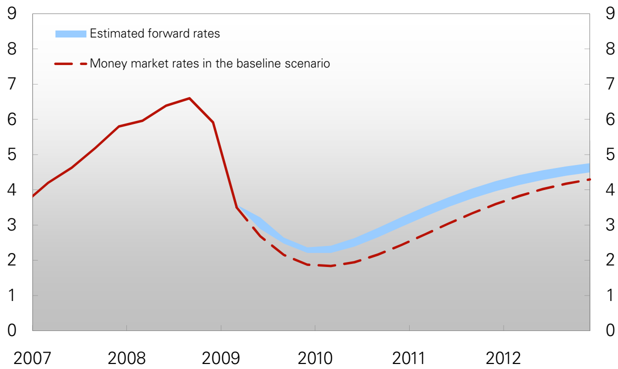
The projections for the key rate, inflation, output and other variables are based on our assessment of the economic situation and our perception of the functioning of the economy and of monetary policy. If economic developments are broadly in line with our projections, economic agents can expect that the interest rate path will also be approximately in line with that projected. However, the interest rate path may shift if the economic prospects change, or if the effect of interest rate changes on inflation, output and employment differs from that assumed.

As previously, we have attempted to illustrate the uncertainty surrounding our projections in the fan charts (see Charts 1.15a-d). The width of the fan charts is based on historical disturbances and therefore expresses the average that covers periods of high and low uncertainty.[4] There is now considerable uncertainty surrounding future developments in inflation and output, and hence monetary policy.

In the baseline scenario, we have assumed that prospects

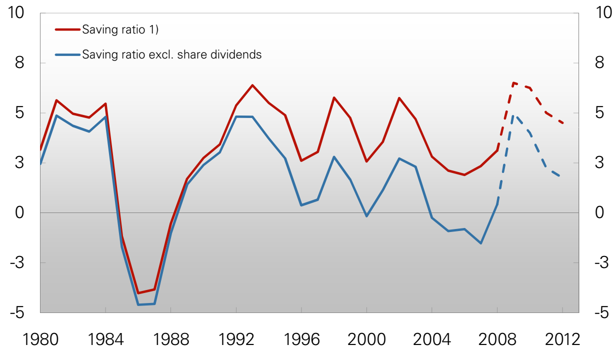
4 A more detailed review of fan charts is provided in *Inflation Report* 3/05. Since the sight deposit rate in practice has a lower limit close to zero, we have as a technical assumption set the outcomes, which in the usual symmetrical distribution would have resulted in negative values, at zero. Technically, the mean for the interest rate will be marginally higher than the interest rate forecast, which can be interpreted as the median in the distribution.

Chart 1.21 Money market rates in the baseline scenario and estimated forward rates[1)]. Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



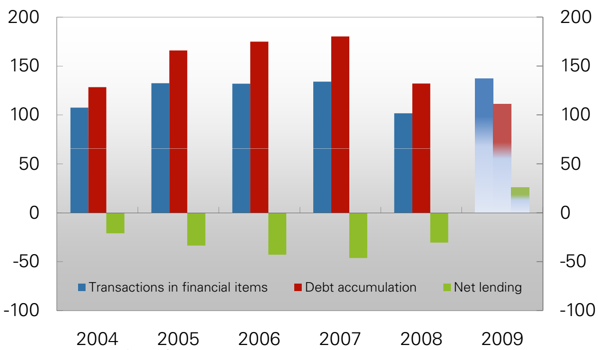
1) Forward rates are based on money market rates and interest rate swaps. The blue band shows the highest and lowest forward rates in the period 6 - 19 March 2009.
Source: Norges Bank

Chart 1.22 Household saving. Share of disposable income. Per cent. Annual figures. 1980 - 2012



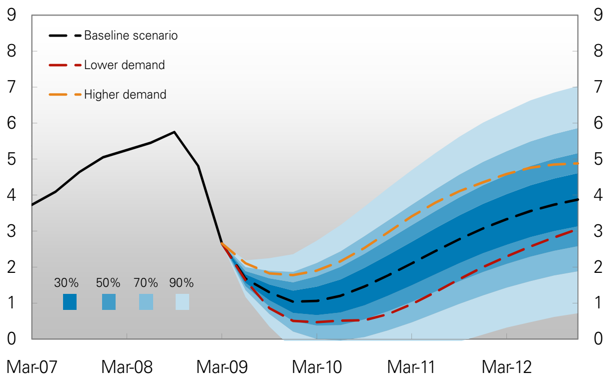
1) Adjusted for estimated reinvested share dividends for 2000 - 2005 and redemption/reduction of equity capital for 2008 - 2012
Sources: Statistics Norway and Norges Bank

Chart 1.23 Household net lending[1)], debt accumulation and transactions in financial items.[2] In Billions of NOK. Annual figures. 2004 - 2009[3)]



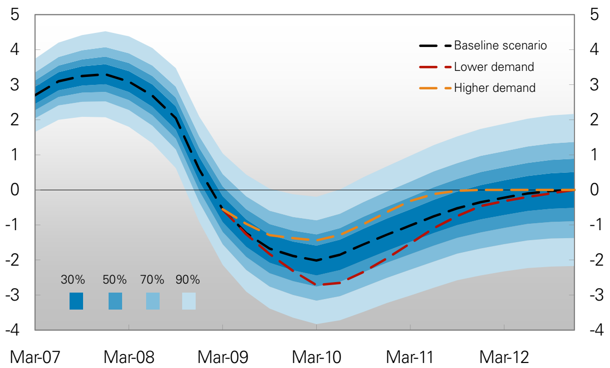
1) Net lending is from Statistics Norway's institutional sector accounts.
2) Adjusted for estimated reinvested share dividends 2000 - 2005 and redemption/reduction of equity capital for 2006 - 2009. Transactions in financial items are estimated as the sum of net lending and debt accumulation.
3) Projections for 2009.
Sources: Statistics Norway and Norges Bank

Chart 1.24a Key policy rate in the baseline scenario and the alternative scenarios with higher and lower demand. Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



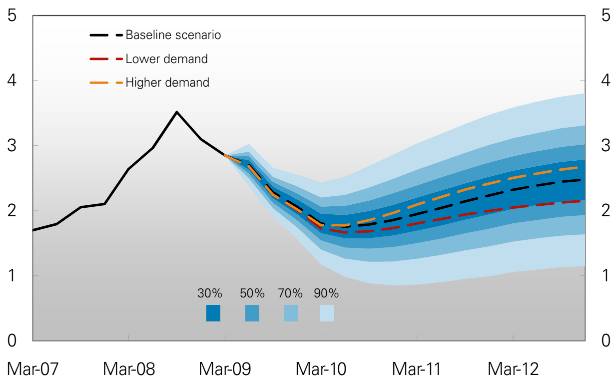
Source: Norges Bank

Chart 1.24b The output gap in the baseline scenario and the alternative scenarios with higher and lower demand. Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



Sources: Statistics Norway and Norges Bank

Chart 1.23c CPIXE[1)] in the baseline scenario and the alternative scenarios with higher and lower demand. 4-quarter change. Per cent. 2006 Q1 – 2011 Q4



1) CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo* 2008/7 from Norges Bank for a description of the CPIXE.
Sources: Statistics Norway and Norges Bank

for higher unemployment, a fall in house prices and a high level of debt will induce households to build up financial buffers and reduce debt. The saving ratio is expected to increase considerably (see Chart 1.22). Net lending is projected to be positive this year after being negative since 2004 (see Chart 1.23). As household borrowing has been considerable in recent years, deleveraging in the household sector is important to long-term stability in the economy. Household income growth adjusted for interest payments is, however, high. It cannot be excluded that consumption may pick up more quickly than assumed and that the household sector may borrow more than envisaged. Demand and output in Norway may then rise more quickly, with higher-than-expected wage and price inflation.

Charts 1.24a-c (yellow lines) illustrate a scenario where growth in private consumption is stronger than expected and the turnaround in Norway occurs more rapidly. In this scenario, interest rates may decrease to a lesser extent and rebound more quickly than we now envisage. This will contribute to stabilising price and cost inflation so that inflation remains close to 2.5% and to counteracting an excessive decrease in saving.

We have based our projections on the assumption that the global situation will gradually improve and that growth among our trading partners will begin to pick up in 2010. This will depend on building up confidence in the financial systems in the largest economies. Low interest rates abroad are curbing the decline in investment and making it easier for households to repay debt. The adjustment may nevertheless take longer than envisaged at this time. It is unlikely that households in the US and Europe will fuel the recovery soon. The public sector will also gradually have to cut down on spending and raise tax revenues to prevent debt from becoming too high. If the global downturn is deeper and more prolonged than envisaged, export industry activity in Norway will be reduced more than currently estimated and inflation will be even lower. Norwegian households may choose to further reduce consumption and increase saving.

Charts 1.24a-c (red lines) illustrate a scenario where the global downturn is deeper and more prolonged, with more pronounced effects on the Norwegian economy than assumed. It will then be appropriate to set a lower interest rate in order to stimulate the Norwegian economy and thereby prevent inflation from becoming too low. Interest rate changes are assumed to have an impact on banks' lending rates. However, it is uncertain to what extent monetary policy will have an impact on bank lending rates when the key rate is very low. Experience shows that bank lending margins increase when the interest rate level is low, while deposit margins decrease. This effect will probably gain momentum in pace with the decrease in the key rate. The effect on bank lending rates of a considerable decrease in the key rate may therefore be limited. A key rate close to zero will probably primarily have an impact via a weaker krone. It will then be appropriate to consider instruments other than the interest rate (see box on monetary policy measures when the key rate is close to zero).

Criteria for an appropriate interest rate path

The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of approximately 2.5% over time. In interest rate setting, the forecast for future interest rate developments should satisfy the following main criteria:

1) The interest rate should be set with a view to stabilising inflation close to the target in the medium term. The horizon will depend on disturbances to which the economy is exposed and the effects on the prospects for the path for inflation and the real economy.

2) The interest rate path should provide a reasonable balance between the path for inflation and the path for capacity utilisation.

In the assessment, potential effects of asset prices, such as property prices, equity prices and the krone exchange rate on the prospects for output, employment and inflation are also taken into account. Assuming the criteria above have been satisfied, the following additional criteria are useful:

3) Interest rate developments should result in acceptable developments in inflation and output also under alternative, albeit not unrealistic assumptions concerning the economic situation and the functioning of the economy.

4) Interest rate adjustments should normally be gradual and consistent with the Bank's previous response pattern.

5) As a cross-check for interest rate setting, it should be possible to explain any substantial and systematic deviations from simple monetary policy rules.

Changes in the projections

Changes in the interest rate forecast since Monetary Policy Report 3/08

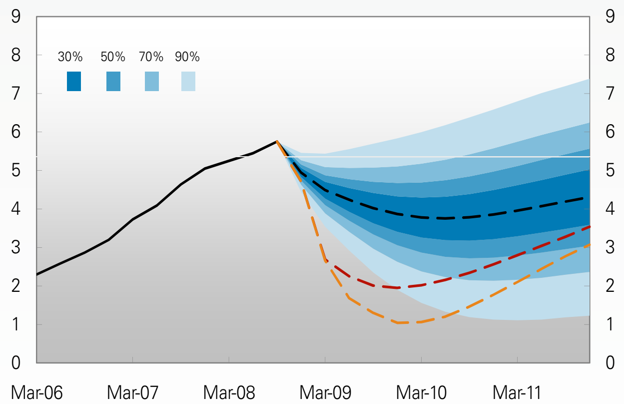
The interest rate forecast in this *Report* is substantially lower than the forecast in *Monetary Policy Report* 3/08 (see Chart 1). The forecasts are based on an overall assessment of the situation in the Norwegian and global economies and on our perception of the functioning of the economy (see Table containing changes in the projections). Chart 2 shows a technical illustration of how news and judgement have affected the changes in the interest rate path. The calculation is intended to provide an indication of how various factors have influenced the interest rate forecast through their effect on the outlook for inflation, output and employment. The isolated contributions from the different factors are shown in the bars. The overall change in the interest rate forecast is shown by the black line.

The outlook for global and domestic growth has deteriorated considerably since October last year. Projected growth among our trading partners has been revised down substantially, which is reducing activity in the Norwegian economy and depressing price and cost inflation. The Norwegian export sector is being particularly hard hit by the global downturn. Petroleum investment is also expected to be lower than projected in October as a result of lower oil prices. Due to lower capacity utilisation and a limited supply of credit, corporate investment will fall markedly ahead. Growth in the Norwegian economy is being underpinned by an expansionary fiscal policy, but on balance there are prospects that activity will decline more than projected in October. Reduced global and domestic demand imply a markedly lower key policy rate now than in October (see Chart 2, red bars).

Inflation projections have been revised down since October. Lower global inflation and reduced capacity utilisation in the Norwegian economy will curb inflation. The decline in energy prices is also restraining inflation. Wage growth is expected to slow and productivity to pick up, curbing the rise in enterprises' costs. Lower price and cost inflation would suggest a lower key policy rate (see Chart 2, orange bars).

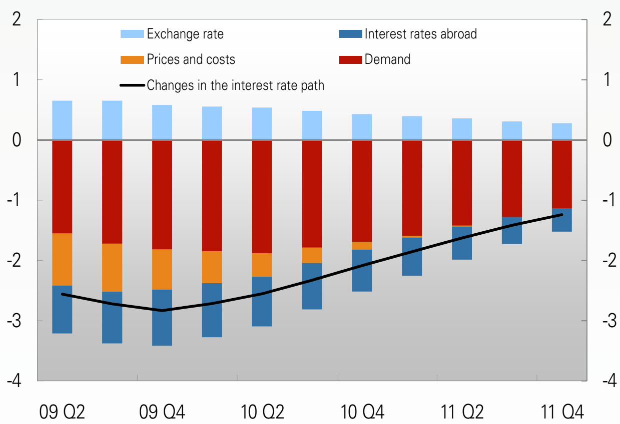
The krone depreciated markedly towards the end of 2008 and considerably more than projected in *Monetary Policy Report* 3/08,

Chart 1 Key policy rate in the baseline scenario in MPR 3/08 with fan chart and key policy rate in the baseline scenario from 17 December 2008 (red line) and MPR 1/09 (yellow line). Per cent. Quarterly figures. 2006 Q1 – 2011 Q4



Source: Norges Bank

Chart 2 Factors behind changes in the interest rate path since MPR 3/08. Accumulated contribution. Percentage points. 2009 Q2 – 2011 Q4



Source: Norges Bank

resulting in higher-than-projected imported inflation and pushing up the interest rate forecast (light blue bars).

As a result of considerably lower growth and inflation expectations and substantial reductions in central bank key rates, market key rate expectations among our trading partners are markedly lower than in October. This would suggest a lower key policy rate in Norway (see Chart 2, dark blue bars).

Changes in the interest rate forecast since 17 December 2008

The interest rate forecast in this Report is also lower than the forecast published in December last year (see Chart 1). The factors contributing to the changes in the interest rate forecast are shown in Chart 3.

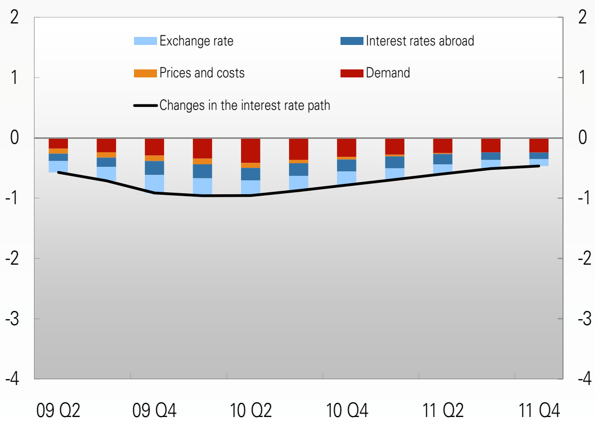
The outlook for global growth has deteriorated further. The slowdown in the Norwegian economy appears to be more pronounced than expected in December. Lower global and domestic demand would suggest a lower key policy rate than projected in December (red bars).

Inflation in Norway has been higher than projected in December. Our inflation projections have nevertheless been revised down due to the prospect of lower inflation abroad and in Norway. This would suggest a lower key policy rate (see Chart 3, orange bars).

Due to lower growth and inflation expectations abroad, key rate expectations among our trading partners have fallen. This would suggest a lower key policy rate in Norway (dark blue bars).

The krone has been stronger than projected in December. This will result in lower inflation and reduced activity in the Norwegian economy and would suggest a lower key policy rate (light blue bars).

Chart 3 Factors behind changes in the interest rate path since 17 December 2008. Accumulated contribution. Percentage points. 2009 Q2 – 2011 Q4



Source: Norges Bank

Table 1 Projections for macroeconomic aggregates in *Monetary Policy Report* 1/09. Change from projections in *Monetary Policy Report* 3/08 in brackets.

	2008	2009	2010	2011
Mainland demand	2.1 (-¼)	-1¼ (0)	3 (1½)	5 (1¼)
GDP mainland Norway	2.4 (0)	-1 (-1¼)	2½ (0)	3¾ (¼)
Employment	3.2 (½)	-1½ (-¾)	-¼ (-¼)	1 (¼)
LFS unemployment (rate)	2.6 (0)	4¼ (1)	4¾ (¾)	4¼ (¼)
CPIXE[1)]	3.1 (-¼)	2½ (-¾)	1¾ (-1)	2 (-½)
CPI-ATE	2.6 (0)	2½ (-½)	2 (-¾)	2¼ (-¼)
CPI	3.8 (0)	2 (-1)	2 (-¾)	2¼ (-¼)
Annual wage growth	6 (0)	4 (-¾)	3¾ (-1)	4¼ (-½)

1) CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo* 2008/7 from Norges Bank for a description of the CPIXE.

Source: Norges Bank

Summary

It appears that the decline in the global economy will be even deeper and more prolonged than envisaged in December. International trade is shrinking markedly. Inflation is slowing sharply and inflation expectations have fallen. Central bank key rates have been reduced in many countries to mitigate the impact of the crisis. Government authorities the world over are taking action to boost demand for goods and services, improve banks' financial strength and enable credit markets to function. It will nevertheless take time for global growth to pick up.

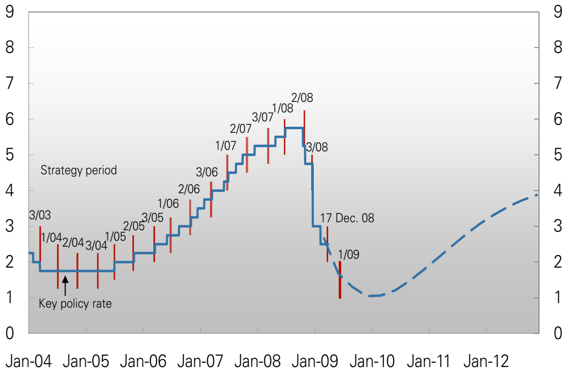
It also appears that the decline in activity in the Norwegian economy will be more pronounced than previously assumed. The export industry will be severely affected by the sharp global downturn, with repercussions on other Norwegian business sectors. The decline in interest rates and strong growth in general government expenditure will mitigate the impact on output and employment in Norway.

There are prospects that inflation will fall more rapidly than previously assumed and be below 2.5% for a period. Lower global inflation and lower capacity utilisation in the Norwegian economy will curb inflation ahead. It is therefore appropriate to set the key policy rate at a low level to prevent inflation from falling too far below target.

Both the objective of stabilising inflation around the target and the objective of stable developments in output and employment suggest that the interest rate should be low, and lower than envisaged in December. The risk of a sharp downturn in the Norwegian economy indicates that the interest rate should be rapidly reduced to a low level. On the other hand, we have already made substantial cuts in the key policy rate. A low interest rate may result in a more rapid turnaround in Norway than we assume, suggesting in isolation that changes in the interest rate should be gradual or that further interest rate cuts should be put on hold.

The projections are uncertain. New information may reveal aspects of economic developments that indicate that the Norwegian economy is moving on a different path

Chart 1.25 Interval for the key policy rate at the end of each strategy period, actual developments[1)] and projection. Per cent. January 2004 – December 2012



1) The Executive Board's decision of 25 March 2009 is not shown in the chart (see Table on page 49).
Source: Norges Bank

than projected. Private consumption may pick up more quickly and deleveraging in the household sector may be more limited than expected. A more rapid turnaround or a weaker krone may, on the one hand, result in higher-than-projected inflation. On the other hand, inflation may be lower than projected if the krone appreciates markedly or the global downturn is even deeper and more prolonged than expected.

Monetary policy cannot fine-tune developments in the economy, but it can moderate the largest effects when the economy is exposed to shocks. Overall, the outlook and the balance of risks suggest that the key rate should be gradually reduced further (see Chart 1.25).

Executive Board's strategy

The key policy rate should be in the interval 1-2% in the period to the publication of the next *Monetary Policy Report* on 17 June 2009, unless the Norwegian economy is exposed to new major shocks.

Monetary policy measures when the key rate is close to zero

Low central bank key rates

The Federal Reserve set a target range for the federal funds rate of 0 – 0.25% in December. Key rates in Canada and the UK are now 0.5%, while in Switzerland the policy rate is 0.25% and in Japan 0.1%. Key rates are also very low in a number of Asian countries.

There is limited room for manoeuvre in interest rate setting when the key rate is approaching zero. This is because money in the form of notes and coins yields a zero interest rate. This forms a floor for the interest rate on financial investments.

Challenges when the key rate is close to zero

The most important channel through which monetary policy influences the level of activity in the economy is the *real interest rate*. The real interest rate is primarily determined by the following relationship:

Real interest rate
= an average of actual and expected key rates
+ risk premiums
– expected inflation

Inflation expectations are now falling in a number of countries, and market risk premiums are high. At the same time, key rates have been reduced to a very low level. This may result in a higher than desired real interest rate in spite of very low key rates, a situation known as the liquidity trap. The real interest rate can be positive even if the key rate is set at zero.

Alternative channels for monetary policy

When the key rate moves close to its lower bound, the central bank can only influence the real interest rate by influencing expectations with regard to the key rate and inflation and by influencing risk premiums. By committing to keeping the key policy rate low for a period ahead, the central bank can stimulate the economy even though the current key rate cannot be reduced further. Similarly, the central bank can move interest rate reductions forward to offset the possibility that monetary policy ahead may be tighter than desired. In addition, the central bank can seek to influence various market risk premiums in order to reduce the real interest rate. The theoretical literature has focused in particular on mechanisms designed to push up inflation expectations.[1]

Alternative instruments used in other countries

The Federal Reserve announced in December that it expected the federal funds rate to be exceptionally low for some time, and emphasised in March that the federal funds rate would be kept low for an extended period.[2]

The counterpart to low nominal interest rates internationally is an increase in the size of central bank balance sheets. Regular market operations are used to supply sufficient liquidity to underpin low interest rates. In a period of financial unrest, it can be necessary to supply large volumes of liquidity to reduce money market risk pre-

1 See for example Klaus Adam and Roberto Billi (2006) "Optimal Monetary Policy under Commitment with a Zero Bound on Nominal Interest Rates", *Journal of Money, Credit, and Banking*, 2006, 38 (7), pp. 1877-1905, Gauti Eggertsson and Michael Woodford (2003) "Optimal Monetary Policy in a Liquidity Trap", *NBER working paper no. 9968*, **http://www.nber.org/papers/w9968** , **http://www.nber.org/papers/w9968**, Gauti Eggertsson and Michael Woodford (2003) "The Zero Bound on Interest Rates and Optimal Monetary Policy, **http://www.columbia.edu/~mw2230/BPEA.pdf** and Lars E.O. Svensson (2003) "Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others", *Journal of Economic Perspectives*, Vol. 17, no. 4, pp. 145-166.

2 In a press release on 18 March, the Federal Reserve's Federal Open Market Committee stated that "…the Committee will maintain the target range for the federal funds rate at 0 to ¼ percent and anticipates that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period."

miums. Both the Bank of England and the Federal Reserve also use so-called quantitative easing. This involves supplying liquidity by purchasing government bonds or private sector securities not normally used in market operations.[3] This extra liquidity results in a further increase in central banks' balance sheets.

In March, the Bank of England and the Federal Reserve began to implement quantitative easing by purchasing longer-term government securities. According to the Bank of England, this extra supply of central bank liquidity will underpin the inflation target by increasing the supply of money and credit, which may result in an increase in private demand.

So far, it appears that the purchases of longer-term government securities have resulted in lower long-term interest rates in both the US and the UK. One of the reasons may be that the purchase of government securities is perceived as signalling low future key rates, since long-term rates usually reflect an average of future short-term interest rates. Another reason may be that markets for government securities with varying maturities are segmented. Substantial purchases of government securities with specific maturities may then push up prices for these securities, thereby lowering the expected return on investment in these securities.

The Federal Reserve has since autumn 2008 supplied a large volume of liquidity by purchasing private sector securities. In referring to these purchases, the Federal Reserve has emphasised that this is credit easing. The aim of this policy is to ease funding conditions and improve access to credit for the private sector. The Bank of England and the Swiss National Bank have recently purchased corporate bonds and commercial paper with a view to easing funding conditions in the economy. The Bank of Canada has established repurchase agreements for private sector securities to improve liquidity in this market.

3 The Bank of Japan uses the term quantitative easing to refer to the policy conducted in the period 2001-2006. The Bank of Japan is also currently supplying liquidity by purchasing securities not normally used in liquidity management, including both government bonds and private sector securities.

2 The projections

The global economy

Economic growth among our trading partners is now forecast at -3% in 2009 and ¾% in 2010 (see Table 2.1).

Reduced access to credit and weakening confidence in economic developments are dragging down activity in 2009 (see Chart 2.1). Government measures and the sharp fall in oil and commodity prices through 2008 will probably curb and eventually reverse the downturn. Several factors indicate that the upturn will be moderate when it occurs (see box on p 37).

The problems in financial markets seem to be particularly severe in the US and the UK. House prices have also fallen markedly in these two countries. There is a considerable need for deleveraging. Unemployment has already shown a pronounced increase, and is expected to rise further in the year ahead (see Chart 2.2). This is pushing down domestic demand. Moreover, the contributions from net exports are likely to be limited. GDP is expected to decline throughout 2009 in the UK and until mid-autumn in the US.

Exports have fallen sharply in both the euro area and Sweden, and the contributions to growth from net exports are expected to be negative in both 2009 and 2010 in many European countries, resulting in lower fixed investment and lower employment levels. The problems in credit markets seem to be less severe in the euro area and Sweden than in the US, and households' financial position is still solid in many European countries, which may help to moderate the fall in consumption. Growth is expected to pick up again in the course of autumn in Sweden and early next year in the euro area.

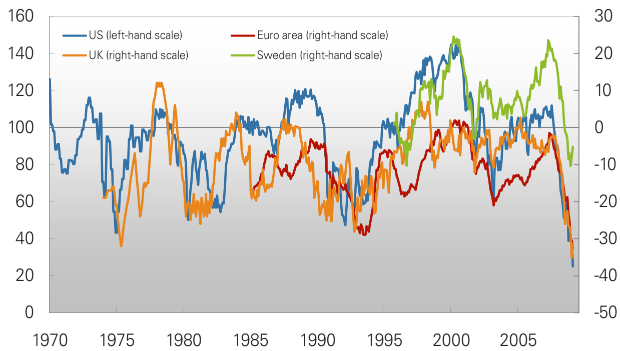
In most EMEs the real economic effects of the financial crisis have come into full evidence. Access to financing of investment and exports from foreign sources is limited.

Table 2.1. Projections for GDP growth in other countries. Change from previous year. Per cent

	2009	2010	2011-12 [1]
US	-3	¾	2½
Euro area	-3¼	0	2
Japan	-6	¼	1¼
UK	-3½	¼	2¼
Sweden	-3½	1	2¼
China	6½	7¾	9¾
Trading partners[2]	-3	¾	2½

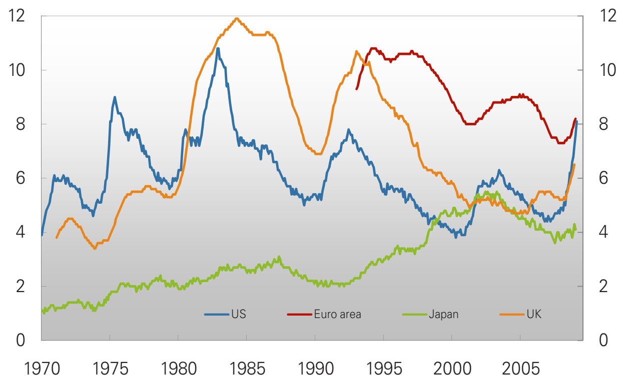
[1] Average annual growth.
[2] Export weights, 26 important trading partners.
Sources: Eurostat and Norges Bank

Chart 2.1 Consumer confidence. Seasonally adjusted diffusion index for the euro area, the UK and Sweden. Seasonally adjusted index for the US. January 1970 – February 2009



Source: Thomson Reuters

Chart 2.2 Unemployed. Percentage of labour force. Seasonally adjusted. January 1970 – February 2009



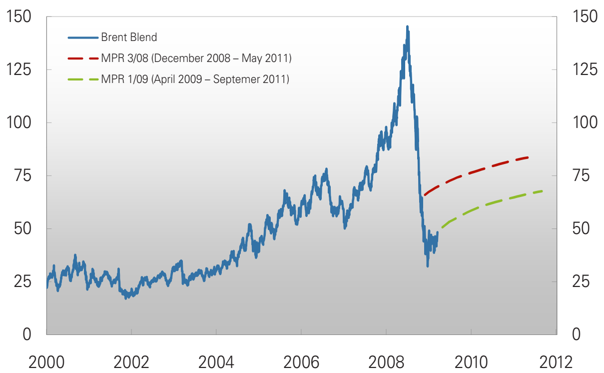
Source: Thomson Reuters

Table 2.2. Projections for consumer prices in other countries (change from previous year, per cent) and oil price

	2009	2010	2011-12[1)]
US	-½	1	1½
Euro area[2)]	½	1¼	1¼
Japan	-1	-½	¼
UK	¾	1¼	1½
Sweden	-¾	½	1¾
China	-¼	1¼	3
Trading partners[3)]	¼	1	1½
Oil price Brent Blend[4)]	48.9	57.3	61.7

1) Average annual rise.
2) Weights from Eurostat (each country's share of total euro area consumption).
3) Import weights, 26 important trading partners.
4) USD per barrel. Average future price for the last five trading days. For 2009, an average of spot prices so far this year and future prices for the rest of the year is used.
Sources: Eurostat, Thomson Reuters and Norges Bank

Chart 2.3 Oil price (Brent Blend) in USD per barrel. 3 January 2000 – 19 March 2009. Futures prices (broken lines) MPR 3/08 and MPR 1/09



Sources: Thomson Reuters and Norges Bank

The uncertainty among households and businesses with regard to economic developments has increased. Exports are falling at a fast pace, and investment and consumption are faltering. Many EMEs, particularly in Asia, are nevertheless more robust than during previous downturns, partly owing to solid budget balances, current account surpluses, low foreign debt and considerable foreign exchange reserves. Several countries, particularly China, are using the scope for manoeuvre to implement measures to stimulate private demand. Growth in demand from EMEs is expected to bring the contraction in world trade to a halt in the course of the first half of 2009.

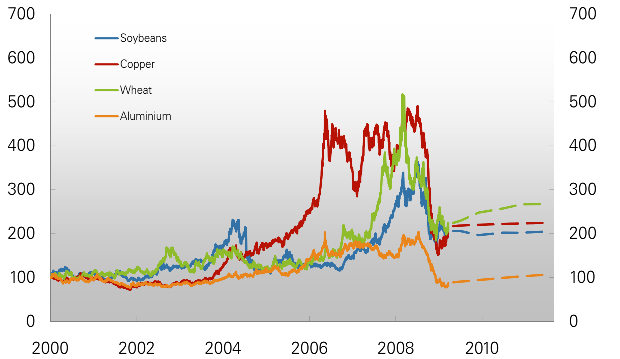
Consumer price inflation among trading partners is expected to remain low in the coming years (see Table 2.2). In the US, the consumer price index is expected to fall in 2009 as a result of lower energy prices. CPI inflation will thereafter be moderate. In the UK and the euro area, inflation will probably be lower than the inflation target through the entire forecast period owing to weak real economic developments. In Sweden, interest payments are included in housing costs in the consumer price index. Combined with weak underlying inflation, the fall in interest rates will result in a decrease in prices this year.

On average, oil prices have hovered just below USD 45 per barrel so far this year, after falling by more than USD 100 in the course of the latter half of last year. The projections in this *Report* are based on the assumption that oil prices move in line with futures prices (see Chart 2.3 and Table 2.2). High oil stock levels in OECD countries and rising spare production capacity in OPEC indicate reduced tightness in the oil market ahead. The world economic outlook, as presented in this *Report*, points in the same direction. On the supply side, OPEC's ability and willingness to cut production will be important in the near term. In the somewhat longer term, non-OPEC supply may be affected by limited new investments if oil prices remain low for an extended period and the problems in financial markets further reduce access to credit and equity capital.

The Economist commodity-price index fell markedly last autumn, but has been fairly stable since the end of 2008.

Prices for industrial commodities will largely be determined by world economic growth ahead. Metal prices are particularly sensitive to cyclical developments. Food prices are to a larger extent influenced by weather conditions and other supply-side factors. Futures prices for a selection of raw materials indicate unchanged or moderately rising prices in the next few years (see Chart 2.4).

Chart 2.4 Commodity prices in USD. Index. 4 January 2000 = 100.
4 January 2000 – 19 March 2009. Futures prices from 19 March 2009 (broken lines).
April 2009 – July 2011



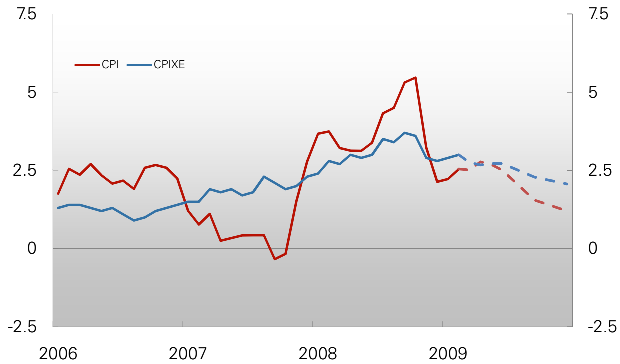
Sources: Thomson Reuters, Chicago Board of Trade and Norges Bank

The Norwegian economy in the year ahead

Prices

In February, consumer prices (CPI) were 2.5% higher than in the same month one year earlier. Adjusted for tax changes and excluding temporary changes in energy prices (CPIXE), inflation was 3.0% (see Chart 2.5). Inflation adjusted for tax changes and excluding energy products (CPI-ATE) was also 3.0% (see Chart 2.6). In January, inflation was broadly in line with that projected at the monetary policy meeting on 17 December, but inflation was higher than projected in February. Inflation is expected to fall back in the period ahead.

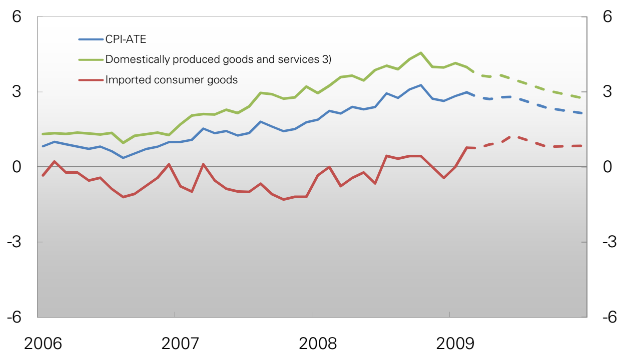
Chart 2.5 CPI and CPIXE[1)]. 12-month change.
Per cent. January 2006 – December 2009[2)]



1) CPI adjusted for tax changes and excluding temporary changes in energy prices. See Staff Memo 2008/7 from Norges Bank for a description of the CPIXE.
2) Projections for March 2009 – December 2009 (broken lines). Monthly figures to June 2009, then quarterly figures.
Sources: Statistics Norway and Norges Bank

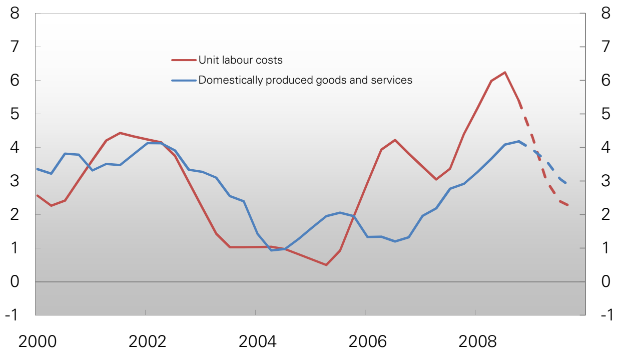
The rise in prices for domestically produced goods and services reached a peak in October last year at 4.6% and fell back to 4.0% in February this year. In the first half of this year, inflation will continue to be marked by high wage growth and the fall in productivity growth through 2008 (see Chart 2.7). Low growth in demand may nevertheless reduce the scope for passing on higher costs to prices. A marked rise in house rents and a sharp increase in food prices in connection with the Agricultural Settlement pushed up inflation in the first quarter. In the second half of the year, the decline in commodity and energy prices, faster productivity growth and lower wage growth will lead to a slower rise in prices for domestically produced goods and services. The fall in residential construction activity may result in lower prices for goods and services for home maintenance and repair. The rate of increase in house rents and food prices is expected to moderate ahead, after rising sharply at the beginning of the year. The rise in house rents may also slow as a result of the decline in interest expenses facing landlords.

Chart 2.6 CPI-ATE[1)]. Total and by supply sector.
12-month change. Per cent. January 2006 – December 2009[2)]



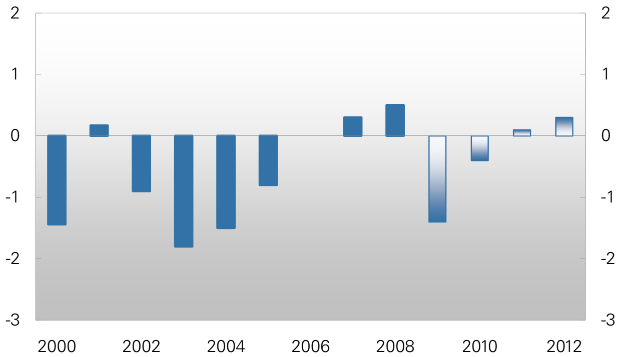
1) CPI adjusted for tax changes and excluding energy products.
2) Projections for March 2009 – December 2009. Monthly figures to June 2009, then quarterly figures.
3) Norges Bank's estimates.
Sources: Statistics Norway and Norges Bank

Chart 2.7 Unit labour costs, mainland Norway and domestically produced goods and services[1]. Four-quarter growth. Per cent. 2000 Q1 – 2009 Q4[2]



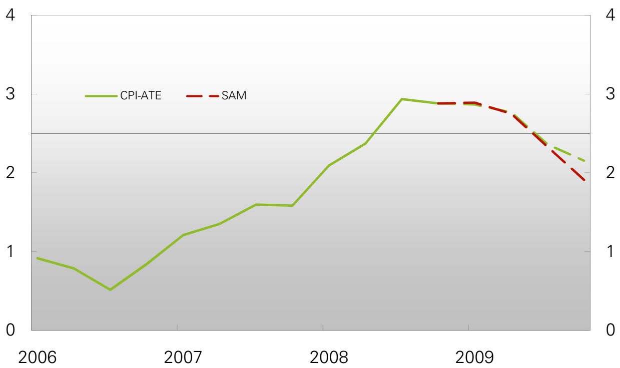
1) Norges Bank's estimates.
2) Projections for 2009.
Sources: Statistics Norway and Norges Bank

Chart 2.8 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Per cent. 2000 – 2012[1]



1) Projections for 2009 – 2012.
Sources: Thomson Reuters, Statistics Norway and Norges Bank

Chart 2.9 CPI-ATE[1]. Actual figures, baseline scenario and projections by SAM[2]. Four-quarter change. Per cent. 2006 Q1 – 2009 Q4[3]



1) CPI adjusted for tax changes and excluding energy products.
2) System of models for short-term forecasting.
3) Projections for 2009.
Sources: Statistics Norway and Norges Bank

Overall, the rise in prices for domestically produced goods and services is expected to move below 3% around the end of the year.

The rise in prices for imported consumer goods has edged up in recent months. In February, prices were 0.8% higher than in February last year. Measured in foreign currency, prices for these goods rose in 2007 and the first half of 2008, reflecting the sharp increase in world commodity prices and rising inflation in many countries (see Chart 2.8). Since summer 2008, commodity prices have declined. Prices for imported consumer goods measured in a foreign currency are expected to fall by 1½% in 2009. The effect on prices in NOK terms depends on the krone exchange rate. The krone depreciated rapidly and markedly in autumn 2008. The krone exchange rate is assumed to be about 5% weaker in 2009 than the average for 2008. Normally, it takes 1-2 years for changes in the exchange rate to be fully reflected in consumer prices. The appreciable rise in prices for many imported consumer goods in February, despite lower demand, may indicate that the effect of the fall in the value of the krone will occur faster than normal. This may be because the movement in the krone has been pronounced, and because the krone is expected to remain at a weaker value. Many enterprises in Norges Bank's regional network have signalled price increases in the first and second quarter as a result of the weak krone. It is therefore assumed that most of the effect of the krone depreciation on inflation will occur in the first half of the year, which is earlier than historical experience would imply. The overall rise in prices for imported consumer goods is projected at around ¾% through 2009.

Owing to a continued fast rise in prices for domestically produced goods and services, CPI-ATE inflation will remain at around 2¾% in the first half of the year, drifting down to 2¼% in the latter half. The projections for CPI-ATE inflation for 2009 Q1-Q3 are fairly close to the projections derived from SAM, our system for averaging models[1] (see Chart 2.9). The projection for 2009 Q4 in this *Report* continues to be held up by the krone depreciation. SAM includes few models that effectively capture the direct effects of the exchange rate on prices.

1 SAM is described in a box in *Monetary Policy Report* 2/08.

Energy prices increased markedly in 2008, but have fallen in recent months. There are prospects for lower electricity prices in the near term. The estimated energy price trend included in the CPIXE projections is lower than that applied in both *Monetary Policy Report* 3/08 and at the monetary policy meeting on 17 December (see Chart 2.10).[2] The twelve-month rise in the CPIXE is projected to fall back towards 2% at the end of the year. Annual CPI inflation is projected to increase in 2009 Q2, but to fall below 1½% towards the end of the year (see Chart 2.5). CPI inflation is projected at 2% between 2008 and 2009.

Output and demand

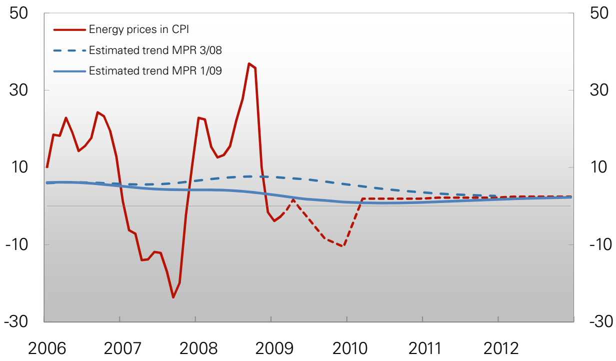
Expensive and reduced access to credit, high interest expenses, and uncertainty about developments ahead amplified the downturn in the Norwegian economy towards the end of 2008. Private consumption fell markedly, the decline in housing investment accelerated and mainland business investment started to fall. Weaker external developments resulted in a decline in mainland exports. In 2008 Q4, mainland GDP contracted by 0.2%. The downturn abroad and the abnormal conditions in financial markets are expected to continue to shape the outlook for the Norwegian economy ahead.

Mainland GDP is projected to fall by 1½% in the first half of the year followed by a moderate increase in the latter half of the year. All in all, mainland GDP is projected to contract by 1% between 2008 and 2009 (see Chart 2.11). Manufacturing production continued to fall in January. The business tendency survey and the Purchasing Managers Index (PMI) point to a further fall in production. The enterprises in Norges Bank's regional network also expect activity to fall in the coming six months (see Chart 2.12).

Norges Bank's system for averaging short-term models, SAM, projected somewhat higher GDP growth than in this *Report* (see Chart 2.13). The abnormal conditions in credit markets and the fall in the confidence indicators have a limited influence on the SAM-based projection. The projections in this *Report* lie within the uncertainty intervals provided by the short-term models.

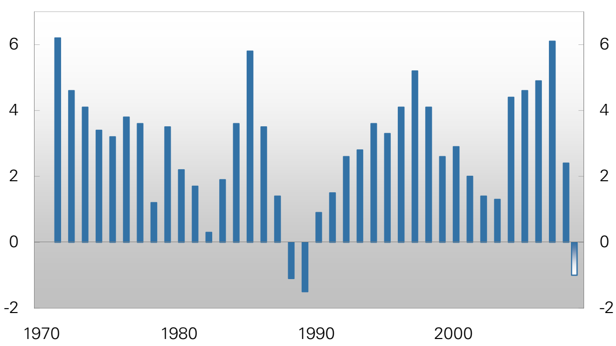
2 The CPIXE projection is based on futures prices for oil and electricity in the period 6 to 19 March.

Chart 2.10 Energy component of the CPI[1)] and estimated trend[2)]. 12-month change. Per cent. January 2006 – December 2012[3)]



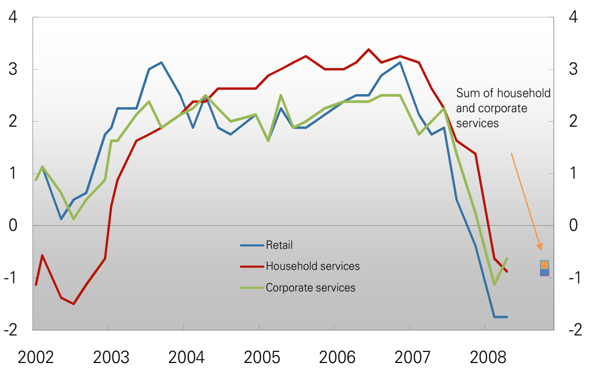
1) The product groups Electricity, gas and other fuels and Fuels and lubricants.
2) The trend is estimated using an HP-filter (lamda = 14 400) on the actual and projected movements of energy prices in the CPI.
3) Projections for March 2009 – December 2012.
Sources: Nord Pool, Statistics Norway and Norges Bank

Chart 2.11 Mainland GDP. Annual volume change. Per cent. 1971 – 2009[1)]



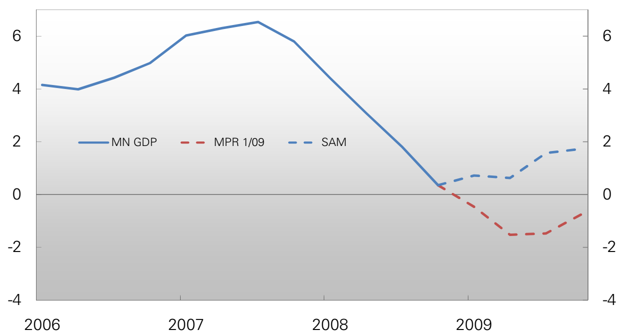
1) Projections for 2009.
Sources: Statistics Norway and Norges Bank

Chart 2.12 Actual production and production as expected in next 6 months. Index[1)]. October 2002 – July 2009



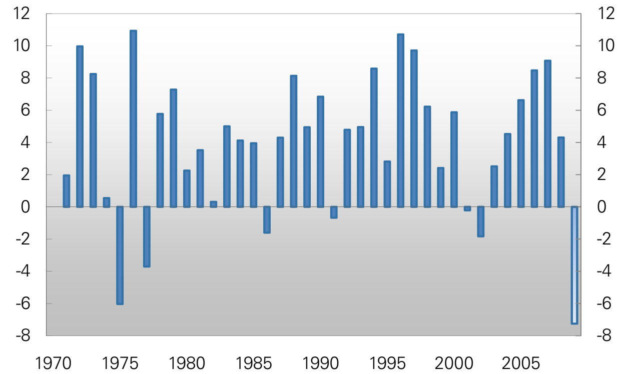
1) The scale runs from -5 to +5, where -5 indicates a sharp fall and +5 indicates strong growth. See article "Norges Bank's regional network" in *Economic Bulletin* 2/05 for further information.
Source: Norges Bank

Chart 2.13 Mainland GDP. Actual figures, our baseline scenario and projections by SAM[1]. Four-quarter change. Volume. Seasonally adjusted. Per cent. 2008 Q1 – 2009 Q4[2]



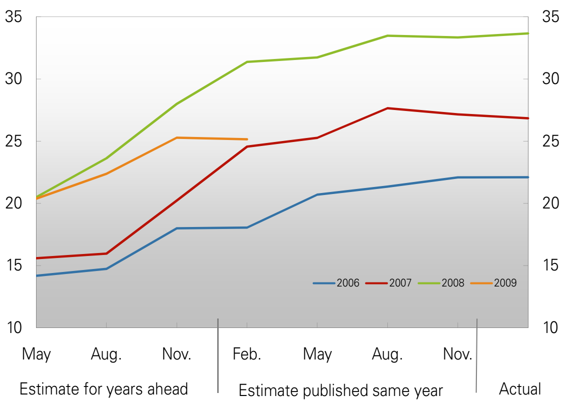
1) System of models for short-term forecasting.
2) Projections for 2009 Q1 – 2009 Q4.
Sources: Statistics Norway and Norges Bank

Chart 2.14 Exports from mainland Norway. Annual volume change. Per cent. 1971 – 2009[1]



1) Projections for 2009.
Sources: Statistics Norway and Norges Bank

Chart 2.15 Manufacturing investment statistics. Estimated and actual investment (current prices). In billions of NOK. 2006 – 2009



Source: Statistics Norway

The output gap fell rapidly through 2008 and is projected to be negative in 2009 Q1. A negative output gap is consistent with the information from the regional network, where only a little more than 20% of the enterprises now report that it would be difficult to accommodate growth in demand. GDP growth is expected to be lower than growth in potential output up to and including 2010 Q1, when the output gap is projected to be -2%.

Mainland exports are expected to decline by 7% this year, in line with the fall in output among our trading partners (see Chart 2.14). Last autumn, demand for consumer durables in particular declined on the world market. Demand for metals and other inputs, which account for a large share of Norwegian exports, has also gradually been affected. The supply of new orders has dropped, and order reserves have started to move down, albeit from a high level. Exports are expected to fall markedly in the first and second quarter. Trade statistics for January and February confirm the fall in exports. The weakening of the krone, in conjunction with an expected halt in the decline in demand among our trading partners towards the end of the year, may result in a flattening out of exports in the latter half of the year.

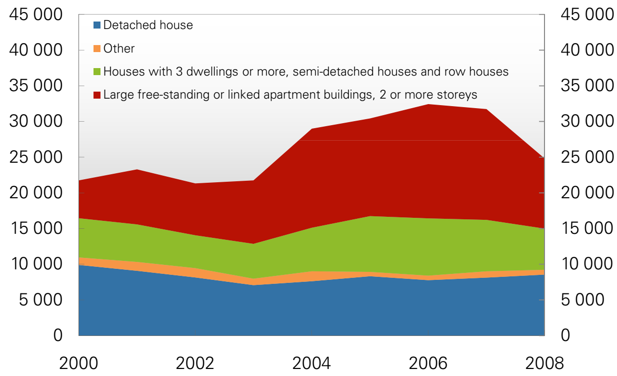
Business investment is projected to fall by close to 20% in 2009, albeit from a relatively high level. Lower demand in both domestic and export markets is dragging down investment. The enterprises in Norges Bank's regional network report that investments are being cancelled or postponed owing to funding problems and weak market prospects. In addition, many manufacturing enterprises have seen a fall in profitability as a result of high cost growth and a decline in commodity prices, which reduce investment ability. The first-quarter investment intentions survey for manufacturing indicates a marked fall in manufacturing investment in 2009 (see Chart 2.15). Norges Bank's lending survey for 2008 Q4 showed that banks would continue to tighten their credit standards for enterprises in 2009 Q1. This may have a particularly strong impact on investment in non-residential buildings, which normally relies on a high share of debt-financing, and where market prices dropped by 20% in 2008. The decline in investment is not expected to moderate until early next year when growth prospects have improved, enterprises' access to funding is easier and the interest rate is low.

Housing investment is projected to decline by a little more than 20% in 2009. Housing starts have continued to fall according to building statistics. Order statistics for the construction sector show a decline in both new orders and order reserves for dwellings. Housing starts are expected to decline to around 20 000 in 2009. This is lower than in 2002/2003, but somewhat higher than in the beginning of the 1990s. In particular, building starts for apartments are expected to show a decline from the high level prevailing in previous years (see Chart 2.16). The fall in housing investment is expected to moderate through 2009 as improved access to credit and a lower interest rate boost housing demand.

After falling in the latter part of 2008, the decline in *private consumption* is expected to come to a halt in the first half of this year. Car sales were low in January and February, but consumption of other goods edged up in January according to the retail sales index. Households became somewhat more positive with regard to developments ahead in January and February compared with the latter half of 2008 according to MakroSikt's consumer confidence survey. TNS Gallup's trend indicator for 2009 Q1 shows that households' tendency towards an increasingly negative assessment of their own financial situation and their view of the Norwegian economy has eased. Owing to lower interest rates and reduced inflation, household real disposable income will be higher this year than in 2008 despite the decline in wage growth and employment (see Chart 2.17).

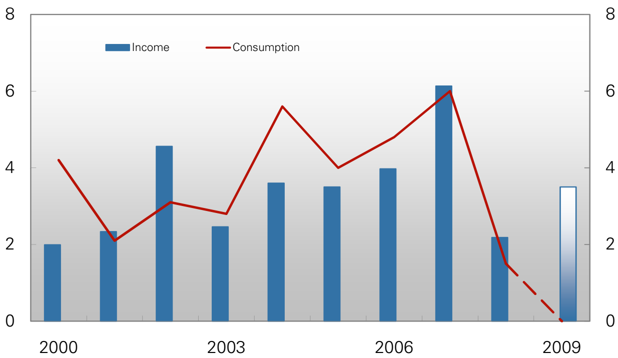
It is assumed that the prospect of higher unemployment, falling house prices and a high debt level will prompt households to build up financial buffers and reduce debt. Saving is expected to increase to around 5% of disposable income in 2009 and net lending is projected to become positive. Low interest rates and solid real income growth nevertheless provide a basis for a clear upswing in household consumption in the latter half of 2009.

Chart 2.16 Number of housing starts by type of dwelling. 2000 – 2008



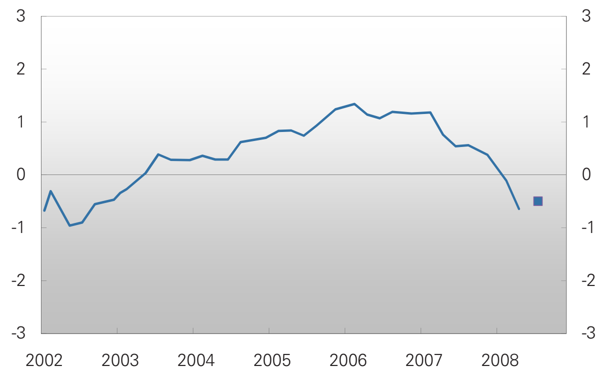
Sources: Statistics Norway and Norges Bank

Chart 2.17 Household real disposable income[1)] and consumption[2)]. Annual growth. Per cent. 2000 – 2009[3)]



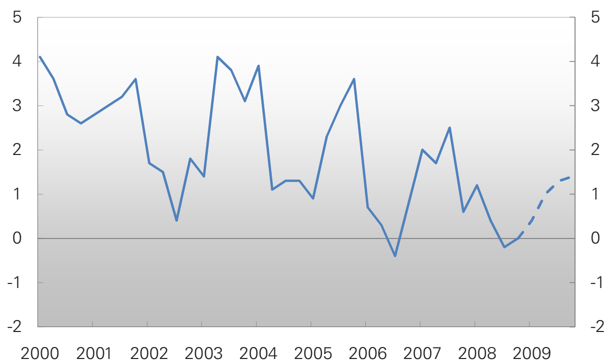
1) Adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2009.
2) Includes consumption in non-profit organisations. Volume.
3) Projections for 2009.
Sources: Statistics Norway and Norges Bank

Chart 2.18 Actual employment and expected employment in next 3 months. Index[1]. October 2002 – April 2009



1) The scale runs from -5 to +5, where -5 indicates a sharp fall and +5 indicates strong growth. See article "Norges Bank's regional network" in *Economic Bulletin* 2/05 for further information.
Source: Norges Bank

Chart 2.19 Hourly productivity.
Four-quarter change. Seasonally adjusted. Base value. 2000 – 2009[1]



1) Projections for 2009.
Source: Norges Bank

Table 2.3 Population and labour force growth. Change from previous year. Per cent

	2008	2009
Population growth in the age group 15 - 74 years	1¾	1¼
Contribution from change in population composition	-¼	-¼
Cyclical contribution	1¾	-1
Labour force growth	3.4	0

Source: Norges Bank

Labour market

According to quarterly national accounts (QNA) figures, employment fell by 0.4% in 2008 Q4. Demand for labour is expected to be lower ahead as a result of a fall in production. Employment is projected to fall by 1½% in 2009. This is in line with the expectations reported by the enterprises in Norges Bank's regional network (see Chart 2.18).

The number of person-hours worked fell by 0.7% in 2008 Q4, and average working hours declined. Working hours are expected to fall further through 2009, partly as a result of reduced overtime. Person-hours worked are therefore projected to fall by 2% in 2009.

After falling through the first half of 2008, productivity increased somewhat in the second half of 2008. Productivity is expected to continue to rise in 2009 as enterprises adapt their workforces to production (see Chart 2.19).

The labour force continued to expand through autumn last year, even though employment growth stalled. The labour force is projected to remain unchanged in 2009, in spite of the assumption of 1¼% population growth (see Table 2.3). The supply of labour has proved to be flexible. The labour supply increased when demand rose. Labour force participation rates must thus also be expected to fall when demand for labour drifts down. Among other things, flows into education are expected to increase and the share of older workers opting to retire under the contractual early retirement scheme is expected to rise. The projection for population growth is based on the assumption that immigration will fall back.

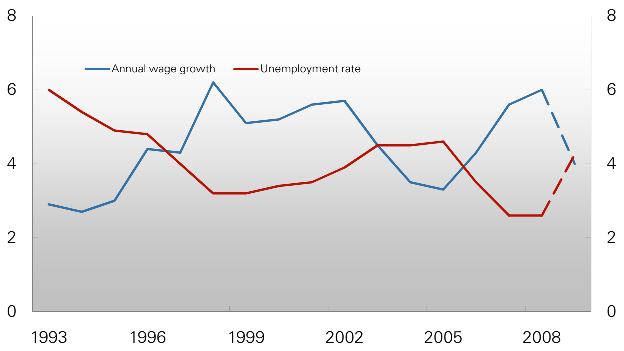
Unemployment has increased since autumn last year. According to the labour force survey (LFS), seasonally adjusted unemployment increased from 2.4% in August to 3.0% in December. The number of unemployed registered with the Norwegian Labour and Welfare Administration increased from a little more than 41 000 in August to 64 000 in February. With a continued fall in employment through 2009 and an unchanged labour force, unemployment will move up further. LFS unemployment is projected to rise to 4¾% at the end of the year.

Wage growth

The Technical Reporting Committee on Income Settlements (TRC) estimates wage growth at 6% in 2008 and a carry-over of 2¼% into 2009. In the local government sector, pay increases have already been agreed for 2009 that will contribute 0.3 percentage point to total annual wage growth. Lower corporate profitability, rising unemployment and lower consumer price inflation will probably result in moderate wage drift and low centrally negotiated pay increases this year. Wage growth is projected at 4% this year (see Chart 2.20).

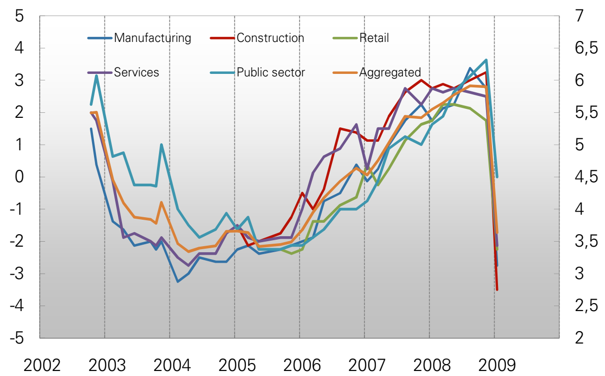
The contacts in Norges Bank's regional network expect that annual wage growth in 2009 will be between 2¾% and 4½% in the various industries (see Chart 2.21). Perduco's expectations survey for 2009 Q1 shows that the social partners expect wage growth of 4.1% this year.

Chart 2.20 Annual wage growth[1)] and LFS unemployment. Per cent. 1993 – 2009[2)]



1) Average for all groups. Including estimated costs of increase in number of vacation days and introduction of mandatory occupational pensions.
2) Projections for 2009.
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements and Norges Bank

Chart 2.21 Expected annual wage growth same year. Index[1)] and per cent. October 2002 – January 2009



1) The scale runs from -5 to +5, where -5 indicates a sharp fall and +5 indicates strong growth. See article "Norges Bank's regional network" in *Economic Bulletin* 2/05 for further information.
Source: Norges Bank

Assumptions concerning fiscal policy and oil investment from 2009 to 2012

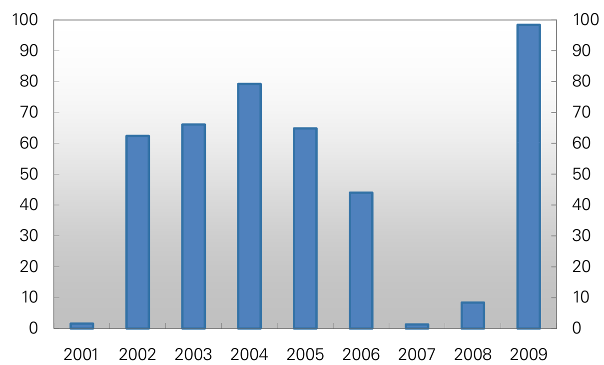
Fiscal policy

Growth in general government expenditure and revenues in 2009 is assumed to be in line with the National Budget for 2009 with the changes approved by the Storting (Norwegian parliament) on 13 February. Between 2008 and 2009, nominal growth in general government consumption is projected at 8¾%, while general government investment is projected to grow by 14½%.

The non-oil budget deficit is projected to increase by NOK 90bn, or 5% of trend GDP, between 2008 and 2009 (see Chart 2.22). The structural non-oil budget deficit for 2009 is estimated at NOK 120.5bn. This is NOK 29.5bn higher than the expected real return on the Government Pension Fund – Global and 5.3% of the Fund's capital. The structural budget deficit is expected to increase by 2.4 percentage points of trend GDP between 2008 and 2009.

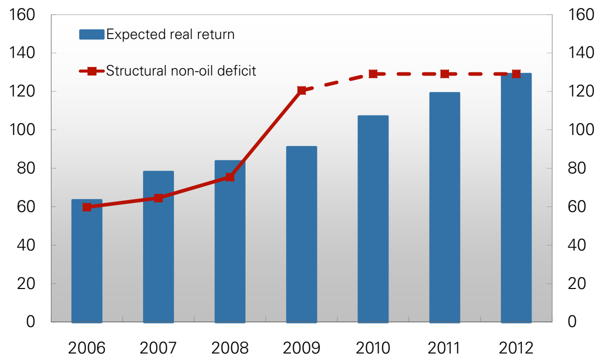
Fiscal policy is assumed to become less expansionary between 2010 and 2012. In line with the fiscal rule, the structural non-oil budget deficit is expected to revert to

Chart 2.22 Non-oil deficit. In billions of NOK. 2001 – 2009



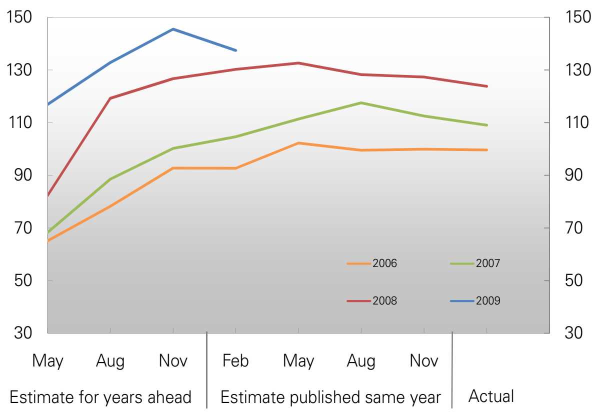
Source: Ministry of Finance

Chart 2.23 Structural non-oil deficit[1] and expected real return on the Government Pension Fund – Global. In billions of 2009 NOK. 2006 – 2012



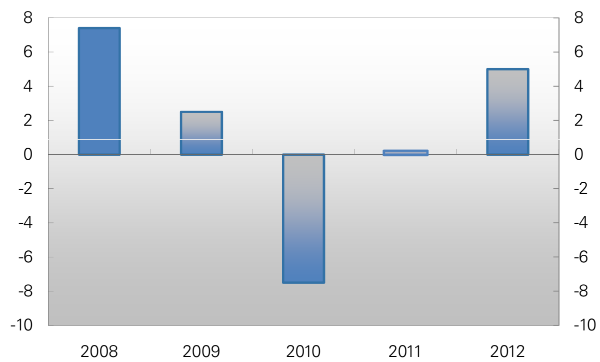
1) Norges Bank's projections for 2010 – 2012.
Sources: Ministry of Finance and Norges Bank

Chart 2.24 Investment statistics for the petroleum industry. Estimated and actual investment (current prices). In billions of NOK. 2006 – 2009



Source: Statistics Norway

Chart 2.25 Oil investment. Annual volume change. Per cent. 2008 – 2012[1]



1) Projections for 2009 – 2012.
Sources: Statistics Norway and Norges Bank

4% of the Government Pension Fund – Global as cyclical conditions eventually normalise (see Chart 2.23). As a technical assumption, direct and indirect tax rates are held unchanged between 2010 and 2012.

Nominal growth in general government consumption is put at 7½% in 2010, followed by slower growth in 2011 and 2012. General government investment is assumed to continue to grow in 2010 to a relatively high level, before falling somewhat in 2011 and 2012.

Oil investment

Oil investment expanded by 7.1% in 2008. The investment intentions survey for 2009 Q1 indicates that oil investment will stop growing in 2009 (see Chart 2.24). Oil investment normally reacts strongly to oil price swings, but there is some lag between a change in oil prices and investment adjustments. Oil prices have fallen very rapidly and futures prices have been reduced. Oil prices are now lower than what is considered to be the profitability threshold for a number of planned field development projects in the North Sea.

In the near term, oil investment will probably hold up as a result of existing investment plans, even though some planned projects may be cancelled or postponed. Small-scale investments, for example relating to exploration and new oil wells, may be cancelled at short notice. Oil investment is projected to grow by 2½% in 2009.

Lower commodity prices, such as metal prices, may gradually lead to a decline in investment costs. As a result, a greater number of projects will be attractive, even at today's oil price. Oil prices are assumed to rise in pace with futures prices, paving the way for a renewed upswing in oil investment. Oil investment is projected to fall by 7½% in 2010, followed by an approximately unchanged level in 2011 and a pick-up in 2012 (see Chart 2.25).

Boxes

Deep downturn in the global economy

Evaluation of the projections for 2008

Deep downturn in the global economy

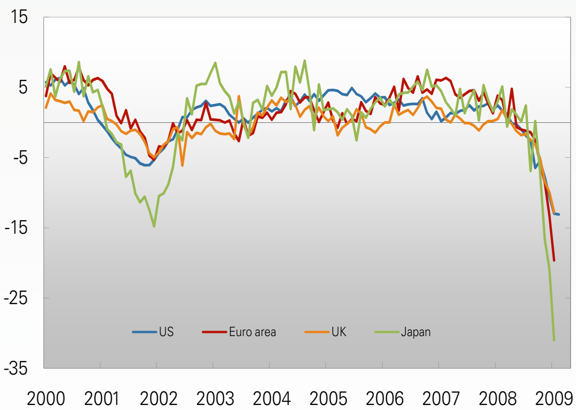
The Lehman Brothers bankruptcy in mid-September 2008 sparked a crisis of confidence in the global economy. Banks were reluctant to lend to one another, and the interbank lending market dried up. Credit standards were tightened for households and businesses. Households reduced consumption, and businesses cut back on production and investment.

Activity in the global economy has fallen sharply. In the year to February 2009, industrial production contracted by 13% in the US. In the year to January 2009, industrial production fell by 20% in the euro area and by 31% in Japan (see Chart 1). GDP in the OECD area as a whole is expected to fall in 2009 for the first time since the Second World War.

Increased trade has been a key driver behind the high global growth of the past decade, and growth in world trade has been particularly important for emerging market economies (EMEs). Weaker demand from OECD countries, a shortage of financing for exports and imports and reduced inflows of capital from abroad have had a severe impact on many EMEs (see Chart 2). Industrial output declined when exports fell (see Chart 3). In the longer term, growth in fixed investment will also fall, as fixed investment is closely linked to the export sector in these countries. GDP fell sharply towards the end of last year in many EMEs.

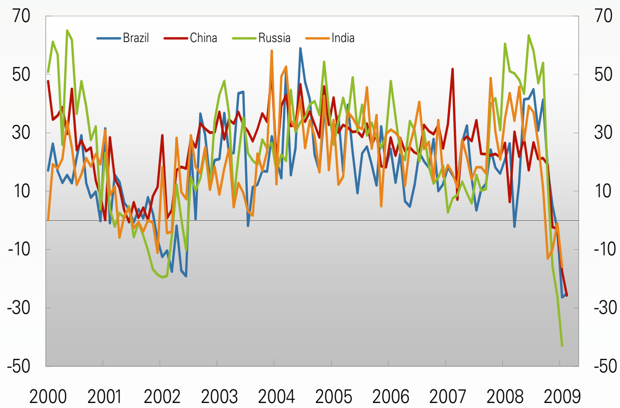
The steep and synchronised downturn in the real global economy has had an adverse feedback effect on financial markets. To date, losses at banks and other financial institutions have largely been related to the problems in housing and financial markets. Ahead, losses will also be affected by higher unemployment and more business bankruptcies. These losses are reducing banks' capacity and willingness to issue credit. The dwindling supply of credit is amplifying the fall in house prices in a number of countries. The drop in house prices is dampening activity in the construction sector and eroding household wealth and borrowing capacity. Households are consuming less, and businesses are tightening their budgets. Trade is continuing to fall. The loss of confidence, lower asset prices and

Chart 1 Industrial production in major advanced economies. Manufacturing. 12-month change. Per cent. January 2000 – February 2009



Source: Thomson Reuters

Chart 2 Exports from major emerging market economies. Value. 12-month change. Per cent. January 2000 – February 2009



Source: Thomson Reuters

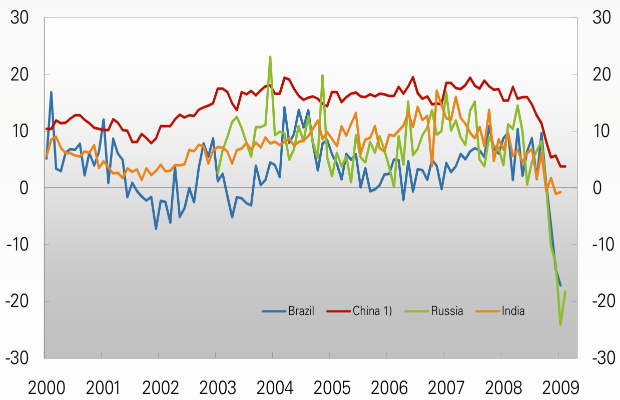
weaker growth in the real economy are having a negative impact on each other. The result is global economic recession[1].

Authorities worldwide are now taking extensive action to counter the loss of confidence and lower demand. Central banks and governments have introduced measures to keep credit markets open. Key rates have been cut and are approaching zero in many countries. Central banks are pumping unusually large amounts of liquidity into the banking sector. In addition, the authorities have intervened directly in parts of the credit market by purchasing fixed income instruments and increasing lending to the private sector. Governments worldwide have introduced rescue packages for the banking sector. Fiscal measures are also planned to buoy aggregate demand for goods and services. But there are limits to how active economic policy can be. A number of countries are no longer creditworthy and have lost their economic room for manoeuvre. They are being forced to seek support from neighbouring countries and the International Monetary Fund (IMF). Many countries with high debt or large deficits are having to pay dearly for credit (see Chart 4). In the longer term, large budget deficits will have to be reduced.

In many Western countries, the private sector is also facing a period of financial consolidation. Debt needs to come down, and saving must rise. Banks need to restore capital adequacy following heavy losses and write-downs. There is also a growing need for households in industrial countries to build up buffers and reduce debt, now that house prices and expectations with regard to future income have fallen. While households in some countries, including the UK and the US, are heavily indebted, the debt-to-income ratio in a number of European countries, including Germany and France, is lower (see Chart 5). Fiscal measures will to some extent shift the financial deficit from the private to the public sector in in-

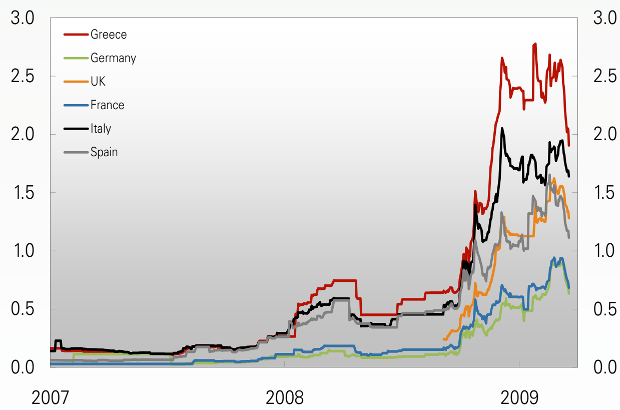
1 The IMF defines global recession as a period in which global growth (averaged across industrial, emerging and developing countries) drops below 3% annually.

Chart 3 Industrial production in major emerging market economies. Manufacturing. 12-month change. Per cent. January 2000 – February 2009



1) Overall industrial production, including energy production. To avoid New Year effects, data for China for January and February are calculated as the average 12-month change for the two months.
Sources: Thomson Reuters, CEIC and Norges Bank

Chart 4 Selected sovereign CDS prices. Percentage points. Daily figures. 1 January 2007 – 19 March 2009



Source: Bloomberg

dustrial countries, and lower interest rates will ease this deleveraging process.

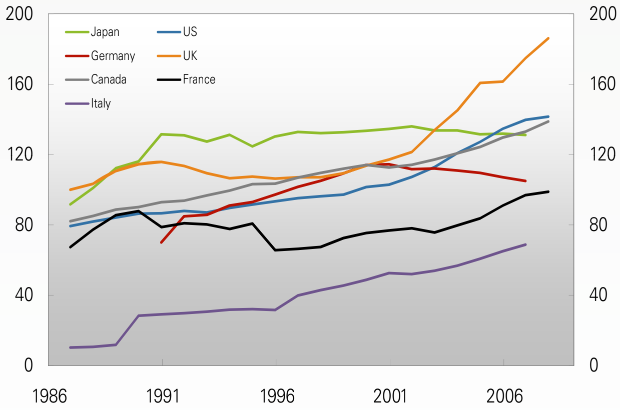
An analysis from the IMF[2] shows that, on average, a recession in the OECD area lasts around a year, and that GDP falls by about 2% during that period. This analysis, and similar studies by Reinhart and Rogoff[3], shows that episodes with sharp credit contraction and falling house and equity prices typically result in downturns that are longer and deeper than other recessions. Unlike previous post-war recessions, we are also now seeing a synchronised downturn in almost all countries and in all financial markets and markets for goods and services.

Chart 6 compares our projections for economic growth among our trading partners in this *Report* with the two sharpest downturns in OECD countries since the Second World War. The current recession is expected to be deeper and longer than previous post-war recessions. The response from the authorities is nevertheless expected to result in a pickup in output and demand from late 2009. See Section 2 for a more detailed presentation of our projections.

2 Claessens, Stijn, Kose, M. Ayhan, and Terrones, Marco (2008) "What Happens During Recessions, Crunches and Busts?", *IMF Working Paper* No. 08/274.

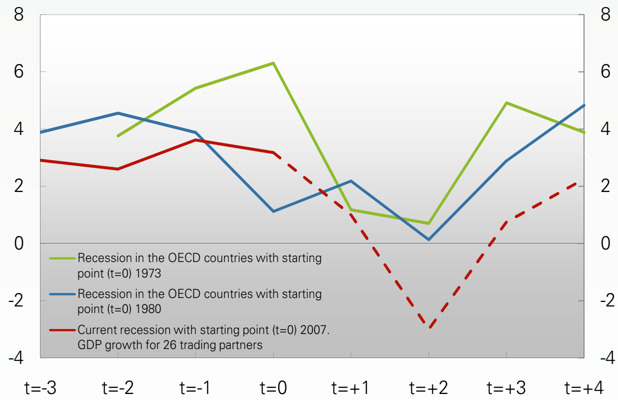
3 Reinhart, Carmen M. and Rogoff, Kenneth (2008) "The Aftermath of Financial Crises", Harvard University, December 2008.

Chart 5 Household debt.
Gross debt as a percentage of disposable income. 1986 – 2007



Source: OECD Economic Outlook

Chart 6 Projected future GDP growth among our trading partners. Compared with growth in GDP in the OECD countries during two earlier downturns.[1)] Annual figures



1) t=0 is the year when the recession started in the US. Projected growth for our trading partners as from 2008.
Sources: OECD and Norges Bank

Evaluation of the projections for 2008

Norges Bank's forecasts for economic developments for the next few quarters form an important part of the basis for monetary policy. Evaluation of the projections can enhance our insight into the functioning of the economy and contribute to the development of our analytical tools.

In this box, Norges Bank's projections for 2008 published in *Monetary Policy Report* 3/07 are evaluated.[1] The short-term projections are based on an overall assessment of current information and projections from several types of models. Norges Bank has developed a new system (SAM) for averaging short-term forecasts for inflation and mainland GDP provided by different models.[2] SAM has been used in forecasting since mid-2008.

Sharp turnaround in the economy

In *Monetary Policy Report* 3/07, Norges Bank estimated that capacity utilisation had reached a peak and that it would gradually decline towards a normal level in the period to end-2010. Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) was projected to increase gradually to around 2½% in 2010. Inflation was expected to be 1¾% and growth in mainland GDP was expected to be 2¾% in 2008. The key policy rate was projected to be somewhat above 5% in the period 2008-2011.

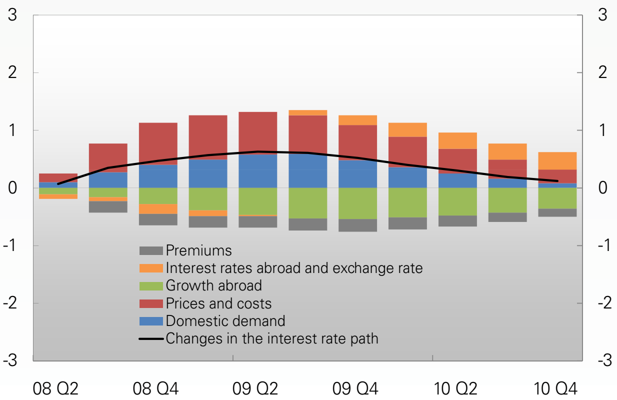
The rise in consumer prices and activity in the mainland economy was sharper than projected in the period towards the end of 2007 and up to summer 2008. The interest rate path was therefore raised in *Monetary Policy Report* 1/08 and 2/08 (see Chart 1). In addition, the key policy rate at the end of the first half of last year was somewhat higher than projected in *Monetary Policy Report* 3/07.

The global economy entered a sharp downturn last autumn. The outlook for the Norwegian economy deteriorated, and there were prospects that inflation would fall more rapidly than previously projected. As a result, the key policy rate was reduced by one percentage point in October and by 1.75 percentage points at the monetary policy meeting on 17 December. The interest rate path was lowered

1 See also the article "Evaluation of Norges Bank's projections for 2008", to be published in *Economic Bulletin* 1/09.

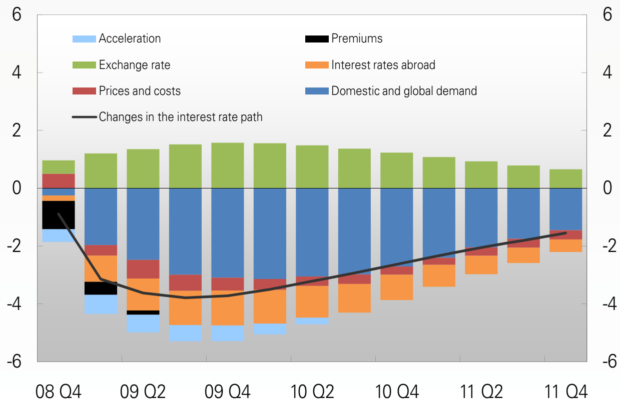
2 See box "SAM – System of models for short-term forecasting" in MPR 2/08.

Chart 1 Factors behind changes in the interest rate path from MPR 3/07 to MPR 2/08 (first half of 2008). Percentage points. 2008 Q2 – 2010 Q4



Source: Norges Bank

Chart 2 Factors behind changes in the interest rate path from MPR 2/08 to monetary policy meeting in December 2008 (second half of 2008). Percentage points. 2008 Q4 – 2011 Q4



Source: Norges Bank

substantially in both *Monetary Policy Report* 3/08 and in new projections presented at the December monetary policy meeting (see Chart 2).[3]

Inflation higher than projected

In 2008, CPI inflation and CPI inflation adjusted for tax changes and excluding energy products (CPI-ATE) were higher than projected in *Monetary Policy Report* 3/07 (see Table 1 and Charts 3 and 4). Inflation projections for 2008 from other forecasters were also too low (see Charts 5 and 6).[4]

CPI-ATE inflation rose more than projected up to last summer. Wage growth was approximately as expected, but lower-than-projected productivity growth resulted in stronger-than-projected growth in unit labour costs. Higher demand towards the end of 2007 and in early 2008 may have made it easier for enterprises to pass on higher costs to customers. In addition, external price impulses were stronger than expected, and the krone somewhat weaker towards the end of 2007 and the beginning of 2008 than assumed in *Monetary Policy Report* 3/07. CPI inflation rose more than projected through summer and autumn last year. Energy prices had increased to an unexpected extent. Inflation slowed towards the end of 2008. Household demand was subdued through autumn, leading to higher-than-normal activity in the Christmas sales. Oil prices also fell sharply.

3 See boxes in last year's monetary policy reports and the background document "New interest rate projections" from the monetary policy meeting on 17 December for a more detailed account of the changes in the interest rate path in 2008.

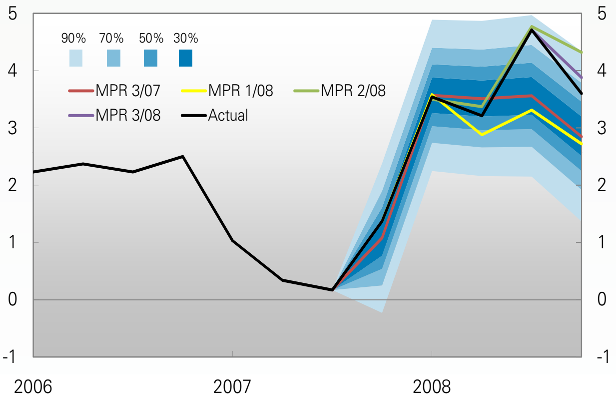
4 Forecasters: Ministry of Finance, Statistics Norway, DnB NOR, Nordea, Handelsbanken, Danske Bank, Skandinaviska Enskilda Banken and the Confederation of Norwegian Enterprises.

Lower growth and capacity utilisation

Preliminary national accounts figures show that growth in mainland GDP from 2007 to 2008 was approximately as projected in *Monetary Policy Report* 3/07, but that developments through the year had differed from our assumptions. In addition, economic growth picked up more than expected towards the end of 2007, bringing capacity utilisation up to a higher level at the beginning of 2008 than projected (see Chart 7). In the period to autumn last year, it appeared that the Norwegian economy would experience a soft landing.

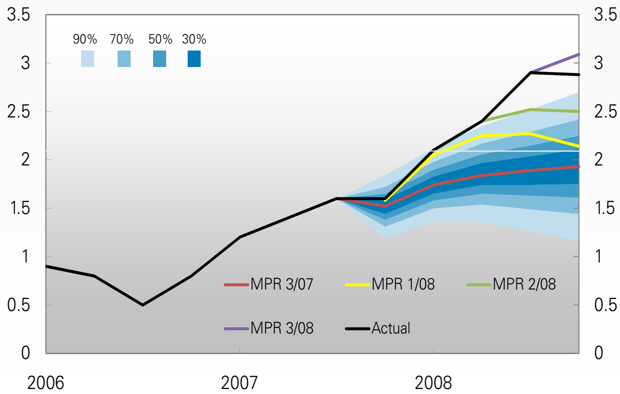
The situation changed dramatically through autumn. When financial market turbulence developed into a financial crisis in September last year, banks raised their lending rates as a result of higher money market risk premiums. At the same

Chart 3 CPI. Projections from various reports and actual figures. Fan chart from MPR 3/07. Four-quarter growth. Per cent. 2006 Q1 – 2008 Q4



Sources: Statistics Norway and Norges Bank

Chart 4 CPI-ATE[1]). Projections from various reports and actual figures. Fan chart from MPR 3/07. Four-quarter growth. Per cent. 2006 Q1 – 2008 Q4



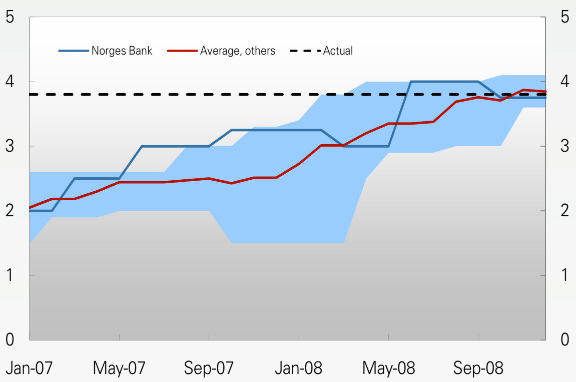
1) CPI adjusted for tax changes and excluding energy products.
Sources: Statistics Norway and Norges Bank

time, banks became more reluctant to provide loans for consumption and investment. Equity prices and prices for oil and other commodities fell markedly. GDP among Norway's trading partners fell by over 1% in 2008 Q4, a far weaker development than projected.

For 2008 as a whole, growth in private consumption and in private gross mainland investment was appreciably lower than projected in *Monetary Policy Report* 3/07. On balance, export growth was as projected, but stronger than expected in the first half of the year and weaker than expected towards the end of the year. Growth in petroleum investment was approximately as expected, while general government consumption was higher than assumed. Capacity utilisation was lower than expected at end-2008 (see Chart 7).

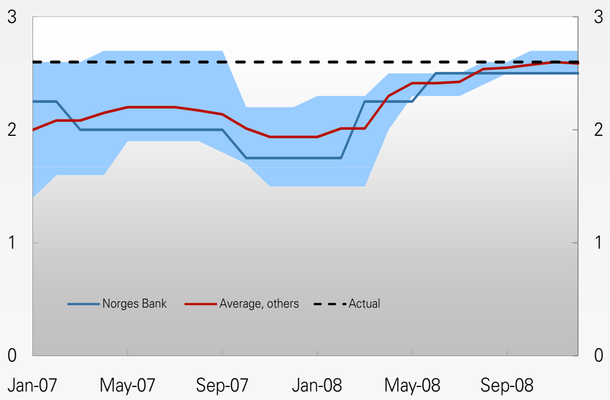
Norges Bank's projections for mainland GDP growth from 2007 to 2008 were generally as accurate as the average projection from other forecasters (see Chart 8).

Chart 5 CPI. Projections of annual growth in 2008 at different times.[1)] Per cent. January 2007 – December 2008



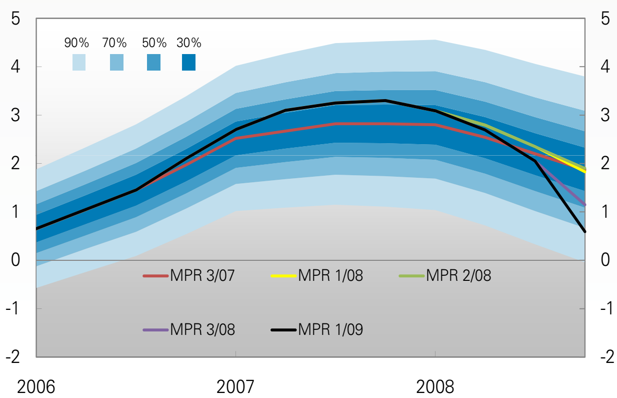
1) Highest and lowest projections from other forecasters are shown by the blue band. The red line shows the average of other forecasters' projections.
Sources: Norges Bank and reports from the other forecasters

Chart 6 CPI-ATE[1)]. Projections of annual growth in 2008 at different times.[2)] Per cent. January 2007 – December 2008



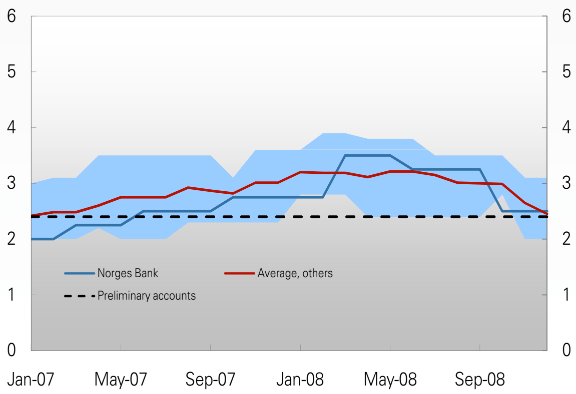
1) CPI adjusted for tax changes and excluding energy products.
2) Highest and lowest projections from other forecasters are shown by the blue band. The red line shows the average of other forecasters' projections.
Sources: Norges Bank and reports from the other forecasters

Chart 7 The output gap. Projections in the baseline scenario in MPR 3/07 with fan chart and projections from other reports. Per cent. 2006 Q1 – 2008 Q4



Source: Norges Bank

Chart 8 Mainland GDP. Projections of annual growth in 2008 at different times.[1)] Per cent. January 2007 – December 2008



1) Highest and lowest projections from other forecasters are shown by the blue band. The red line shows the average of other forecasters' projections.
Sources: Norges Bank and reports from the other forecasters

Table 1 Projections and assumptions for main economic aggregates for 2008. From *Monetary Policy Report* 3/07 to *Monetary Policy Report* 3/08. Percentage change from 2007 unless otherwise stated

	MPR 3/07	MPR 1/08	MPR 2/08	MPR 3/08	Prelim. accounts
CPI	3¼	3	4	3¾	3.8
CPI-ATE	1¾	2¼	2½	2½	2.6
Annual wage growth	5¾	6	6	6	6
GDP	3¾	3	2¾	2	2.0
GDP, mainland Norway	2¾	3½	3¼	2½	2.4
Output gap, mainland Norway (level)[1]	2¼	2½	2½	2¼	2
Employment	1¼	2¼	2¾	2¾	3.2
Labour force, LFS	1¼	2¼	2¾	2¾	3.4
LFS unemployment (rate)	2½	2½	2½	2½	2.6
Mainland demand	3¼	3¼	3¼	2¼	2.1
- Private consumption	3½	3½	2¾	1½	1.5
- Public consumption	2¾	2¾	3¼	3¾	3.7
- Fixed investment in mainland Norway	3¼	5¼	4¾	2¼	1.9
Petroleum investment	7½	7½	7½	7½	7.1
Traditional exports	4	5	5	5½	4.3
Imports	4¾	5¼	5¼	4	4.2
Key policy rate (level)	5¼	5½	5½	5¼	5.3
Import-weighted exchange rate (I-44) (level)	88¼	87	87½	90.2	90.8
GDP, trading partners	2½	2	2¼	1¾	0.9
External price impulses[1),2)]	-¼	0	½	¾	½
Oil price, USD per barrel (level)	84	101	122	100	97

1) Norges Bank's estimates.
2) Indicator of external price impulses to imported consumer goods measured in foreign currency.

Sources: Statistics Norway and Norges Bank

Annex

Regional network: enterprises and organisations interviewed

Monetary policy meetings

Tables and detailed projections

Regional network: enterprises and organisations interviewed

3B-fiberglass Norway AS
3T produkter AS
Acando AS
Accenture AS
Account-IT AS
Adecco Norge AS, Tromsø
Adecco Norge AS, Trondheim
Aditro HRM AS
Adresseavisen AS
Advokat Ole Morten Husmo AS
Ahlsell Norge AS, Trondheim
Air Products AS
Aker MH AS
Aker offshore partner AS
Aker offshore partner AS, Kristiansund
Aker Stord AS
Aker Verdal AS
Aktietrykkeriet AS
Akva group maritech AS
Alfr. Nesset AS
Alléen auto AS
American Express Company AS
Amfi drift AS
Amfi Moa
A-møbler AS
Aquaterm AS
Arbor-Hattfjelldal AS
Arendal Auto AS
Arki arkitektar AS
Arkitektfirmaet C. F. Møller Norge AS
Arntzen de Besche Advokatfirma AS
Artec aqua AS
AS Jotunheimen og valdresruten bilselskap
AS miljøbygg
ASKO Agder AS
Asko Midt-Norge AS
Asplan Viak AS, Stavanger
Asplan Viak AS, Trondheim
Atlantic auto AS
Audio video Grimstad AS
Aukra Midsund offshore AS
Avantor ASA
Avinor AS, Trondheim lufthavn
Axess AS
Bardu kommune
Bates United AS
Bautas AS, Trondheim
BDT Viken revisjon AS, Horten
BearingPoint Norway AS
Beitostølen Resort AS
Berg Hansen NOR AS, Bodø
Bergen group ASA
Bergene Holm AS
Bergens Tidende AS
Berg-Hansen reisebureau AS
Berg-Hansen reisebureau Vestfold AS
Bernhard Olsen AS
Bertil O. Steen Rogaland AS
Betong øst AS
Big Horn Steak House Norge AS
Bil i nord AS
Biobag International AS
Bjerkreim kommune
Bjørge ASA
Bjørn bygg AS
BKK AS
Black design AS
BN entreprenør AS
Bodø kommune
Bodø sildoljefabrikk AS
Borealis arkitekter AS
Br. Dyrøy AS
Br. Reme AS
Bravida AS
Brude Safety AS
Brunvoll AS
Brødrene Dahl AS
Brødrene Røsand AS
BSH husholdningsapparater AS
Busengdal transport AS
Bygg og maskin AS
Byggmester Fritzøe AS
Byggmester Grande AS
Byggmester Markhus AS
Markhus bygg AS
Bø kommune
Bøhmer entreprenør AS
Bømlo kommune
Båtservice holdning AS
Båtsfjordbruket AS
Capgemini Norge AS, Trondheim
CC Mart'n Gjøvik drift AS
Central Hotel, Elverum
City syd AS
Clarion Hotel Ernst AS
Clas Ohlson AS
Color Line AS
Comrod AS
ConocoPhillips Norge
Coop Inn-Trøndelag BA
Coop NKL BA
Coop nord BA
Coop sambo BA
Cowi AS
CSC Norge AS
Dagligvare leverandørenes forening
Dale bruk AS
Dark AS
Deloitte AS, Stavanger
Den nationale scene AS
Devold of Norway AS
DnB NOR eiendom AS, Heimdal
DnBNOR næringsmegling Midt-Norge AS
DNH Den norske høyttalerfabr AS
Dokken og Moen murmesterforretning AS
Doosan Moxy AS
EFD Induction AS
Egersund trål AS
Eidskog kommune
Eidsvoll kommune
Eiendomsfordlingen AS
Eiendomsmegler 1 SR-eiendom AS
Eiendomsmegler vest AS
Eiendomsmegleren Nord Norge AS
Eiendomsspar AS
EKA Chemicals AS
Ekornes ASA
Elektro Bodø AS
Elektrotema Agder AS
Elkem aluminium ANS
Elkem aluminium ANS, Farsund
Elkem AS, Materials
Elkem AS, Salten Verk
Elkjøp stormarked Bodø

Elko AS
Engers lefsebakeri AS
Engerdal kommune
Engum Elkjøp AS
Eramet Norway AS
ErgoGroup AS, Furnes
Esko-Graphics Kongsberg AS
Estatia Resort Hotels AS
Euronics Norge AS
Evensen & Evensen AS
Exact-Obos eiendomsmeglere AS
Exbo Sørlandet AS
Expert Langnes
Fabelaktiv AS
Fagbokforlaget Vigmostad & Bjørke AS
Falkanger sko AS
Fame fotografene AS
Fauske hotell AS
Fauske kommune
Felleskjøpet Rogaland Agder
Fesil AS
Fesil AS, Rana metall
Finsbråten AS
Firda media AS
Fiskars Brands Norge AS
Fjord 1 MRF AS
Fjord Line AS, Egersund
Flekkefjord kommune
FMC Technologies AS
Fokus bank
Fokus bank, Bodø
Fokus Krogsveen AS
Fokus Krogsveen AS, Trondheim
Fossberg hotell AS
FotoKnudsen AS
Franzefoss pukk AS
Fredrikstad kommune
Fuglefjellet AS
Fugro Oceanor AS
Fundator AS
Furnes hamjern holding AS
Fædrelandsvennen AS
Gapro Norge AS
Gaupen-Henger AS
Gausdal Bruvoll BA
GE Healthcare AS
GE Money Bank
Gilstad trelast AS
Gjensidige forsikring BA, Hamar
Gjensidige forsikring BA, Ålesund
Gjøvik kommune
Glamox ASA
Glomsrød mekaniske verksted AS
Glåmdalen AS
Godstrafikk og bilspedisjon AS
Goman bakeriet AS, Trondheim
Granit kleber AS
Gravdahl AS
Grenland Group ASA
Grieg Logistics AS
Grimstad kommune
Gudbrandsdalens uldvarefarbrik AS
Gunnar Hippe AS
H & M Hennes & Mauritz AS
H. Mydland AS
H.J Økelsrud AS
Hafjell alpinsenter AS
Halden kommune
Hamar kommune
Hammerfest kommune
Hamworthy Gas Systems AS
Handelsbanken
Handelsbanken, Trondheim
Handelshuset Martinsen AS
Handicare AS, Lillehammer
Haram kommune
Hauans AS
Hedalm Anebyhus AS
Hedalm Anebyhus AS, nord-vest
Heimdal gruppen AS
Helgeland holding AS
Hellvik hus AS
Helse Midt-Norge RHF
Helse nord RHF
Hepro AS
Holberg Forvaltning AS
Holm Grafisk AS
Holmen fjordhotell
Hordaland fylkeskommune
Hotel Continental AS
HTH kjøkken Oslo AS
Hydraulikk Finnmark AS
Håg AS
Ibas AS
ICA Norge AS
Ide møbler Bodø AS
IKEA AS varehus Forus
Indre Sogn sparebank
Ingeniør Gunnar M. Backe AS
Innoventi AS
Interfil AS
Intersport Sortland AS
Intra AS
Ipark AS
IT partner Bodø AS
Itab Industrier AS
Itella Logistics AS
Ivar Mjåland AS
Iver Bil AS
J. M. Nilsen ANS
Jako AS
Jangaard Export AS
Jiffy Products International AS
JM byggholt AS
Johan G Olsen betong AS
Johan Kjellmark AS
John Galten AS
Jotun AS
K. Haneseth AS
Kaffebrenneriet AS
Kaffehuset Friele AS
Kirkestuen transport AS
KIS nord AS
Kitron Microelectronics AS
Kleive betongbygg AS
Komplett ASA
Kongsberg Automotive AS, Raufoss
KPMG AS
KPMG AS, Bergen
KPMG AS, Tromsø
KPMG AS, Trondheim
Kraft Foods Norge AS
Entreprenør M Kristiseter AS
Kruse Smith AS
Laerdal Medical AS
Landskapsentreprenørene AS
Landteknikk fabrikk AS
Langmorkje almenning
Lebesby kommune
Lefdal elektromarked AS, Tiller
Leiv Sand transport AS
Lerum fabrikker AS
Lerøy Hydrotech AS
Lerøy Midnor AS
Lillehammer sport holding AS
Lindex AS
Lindex AS, Tromsø
Lofoten pelagiske AS
Logica Norge AS

Lom kommune
Lom møbelindustri AS
Lom og Skjåk sparebank
Lundegården drift AS
Luxo Norge AS, Kirkenær
Lyst Bodø AS
Lørenskog kommune
Løvold AS
M3 anlegg AS
Madsen bil AS
Madshus AS
Majas salong AS
Manpower AS
Manpower AS, Hedmark og Oppland
Manpower AS, Kristiansund
Manpower AS, Trondheim
Marine Cybernetics AS
Marine installasjon AS
Maxit AS
MaxMat AS
Melvær & Lien ide-entreprenør AS
Mercursenteret AS
Mesta AS, Bodø
Meyership AS
Mezina AS
Midsund bruk AS
Mjøsplast AS
Mo mekaniske AS
Modern Design AS
Moderne byggfornyelse AS
Moelven Eidsvold Værk AS
Molab AS
mpDesign AS
MTU gruppen AS
Multiconsult AS
Multimaskin AS
Myklebust AS
Møbelhuset AS
Møllergruppen AS
Møre båtservice AS
Møretre AS
Nammo AS
Naper informasjonsindustri AS
National Oilwell Varco Hjelset AS
NAV Sør-Trøndelag
NAV Vest-Agder
Nedre Eiker kommune
Nerland granitindustri AS
Net Transe Services AS
Netcom AS
Nettbuss sør AS
Nilsson AS
Norac AS
NorDan AS
Nord-Aurdal kommune
Nordea bank Norge ASA
Nordea bank Norge ASA, Bodø
Nordea bank Norge ASA, Ålesund
Nordfjord turisthotell AS
Nordic Paper AS
Nordlaks AS
Nordox AS
Norfolier AS
Norplasta AS
NorSea AS
Norsk stein AS
Norsk stål AS, Brumunddal
Norsk tipping AS
Norske skogindustrier ASA
Norske skogindustrier ASA, Skogn
Norspace AS
Nor-Sport Bodø AS
Nortrans Touring AS
Nortura BA, Forus
Nortura BA, Trondheim
Norwegian Air Shuttle ASA
Notar eiendom Nordland AS
Notar eiendom Telemark og Vestfold
Notar eiendom Ålesund AS
Nysted AS
Næringsforeningen i Trondheim
Nøsted kjetting AS
Officelink AS
Offshore Simulator Centre AS
Olaf Olsens Snekkerfabrikk AS
Olympic Shipping AS
Optimera AS, Sandnes
Optimera Vige
Opus AS
Oras AS
Oras Nordland AS
Oras Trondheim AS
Orica Mining Services
Oscar Sylte mineralvannsfabrikk AS
Oshaug metall AS
Oslo kommune
Oslo sportslager AS
Oswo AS
Ottadalen mølle AL
Otteren AS
Ottesen & Dreyer AS
Pallin AS
Partner mote AS
Peab AS
Per Aaland AS
Peterson Linerboard AS
PipeLife Norge AS
Pitney Bowes Norge AS, Eidsiva Gjøvik
Porsgrunds porselænsfabrik AS
PriceWaterhouseCoopers AS
PriceWaterhouseCoopers AS, Sandnes
Proffice AS, Gjøvik
Proffice AS, Sandefjord
Proffice Nord-Norge AS
Promens AS, Kristiansand
Protech AS
Proviantgruppen AS
PS Data
Q-Free ASA
Quality Hotel Sogndal
Radisson SAS Hotel Tromsø
Radisson SAS hotell Norge
Radisson SAS Lillehammer Hotell
Ragasco AS
Rambøll Norge AS, Lillehammer
Rana kommune
Rapp Hydema AS
Rauma kommune
Reber Schindler heis AS, Tiller
Reinertsen AS
Reitan servicehandel Norge AS
REMA 1000 Norge AS region vest
Remvik & Standal AS
Renates dag spa AS
Renés barnevogner AS
Renseriet Sandnes AS
Rescon Mapei AS
Reslab Reservoir Laboratories AS
Hotel Norge AS, Kristiansand
Rica hotels Midt-Norge AS
Rikshospitalet – Radiumhospitalet HF
Ringnes AS, Arendal
Rio Doce Manganese Norway AS
Risa AS
Rissa kommune
Risør kommune
Rofiskgruppen AS

Rogne bygg AS
Romsdals budstikke AS
Rosenborg malerteam AS
Rosenvold klær AS
Røros tweed AS
RørosBanken
Røros sparebank
Rørteknikk AS
Saga fjordbase AS
Saint Gobain Ceramic Materials AS
Sandnes kommune
Sandnesgarn AS
Sarpsborg kommune
SAS Ground Services Molde
SAS Norge AS
SB transport AS
ScanPartner AS
Selvaag gruppen AS
Sentrum bygg AS
Servi Cylinderservice AS
SF kino Stavanger/Sandnes AS
SG Finance AS, Trondheim
Siemens AS, Bergen
Siemens AS, Industry Solutions
Siemens Oil & Gas Offshore AS
Sjøvik AS
Skanska Norge AS, sør (Arendal)
Skanska Norge AS
Skanska Norge AS,indre østland (Moelv)
Skanska Norge AS, vest (Stavanger)
Skanska Norge AS, øst (Tønsberg)
Skibsplast AS
Skien kommune
Skodje byggvare AS
Skretting AS
Slatlem & Co AS
SMV Hydraulic AS
Snadder og snaskum AS
Sodexo Remote Sites Norway AS
Softspring AS
Solsiden spa og velværesenter AS
Sortland entreprenør AS
Sparebank1 SR-bank
Sparebanken Nord-Norge
Sparebanken Pluss
Sparebanken sør
Sparebanken sør, Farsund
Sparebanken vest
Spenncon AS
Grilstad AS, Brumunddal
Sporten Nesttun senteret AS
Sportshuset AS
Stange kommune
Statens vegvesen
Stavanger kommune
Stavanger universitetssykehus HF
Stella Polaris AS
Steni AS
Stillasservice AS
Stjørdal kommune
Stoltz entreprenør AS
Stord kommune
Stordal kommune
Stordal møbler AS
Storebrand ASA
Storvik AS
Strandtorget kjøpesenter
Studentsamskipnaden i Agder
STX Norway Offshore AS, Aukra
Sulland AS
Sulland auto AS, Hamar
Surnadal kommune
Sykehuset Asker og Bærum HF
Sykehuset Telemark HF
Sykehuset Østfold HF
Syljuåsen AS
Sylteosen holding AS
Synnøve Finden ASA
Synsam Norge AS
Sørco AS
Sørensen maskin AS
Sørlandet sykehus HF
Sør-Trøndelag fylkeskommune
T Stangeland maskin AS
Tallaksen Rasmus AS
Tamnes transport AS
Tele2 Norge AS
Tele-Connect Gjøvik AS
Terra forsikring AS
Thon Hotel Bergen Brygge
Thon hotell, Gjøvik
Ti Group Automotive Systems AS
Tide ASA
Time kommune
Timpex AS
Tine meierier vest BA
Tinn kommune
To rom og kjøkken
Top temp bemanning AS
Toten bygg og anlegg AS
Toyota Norge AS
Toyota Stavanger AS
Trafikk & Anlegg AS
Trelleborg Viking AS
Trend trim Lillesand AS
Triplex AS
Trondheim kommune
Trondheim stål AS
Trondheim torg
Tvedestrand kommune
Tyrholm & Farstad AS
Ulstein verft AS
Universitetssykehuset Nord-Norge HF
Valdres auto AS
Valdres last AS
Valdres regnskap AS
Valle sparebank
Varner-gruppen AS
Verdal kommune
Vestbase AS
Vestvatn villmarkssenter AS
Veøy AS
VIBO entreprenør AS
Viken regnskap AS
Vikomar AS
Vintervoll AS
Vital forsikring ASA
Voice Norge AS
Vågå kommune
Wartsila Norway AS
WellDynamics Norge AS
Wennbergs trykkeri AS
West Wacker Holding Norway AS
Wikborg, Rein & Co
Windy Boats AS
XL-bygg Sortland AS
X-partner nord AS, Bodø
YC rør AS
YIT Building Systems AS, Kristiansand
YIT Building Systems AS, Kristiansund
Ø M Fjeld AS
Økonor Flisa AS
Ørland transport AS
Øster hus gruppen AS
Østereng & Benestad AS
Øystre Slidre kommune
Åmot kommune
Aarsland møbelfabrikk AS
Aasen bygg AS

Monetary policy meetings
with changes in the key policy rate

Date	Key policy rate[1)]	Change
17 June 2009		
6 May 2009		
25 March 2009	**2**	**-0.5**
4 February 2009	2.5	-0.5
17 December 2008	3	-1.75
29 October 2008	4.75	-0.5
15 October 2008	5.25	-0.5
24 September 2008	5.75	0
13 August 2008	5.75	0
25 June 2008	5.75	+0.25
28 May 2008	5.5	0
23 April 2008	5.5	+0.25
13 March 2008	5.25	0
23 January 2008	5.25	0
12 December 2007	5.25	+0.25
31 October 2007	5	0
26 September 2007	5	+0.25
15 August 2007	4.75	+0.25
27 June 2007	4.5	+0.25
30 May 2007	4.25	+0.25
25 April 2007	4	0
15 March 2007	4	+0.25
24 January 2007	3.75	+0.25
13 December 2006	3.5	+0.25
1 November 2006	3.25	+0.25
27 September 2006	3	0
16 August 2006	3	+0.25
29 June 2006	2.75	0
31 May 2006	2.75	+0.25
26 April 2006	2.5	0
16 March 2006	2.5	+0.25
25 January 2006	2.25	0

1) The key policy rate is the interest rate on banks' deposits in Norges Bank. This interest rate forms a floor for money market rates. By managing banks' access to liquidity, the central bank ensures that short-term money market rates are normally slightly higher than the key policy rate.

Table 1 Main macroeconomic aggregates

Percentage change from previous year/ quarter		GDP	Mainland GDP	Private consumption	Public consumption	Mainland fixed investment	Petroleum investment[1]	Mainland exports [3]	Imports
2004		3.9	4.4	5.6	1.5	9.3	10.2	4.5	8.8
2005		2.7	4.6	4.0	0.7	12.7	18.8	6.6	8.7
2006		2.3	4.9	4.8	1.9	11.9	4.3	8.5	8.4
2007		3.1	6.1	6.0	3.4	9.3	5.5	9.1	7.5
2008		2.0	2.4	1.5	3.7	1.9	7.1	4.3	4.2
2008[2]	Q1	0.0	-0.3	0.1	0.8	-6.9	1.6	0.4	-1.4
	Q2	0.1	0.5	-0.3	0.8	0.5	-2.1	-0.2	-0.7
	Q3	-0.7	0.3	-0.7	1.3	1.7	3.9	-0.6	2.2
	Q4	1.3	-0.2	-0.5	1.0	-3.1	6.5	-1.6	-4.7
2008 level, billions of NOK		2538	1843	992	489	379	123	458	731

[1] Extraction and pipeline transport.
[2] Seasonally adjusted quarterly figures.
[3] Other goods, travel and other services.

Source: Statistics Norway

Table 2 Consumer prices

Annual rise/ Twelve-month rise. Per cent		CPI	CPI-ATE[1]	CPIXE[2]	CPI-AT[3]	CPI-AE[4]	HICP[5]
2005		1.6	1.0	1.4	1.2	1.4	1.5
2006		2.3	0.8	1.2	2.0	1.0	2.5
2007		0.8	1.4	1.9	0.5	1.6	0.7
2008		3.8	2.6	3.1	3.9	2.5	3.4
2009	Jan	2.2	2.8	2.9	2.2	2.8	2.6
	Feb	2.5	3.0	3.0	2.4	3.1	2.8

[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products.
[2] CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See Staff Memo 2008/7 from Norges Bank for a description of the CPIXE.
[3] CPI-AT: CPI adjusted for tax changes.
[4] CPI-AE: CPI excluding energy products.
[5] HICP: Harmonised Index of Consumer Prices. The index is based on international criteria drawn up by Eurostat.

Source: Statistics Norway

Table 3 Projections for main economic aggregates

	In billions of NOK	Percentage change from previous year (unless otherwise stated)				
			Projections			
	2008	2008	2009	2010	2011	2012
Prices and wages						
CPI		3.8	2	2	2¼	2½
CPI-ATE[1)]		2.6	2½	2	2¼	2½
CPIXE[2)]		3.1	2½	1¾	2	2½
Annual wage growth[3)]		6	4	3¾	4¼	4¾
Real economy						
GDP	2538	2.0	-1¼	2¼	3½	2¾
GDP, mainland Norway	1843	2.4	-1	2½	3¾	3
Output gap, mainland Norway[4)]		2	-1¼	-1¾	-¾	0
Employment		3.2	-1½	-¼	1	¾
Labour force, LFS		3.4	0	¼	½	¼
LFS unemployment (rate)		2.6	4¼	4¾	4¼	3¾
Demand						
Mainland demand[5)]	1860	2.1	-1¼	3	5	3½
- Private consumption	992	1.5	0	5¼	4¾	3¼
- Public consumption	489	3.7	5¼	4	.	.
- Fixed investment, mainland Norway	379	1.9	-13½	-5	.	.
Petroleum investment[6)]	123	7.1	2½	-7½	0	5
Mainland exports[7)]	458	4.3	-7¼	-¼	.	.
Imports	731	4.2	-5¼	¼	.	.
Interest rate and exchange rate						
Key policy rate (level)[8)]		5.3	1¾	1¼	2½	3½
Import-weighted exchange rate (I-44)[9)]		90.8	95	95	94	94

1) CPI-ATE: CPI adjusted for tax changes and excluding energy products.
2) CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See Staff Memo 2008/7 from Norges Bank for a description of the CPIXE.
3) Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations.
4) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP.
5) Private and public consumption and mainland gross fixed investment.
6) Extraction and pipeline transport.
7) Other goods, travel and other services.
8) The key policy rate is the interest rate on banks' deposits in Norges Bank.
9) Level. The weights are estimated on the basis of imports from 44 countries, which comprises 97% of total imports.

· Not available

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

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