NORGES BANK

Monetary Policy Report

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Monetary Policy Report 3/2009

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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 12 August, the Executive Board discussed relevant themes for the *Report*. At the Executive Board meeting on 14 October, 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 24 March 2010 at the meeting held on 28 October. The Executive Board's summary of the economic outlook and the monetary policy strategy is presented in Section 1. In the period to the next *Report*, the Executive Board's monetary policy meetings will be held on 16 December, 3 February and 24 March.

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This *Monetary Policy Report* is based on information in the period to 22 October 2009.

The monetary policy strategy in Section 1 was approved by the Executive Board on 28 October 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

Exiting the economic crisis

The crisis in financial markets in autumn 2008 led to the most severe downturn in the global economy for several decades. The Norwegian economy was also affected. Norwegian banks experienced a liquidity squeeze and tightened credit standards substantially. Export firms faced lower prices and turnover, and businesses became uncertain about the future and scaled back investment.

In order to prevent a deep downturn, Norges Bank reduced the key policy rate considerably and implemented unconventional measures to ease the funding situation for banks. Government spending was increased substantially.

Fortunately for the Norwegian economy, oil prices have remained relatively high. The measures implemented also seem to have been effective. It therefore appears that the Norwegian downturn will be fairly mild. Household demand for goods and services and the willingness to pay for housing are again on the increase. There are also signs that growth in other countries is picking up. The liquidity crisis in the banking sector has passed, and it is appropriate to phase out the extraordinary measures. Moreover, the key policy rate is now being raised.

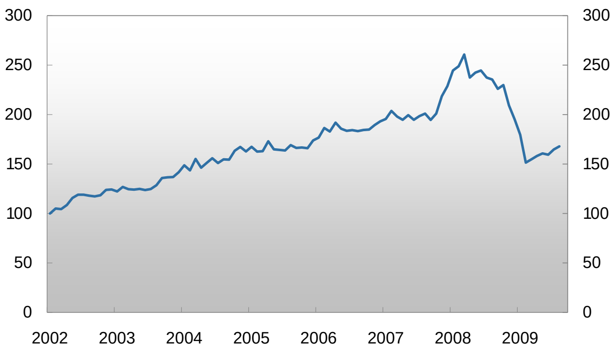
Even though the outlook for the Norwegian economy has improved, the impetus from the global economy must be expected to be modest ahead. Interest rates abroad will probably remain close to zero for a period. Interest rates in Norway are also low.

The interest rate is set with a view to stabilising inflation over time close to 2.5%. If the interest rate is raised too sharply and too early, the downturn may be prolonged, a strong krone may appreciate even further and inflation may become too low. If we proceed too slowly, household demand may surge and inflation may gradually become too high.

The Executive Board's strategy is that the key policy rate should be in the interval 1¼ - 2¼% in the period to the publication of the next *Monetary Policy Report* on 24 March 2010 unless the Norwegian economy is exposed to new major shocks.

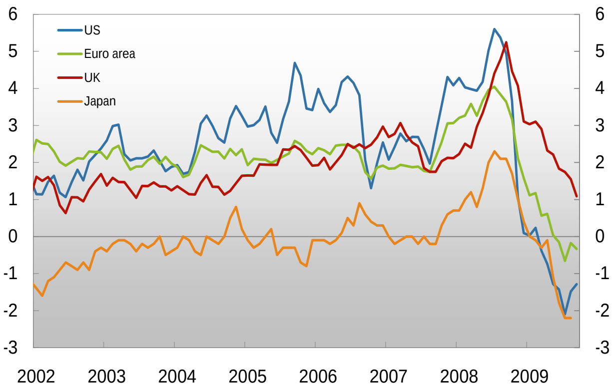
Svein Gjedrem,
28 October 2009

Chart 1.1 Indicator of world trade.[1)] Index, January 2002 = 100. January 2002 – August 2009



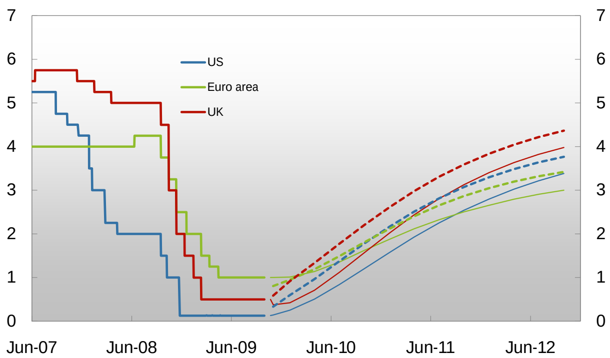
1) The index is constructed on the basis of the sum of exports and imports in the US, Japan, Germany and China. The numbers are converted into USD
Sources: Thomson Reuters and Norges Bank

Chart 1.2 Consumer prices in industrial countries. 12-month change. Per cent. January 2002 – September 2009



Source: Thomson Reuters

Chart 1.3 Key rates and estimated forward rates on 17 June 2009 and 22 October 2009[1)]. Per cent. 1 June 2007 – 31 December 2012[2)]



1) Dotted lines show estimated forward rates as at 17 June 2009. Thin lines show forward rates as at 22 October 2009. Forward rates are based on Overnight Indexed Swap (OIS) interest rates
2) Daily figures from 1 June 2007 and quarterly figures as at 22 October 2009
Sources: Thomson Reuters and Norges Bank

1 Monetary policy assessments and strategy

The economic situation

It has been a year since financial turbulence developed into a full-blown crisis and resulted in the most severe downturn in the global economy since the Second World War. Unemployment is high in many countries, but financial market conditions have improved. Activity in the global economy is picking up, albeit only gradually and from a low level.

The financial crisis eroded confidence in banks, counterparties and contractual partners. Access to export credit came to a halt and international trade slowed sharply (see Chart 1.1). Manufacturing sales stalled.

The measures implemented by central banks and governments have had a stabilising effect on financial markets. Credit and money market premiums have decreased and activity has picked up. Daily fluctuations are less pronounced. With the improvement in financial markets over the past six months and the increase in the credit supply, global trade is now picking up slightly. Manufacturing output has recently risen in the US, Japan and many emerging economies, while it continues to fall – albeit at a slower pace – in many euro area countries. Manufacturing output in Japan and the US is still at a very low level.

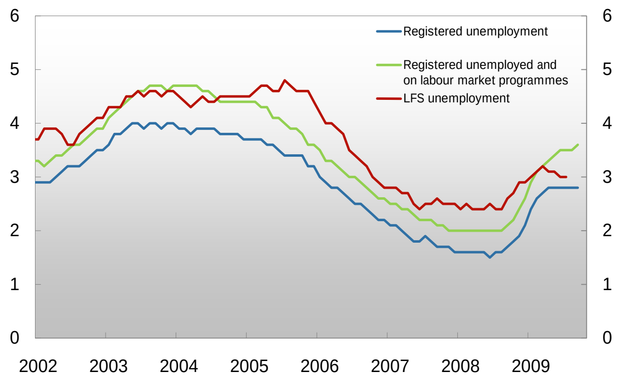
Despite the pickup in growth, capacity utilisation in advanced economies will remain very low for the next two-three years. With the combination of high debt levels and the fall in asset prices, there is a need to reduce debt in households, enterprises and financial institutions in many countries. High and still rising unemployment is causing private consumption to contract further. In many countries, substantial deficits are leading to a rapid increase in government debt. These large deficits cannot be sustained.

The severe cyclical downturn and the decline in commodity prices has resulted in very low consumer price inflation in many countries (see Chart 1.2). The year-on-year change in consumer prices is negative in the US, the euro area, Sweden, Japan and China. Core inflation is more stable, but has also edged down recently. Key rates are close to zero in many countries. Several central banks have signalled that key rates will be kept low for a long period, and key rate expectations abroad have fallen. Pricing in the market indicates an expected rise in key rates in a number of countries after the turn of the year (see Chart 1.3).

The Norwegian authorities implemented a range of measures to mitigate the impact of the crisis on the Norwegian economy. Norges Bank reduced the key policy rate considerably last autumn. The key policy rate has been reduced further in 2009 to 1.25%. Norges Bank also stepped up its supply of liquidity to banks in the form of short- and long-term loans. The arrangement whereby banks could exchange covered bonds (OMF) for government securities made a contribution to securing long-term funding for banks. Strong growth in government spending fuelled demand for goods and services.

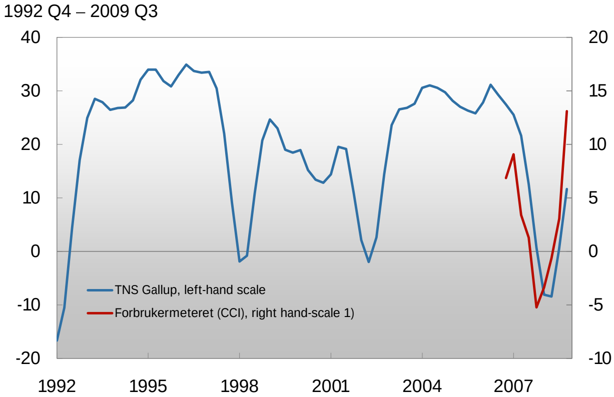
Since *Monetary Policy Report* 2/09, developments in the Norwegian economy have been more positive than expected. High activity in the petroleum industry, combined with monetary and fiscal measures, has contributed to holding up demand for goods and services. The fall in employment and the rise in unemployment have not been as marked as projected so far. The number of registered unemployed was 2.8% of the labour force in September (see Chart 1.4). At the same time, productivity is low. It appears that firms are maintaining their workforces in anticipation of a pickup in demand. The supply of credit to the corporate sector also seems to be improving somewhat. The enterprises in Norges Bank's regional network are expecting moderate growth in output ahead. Firms that experienced recruitment problems during the previous cyclical turnaround may now choose to keep some labour in reserve.

Chart 1.4 Unemployed. Percentage of labour force. Seasonally adjusted. January 2002 – September 2009



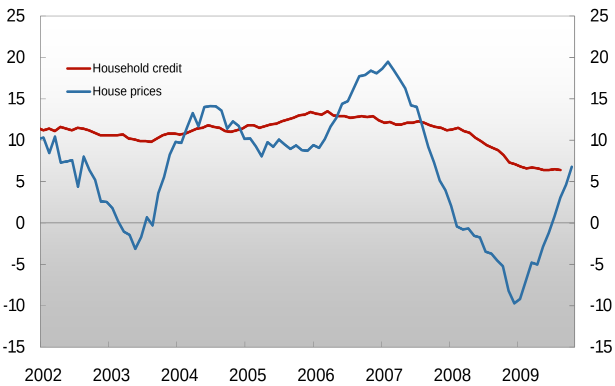
Sources: Statistics Norway, Norwegian Labour and Welfare Administration (NAV) and Norges Bank

Chart 1.5 Household expectations. Net numbers. Quarterly figures. 1992 Q4 – 2009 Q3



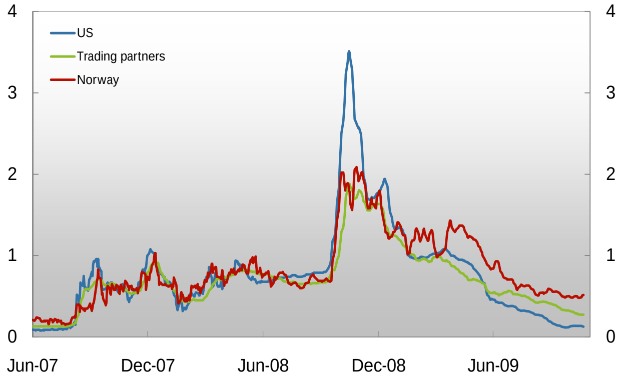
1) Quarterly figures based on monthly observations
Sources: TNS Gallup, Opinion and Norges Bank

Chart 1.6 Household credit from domestic sources[1)] and house prices. 12-month change. Per cent. January 2002 – September 2009



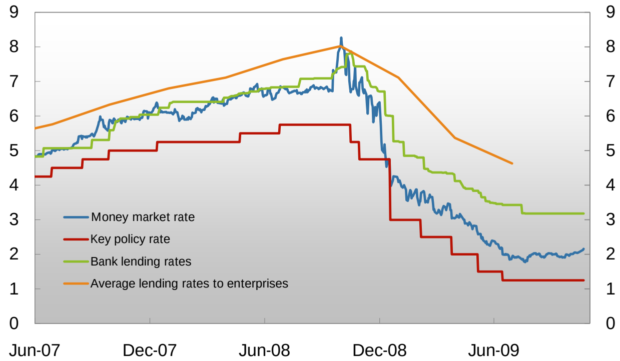
1) C2
Sources: Statistics Norway and the real estate industry (NEF, EFF, FINN.no and ECON Pöyry)

Chart 1.7 Difference between 3-month money market rate and key policy rate expectations in the market. Percentage points. 5-day moving average. 1 June 2007 – 22 October 2009



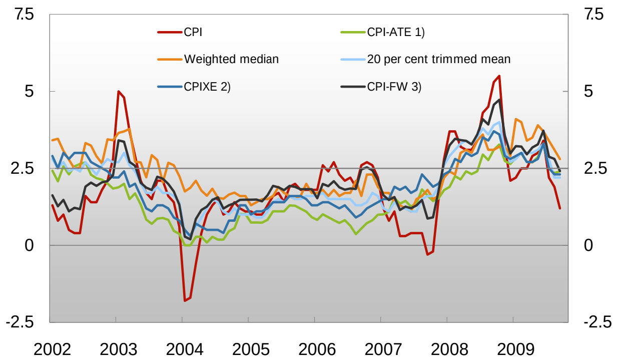
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 1.8 Key policy rate, money market rate[1)], bank lending rates on new loans[2)] and average lending rates to enterprises[3)]. Per cent. 1 June 2007 – 22 October 2009



1) 3-month NIBOR (effective)
2) Interest rate on new mortgage loans of NOK 1m within 60% of purchase price with variable interest rate. Figures for the 20 largest banks, weighted according to market share
3) Non-financial enterprises. 2007 Q2 – 2009 Q2
Sources: Norsk familieøkonomi AS, Statistics Norway and Norges Bank

Chart 1.9 Consumer prices. 12-month change. Per cent. January 2002 – September 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 and *Staff Memo* 2009/3 from Norges Bank for a description of the CPIXE
3) CPI adjusted for frequency of price changes. See the box on page 27 and *Economic commentaries* 7/2009 from Norges Bank for a description of the CPI-FW
Sources: Statistics Norway and Norges Bank

Household consumption has increased somewhat more than expected, and household expectations with regard to the outlook ahead have become increasingly optimistic (see Chart 1.5). House prices have risen considerably (see Chart 1.6) and have now reached the summer 2007-level. Household debt growth has remained stable at around 6-7% in recent months. It is easier for households to obtain loans now than last autumn.

Norwegian money market premiums have fallen back and at a more rapid pace than assumed in the June *Report* (see Chart 1.7). A further decrease is expected ahead. The three-month money market rate, which was more than 8% last autumn, is now around 2%. Bank lending rates have also decreased considerably (see Chart 1.8).

The interest rate differential between Norway and trading partners has widened. The three-month money market rate differential is 0.4 percentage point higher than at the time of the June *Report* and is now 1.5 percentage points. Market expectations concerning future interest rates have fallen abroad and increased in Norway.

The krone depreciated considerably in the second half of last year, but has since appreciated again. The import-weighted exchange rate (I-44) has appreciated by about 7% since the publication of the June *Report*. Stronger risk appetite and market expectations of a somewhat earlier rise in interest rates in Norway have probably contributed to the krone appreciation. Lower capital outflows from the Government Pension Fund – Global have probably also made a contribution. Trading in NOK has picked up since summer and foreign exchange market liquidity has improved.

Uncertainty in equity markets has eased. Leading US stock indices have risen by about 20% since the June *Report* and by more than 55% since equity markets bottomed out at the beginning of March 2009. Oslo Børs has risen by about 23% since mid-June and 74% since the beginning of March.

The price of oil has risen somewhat since the June *Report* and has doubled since the trough in December 2008. This probably reflects rising expectations among market participants that higher activity in the global economy will lead to a pickup in demand for oil ahead. On the other hand, oil inventories are still high and spare production capacity in OPEC countries is higher than in the preceding years. At end-October, the price of oil for immediate delivery was around USD 75 per barrel, while the price for delivery one year ahead was about USD 85.

Futures prices also suggest a slight rise in prices for other commodities ahead. Since the June *Report*, metals prices have risen as a result of improved global economic prospects, but are still somewhat lower than last summer.

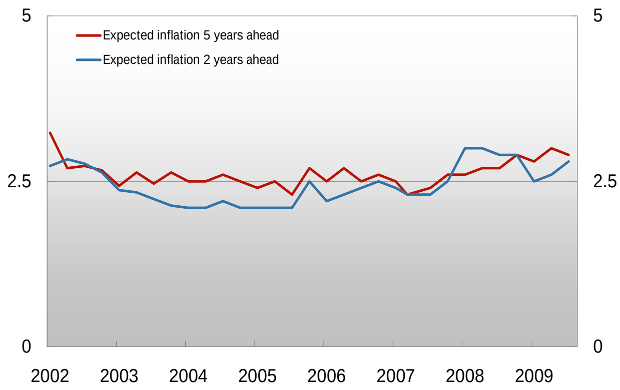
Underlying consumer price inflation in Norway has slowed in recent months to an estimated rate of just below 2½% (see Chart 1.9), reflecting the effects of lower wage growth, reduced capacity utilisation in the Norwegian economy and low inflation abroad. Although the krone depreciation last autumn has pushed up import prices, the effect of the depreciation is probably now waning. Inflation has been somewhat higher than expected since the June *Report*.

According to Perduco's expectations survey, long-term inflation expectations were broadly unchanged in Q3 after rising somewhat since autumn 2008. The social partners and economists in the financial industry and academia expected inflation five years ahead to be around 3% (see Chart 1.10). An indicator of inflation expectations in financial markets can be derived from the expected five-year interest rate differential between Norway and the euro area five years ahead. Because of a higher inflation target in Norway, this long-term differential will normally be around ½-1 percentage point, depending on risk premiums in the bond market. In recent months, the differential has been at the upper end of this range (see Chart 1.11).

The outlook ahead and monetary policy assessments

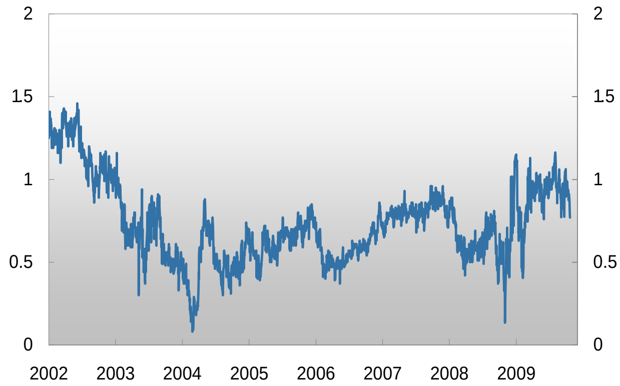
The operational target of monetary policy in Norway is low and stable inflation, with annual consumer price inflation of close to 2.5% over time. In recent years, average

Chart 1.10 Expected consumer price inflation 2 and 5 years ahead.[1)]
Per cent. 2002 Q1 – 2009 Q3



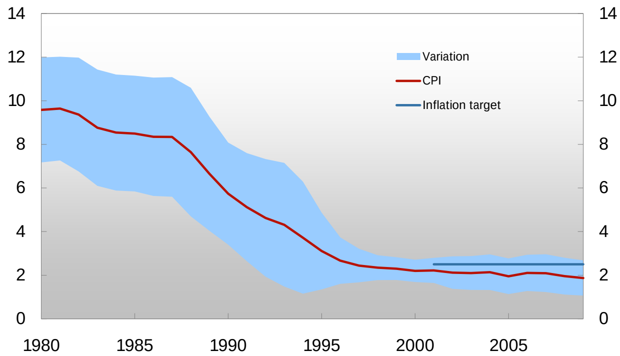
1) Average of expectations of employer/employee organisations and economists (financial industry experts, macro analysts and academics)
Sources: TNS Gallup and Perduco

Chart 1.11 5-year forward rate differential 5 years ahead between Norway and the euro area. Percentage points. 1 January 2002 – 22 October 2009



Sources: Thomson Reuters and Norges Bank

Chart 1.12 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

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.

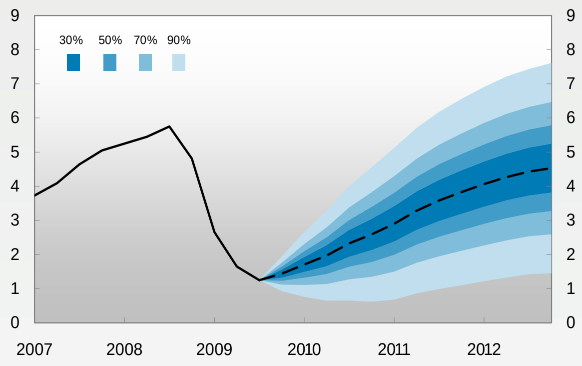
inflation has been close to, but somewhat below 2.5% (see Chart 1.12). Consumer price inflation has generally been somewhat below target since 2003 and monetary policy was then oriented towards pushing up inflation. In 2007 and 2008 inflation picked up to slightly above target (see Chart 1.9). Inflation expectations were firmly anchored (see Chart 1.10) and the key policy rate was gradually raised to a more normal level. Inflation close to target and firmly anchored inflation expectations were essential for monetary policy to be effective when substantial cuts were made in the key policy rate in autumn 2008 and the beginning of 2009.

The key policy rate was reduced to prevent inflation from falling too far below target and to mitigate the impact of the global downturn on the Norwegian economy. In the period to the publication of the June *Report*, global developments and the outlook for the Norwegian economy had been broadly as expected in March, and Norges Bank's interest rate forecast was approximately as outlined in *Monetary Policy Report* 1/09. The analyses indicated then that the key policy rate could remain around the current level until spring 2010.

The analysis in this *Report* shows that economic policy has been effective and that the outlook for the Norwegian economy has improved. Growth has picked up more rapidly than expected a few months ago. It appears that unemployment will be considerably lower than previously projected. The estimate for total capacity utilisation – the output gap – has therefore been revised up compared with the June *Report*. The downturn in Norway may prove to be milder than envisaged earlier this year.

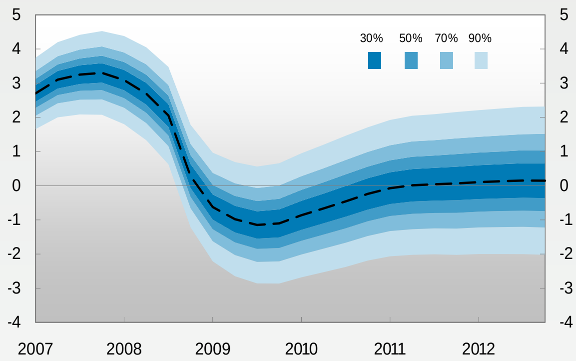
Inflation expectations are slightly above target (see Chart 1.10). It appears that unemployment over the next few years will remain lower and wage growth somewhat higher than previously projected. It is likely that low productivity has squeezed profitability in many firms. All in all, this suggests higher inflation, indicating that the key policy rate should be raised somewhat more rapidly than previously projected.

Chart 1.13a Projected key policy rate in the baseline scenario with fan chart. Quarterly figures. Per cent. 2007 Q1– 2012 Q4



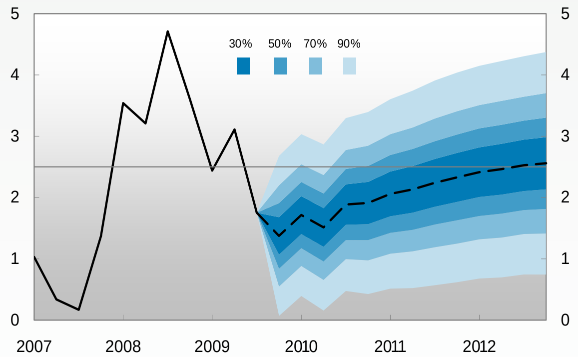
Source: Norges Bank

Chart 1.13b Estimated output gap[1)] in the baseline scenario with fan chart. Quarterly figures. Per cent. 2007 Q1 – 2012 Q4



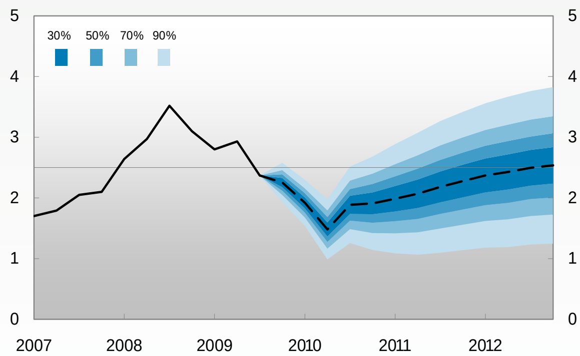
1) Percentage deviation between actual level and estimated normal level for mainland GDP
Source: Norges Bank

Chart 1.13c 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 1.13d 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 and *Staff Memo* 2009/3 from Norges Bank for a description of the CPIXE
Source: Norges Bank

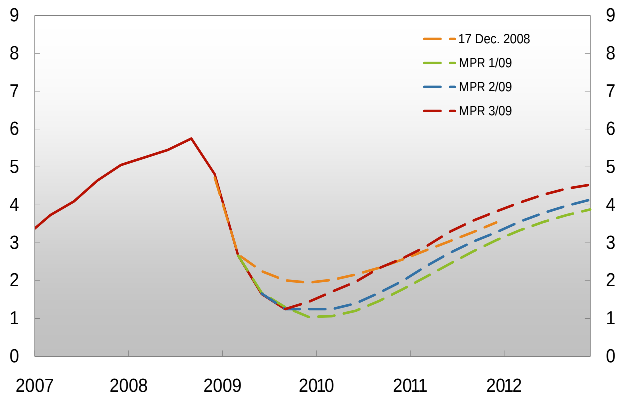
Interest rates in Norway are low. This has led to renewed growth in household consumption, and there are prospects that household demand will continue to rise. House prices are also rising. Over time, there may be a renewed sharp increase in household borrowing and a decline in saving. Strong growth in household debt may be a source of fluctuations in output and employment in the medium term. This strengthens the arguments in favour of raising the key policy rate.

On the other hand, a marked interest rate rise in Norway and a wider interest rate differential between Norway and other countries, in addition to lower capital outflows from the Government Pension Fund – Global, may result in a considerably stronger-than-projected krone, leading to inflation that is too low. This would indicate that the interest rate should not be raised too rapidly.

Overall, the outlook and the balance of risks suggest that the key policy rate can be raised gradually to around 2% in the first half of 2010 (see Charts 1.13 a-d). This is a somewhat more rapid rise in the key policy rate than indicated in the June *Report* (see Chart 1.14 and box on page 20). Some of the increase is counterbalanced by lower money market premiums and is therefore necessary to hold up money market rates. Premiums are assumed to return to their previous normal level of around 0.25 percentage point in 2010 Q3 (see Chart 1.15).

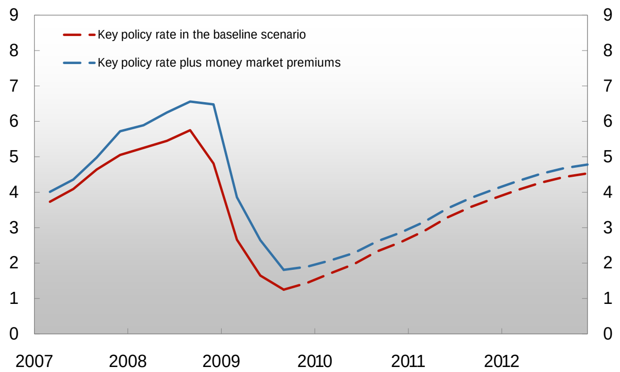
The projections are based on the assumption that the krone will depreciate somewhat from the current level (see Chart 1.16). It is for example assumed that the real krone exchange rate will gradually revert to its historical average (see Chart 1.17). Moreover, the interest rate forecast in the present *Report* is somewhat lower than forward

Chart 1.14 Key policy rate in the baseline scenario as at 17 December 2008, in MPR 1/09, MPR 2/09 and MPR 3/09. Per cent. 2007 Q1 – 2012 Q4



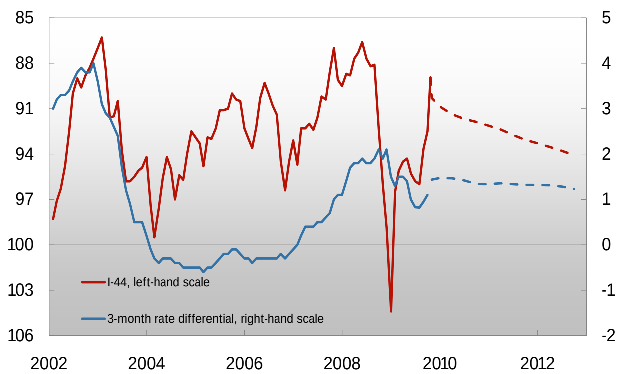
Source: Norges Bank

Chart 1.15 The key policy rate in the baseline scenario and the key policy rate plus premiums in the Norwegian money market.[1] Per cent. 2007 Q1 – 2012 Q4



1) Norges Bank's projections from 2009 Q4
Source: Norges Bank

Chart 1.16 Three-month money market rate differential between Norway and trading partners and the import-weighted exchange rate index (I-44)[1]. Monthly- (historical) and quarterly figures (ahead). January 2002 – December 2012



1) A rising curve indicates a stronger krone exchange rate
Sources: Thomson Reuters and Norges Bank

money market rates. Should the krone appreciate considerably more than projected, the interest rate may be raised later or to a lesser extent than currently envisaged.

The interest rate will be set to stabilise inflation close to 2.5% over time and to bring capacity utilisation back to a normal level (see Chart 1.18). Growth in the Norwegian economy is expected to pick up, driven by high public sector demand and an increase in private consumption. Investment growth is expected to move up as global growth gains momentum. Exports are also expected to pick up ahead. Capacity utilisation is projected to reach a normal level in the first half of 2011.

It appears that wage growth will slow to close to 4% in 2009. Unemployment is rising less sharply than expected. This will probably lead to slightly higher wage growth over the next few years than previously projected. Wage growth is expected to pick up to 4¾% towards the end of the forecast period. Registered unemployment is projected to peak at 3%, or about 80 000, in the beginning of 2010. Consumer price inflation is expected to fall to somewhat below 2% in 2010, before edging up to close to 2.5% towards the end of the forecast period.

Low global activity has resulted in a decline in Norwegian exports, with repercussions for other Norwegian business sectors. Even though manufacturing order books are still relatively full, export growth will probably be moderate ahead.

Investment is expected to fall in the year ahead. Housing investment and commercial property investment will probably remain low to end-2010. Mainland investment is expected to decline by 2½% from 2009 to 2010.

Growth in production capacity has probably been more subdued in the past few quarters. For some firms, structural changes will result in the permanent loss of established production capacity. More difficult access to credit as a result of the financial crisis has amplified the cyclical decline in investment and, combined with the high cost level in Norway, may make it difficult to start new businesses to replace businesses that are closed down. Firms' possibilities of increasing production in the short or medium term have therefore probably been reduced.

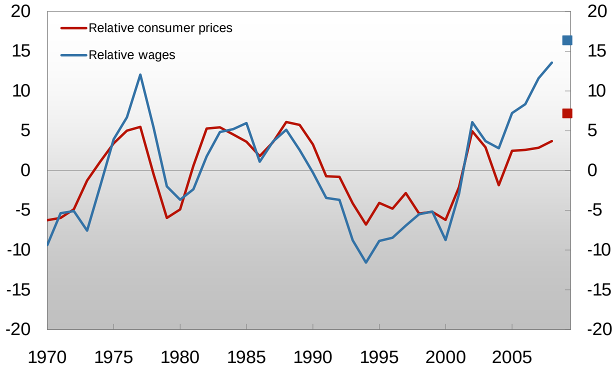
The cost level in the Norwegian business sector is now about 15 per cent higher than the average for the period since 1970, measured in terms of relative wages in a common currency (see Chart 1.17). Since wage growth is higher in Norway than abroad, relative costs will rise ahead even if the nominal krone exchange rate should remain unchanged. This will put many Norwegian firms in a demanding position in terms of international competition, which may influence location decisions ahead.

The outlook for the Norwegian economy is nonetheless better than for most other advanced economies. Monetary policy has been effective through the financial crisis. Inflation expectations have been firmly anchored and real interest rates have been low. Fiscal policy is contributing to supporting demand for goods and services. In addition, oil investment is making a positive contribution to the Norwegian economy. The rebound in activity will probably occur more rapidly, with inflation maintaining a somewhat higher level than in many other countries (see Chart 1.19).

The projections are uncertain. The interest rate forecast is therefore assessed in the light of simple monetary policy rules that can be robust to different assumptions about the functioning of the economy. 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 account of changes in the interest rate level among our trading partners that can result in changes in the exchange rate and thereby influence the inflation outlook.

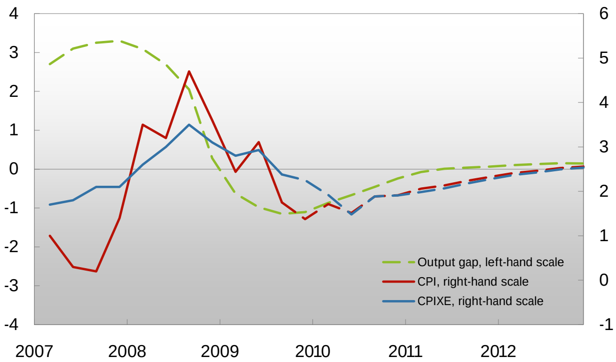
These simple rules generally indicate a key policy rate somewhat above our interest rate forecast for the first half of 2010 (see Chart 1.20). Unless there are prospects for abrupt changes in economic developments, monetary policy could be more robust if the interest rate level does not deviate too far from that indicated by the simple rules. This consideration has been given some weight.

Chart 1.17 Real exchange rate. Deviation from mean over the period 1970 – 2008. Per cent. 1970 – 2009[1)]



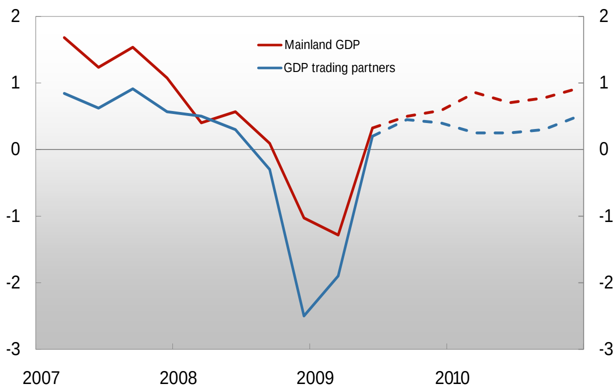
1) The squares shows the average over the period 16 - 22 October 2009. A rising curve indicates weaker competitiveness
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements, Ministry of Finance and Norges Bank

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



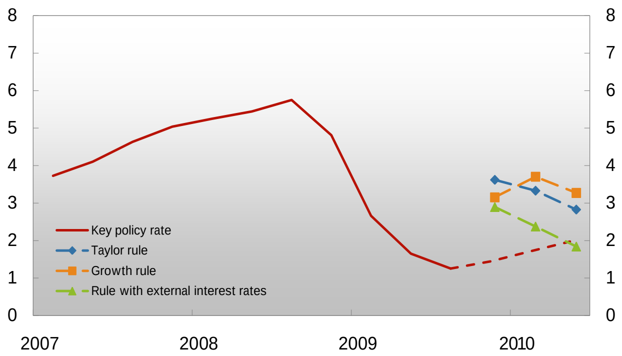
Sources: Statistics Norway and Norges Bank

Chart 1.19 GDP growth from previous quarter. Norway and trading partners. Seasonally adjusted. Per cent. 2007 Q1 – 2010 Q4[1)]



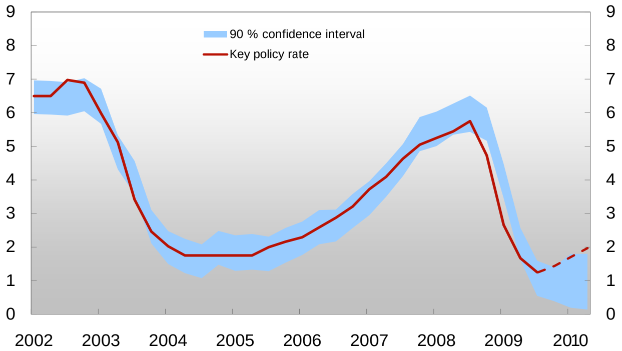
1) Projections from 2009 Q2
Sources: Statistics Norway and Norges Bank

Chart 1.20 Key policy rate and calculations based on simple monetary policy rules.[1)] Per cent. 2007 Q1 – 2010 Q2



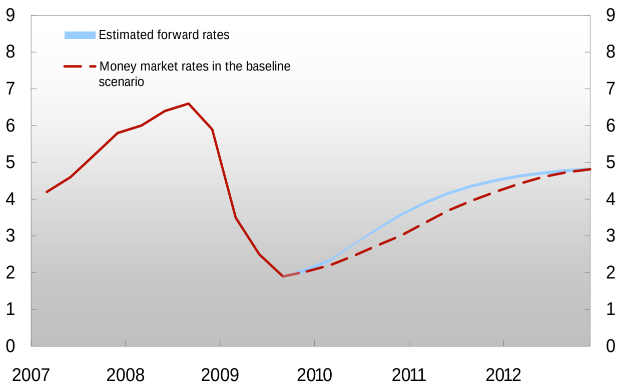
1) The calculations are based on Norges Bank's projections for the output gap, consumer prices adjusted for tax changes and excluding temprary changes in energy prices (CPIXE) and three-month money market rates. To ensure comparability with the key policy rate the simple rules are adjusted for risk premiums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

Chart 1.21 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.[1)]
Per cent. 2002 Q1 – 2010 Q2



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* 2008/3 for further discussion
Source: Norges Bank

Chart 1.22 Three-month 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 9 – 22 October 2009
Source: Norges Bank

Norges Bank has estimated an interest rate rule that seeks to provide a rough explanation of the Bank's previous interest rate setting based on a few observable variables. The rule includes inflation developments, wage growth, mainland GDP and central bank key rates abroad. The interest rate in the previous period is also important. From autumn 2008 and up to summer 2009, Norges Bank reduced the key policy rate more rapidly than implied by the historical response pattern (see Chart 1.21). The interest rate rule indicates an increase in the key policy rate ahead, albeit a smaller increase than in the interest rate forecast. Financial market developments and improved prospects for the Norwegian economy may imply that the interest rate should be raised somewhat more rapidly than indicated by this simple rule, in the same way as the financial crisis in 2008 implied that a reduction in the interest rate should be brought forward.

Forward money market rates provide another cross-check for the interest rate forecast. Estimated forward rates indicate that financial market participants expect a somewhat more rapid rise in money market rates than currently projected (see Chart 1.22).

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 differ if the economic outlook changes or if the effect of interest rate changes on inflation, output and employment differs from that assumed.

The projections in this *Report* indicate that capacity utilisation in the Norwegian economy may rise to a normal level in the course of about two years. The fiscal rule implies that the government budget deficit should be reduced to about 4% of the capital in the Government Pension Fund – Global when the economy resumes a normal level of activity. Norges Bank's projections are based on a technical assumption that the structural non-oil budget deficit for 2010 will persist in 2011 and 2012. If growth in the Government Pension Fund – Global is lower than in previous years, the deficit will still be more than 4% of the Fund's capital, even after capacity utilisation has risen to a normal level. If economic developments are broadly in line with projections, fiscal policy conducted in accordance with the fiscal rule could result in a lower interest rate and a weaker krone than projected.

The petroleum sector is having a stabilising effect on overall demand. As long as oil prices remain around the level prevailing this autumn, it is likely that oil companies will largely maintain their level of activity and demand for goods and services from Norwegian firms. Our projections are based on the assumption that the global situation will continue to improve and that growth among our trading partners will pick up in 2010. Should the global growth outlook deteriorate again, the price of oil may fall markedly. This might lead to a substantial decline in oil investment and also have an adverse impact on the wider Norwegian economy. On the other hand, a fall in oil prices normally results in a depreciation of the krone. Should the krone depreciate for an extended period, inflation may become too high. With lower oil prices, the economic outlook will deteriorate, but the overall effect on inflation of a marked fall in oil prices and a weaker krone is not clear cut.

The uncertainty surrounding our projections is illustrated using fan charts (see Charts 1.13a-d). The width of the fan charts is based on previous disturbances and therefore expresses an average that includes periods of high and low uncertainty.[1]

Household spending is expected to continue to pick up. The decline in household credit growth has come to a halt and house prices have risen considerably so far this year, which may signal an increase in household optimism. We have limited experience to indicate how the interest rate at the current low level will affect output and prices over time.

1 A more detailed review of fan charts is provided in *Inflation Report* 3/05.

Unwinding of extraordinary measures

During the financial crisis, Norges Bank implemented a range of extraordinary measures in monetary and liquidity policy. It has been appropriate to start the unwinding process at an earlier stage in Norway than in other countries:

- In recent months, krone liquidity has not been supplied through currency swap lines or liquidity in foreign currency.

- Loans in NOK at long maturities have not been provided since February.

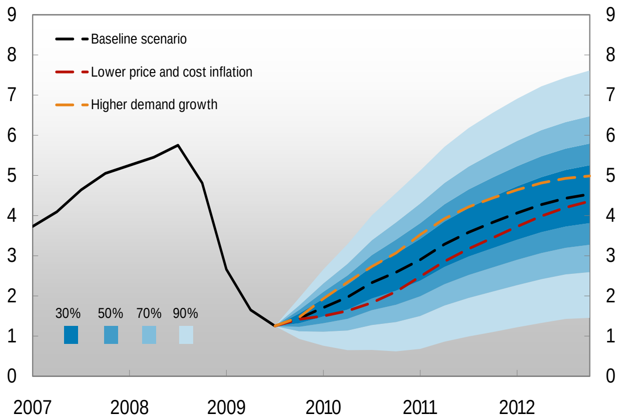
- Surplus liquidity in the banking system was increased to more than NOK 100 billion, but is now close to a more normal level. This motivates banks to revert to money market funding.

- The swap arrangement involving covered bonds (OMF) in exchange for government securities has made an essential contribution to securing banks' long-term funding. The first signs that the covered bond market was beginning to function appeared in spring. The minimum price in the swap arrangement has been raised by 0.9 percentage point, from NIBOR-0.2 percentage point to NIBOR+0.7 percentage point. Use of the arrangement is currently being phased out.

- Norges Bank eased its collateral requirements to enable banks to increase their borrowing in the central bank. This measure is now being reversed.

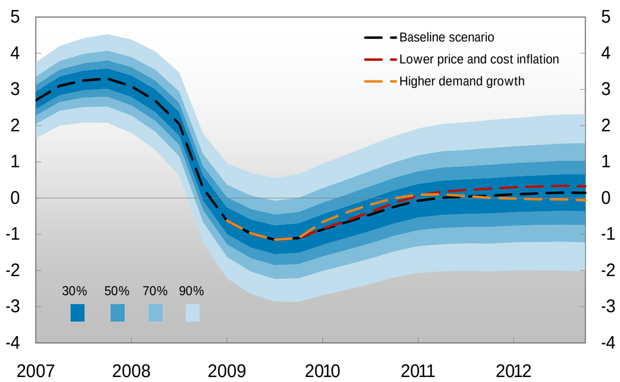
- Norges Bank has also announced that the share of a bank's borrowing facility that can be based on collateral in the form of bank bonds will gradually be reduced. The possibility of using covered bonds as collateral for loans will be continued.

Chart 1.23a Key policy rate in the baseline scenario and in the alternative scenarios. Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



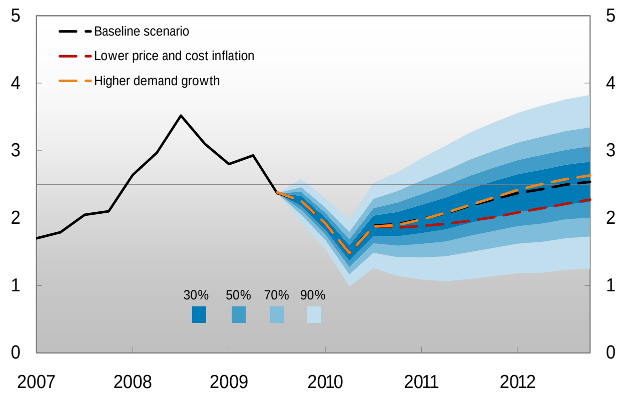
Source: Norges Bank

Chart 1.23b The output gap in the baseline scenario and in the alternative scenarios. Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



Source: Norges Bank

Chart 1.23c CPIXE in the baseline scenario and in the alternative scenarios. Per cent. 2007 Q1 – 2012 Q4



Source: Norges Bank

Charts 1.23a-c (yellow lines) illustrate the effects of stronger-than-expected growth in household demand. In that event, the interest rate will be raised to a higher level and more rapidly than currently envisaged and the krone will appreciate. This will in isolation contribute to lower imported inflation and somewhat lower exports. The interest rate path will stabilise inflation close to 2.5%.

The projections are based on the assumption that productivity will gradually improve. Higher productivity reduces the pressure on firms' costs somewhat. The projections are also based on firms' scope for of strengthening profitability by raising prices. If firms instead reduce employment more rapidly and markedly in order to improve productivity, that will lead to higher unemployment and lower wage and price inflation than projected, as illustrated in Charts 1.23a-c (red lines). The interest rate is kept lower for a longer period in order to ensure that inflation returns to target. A lower interest rate also supports capacity utilisation.

Changes in the projections since *Monetary Policy Report* 2/09

The interest rate forecast in this *Report* has been revised up compared with the forecast in *Monetary Policy Report* 2/09 (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. The interest rate is set so that inflation is close to 2.5% over time. Chart 2 shows a technical illustration of how news and new assessments in isolation have affected the changes in the interest rate forecast through their impact on the outlook for inflation, output and employment. The isolated contributions from the different factors are shown by the bars. The overall change in the interest rate forecast is shown by the black line.

Growth in the Norwegian economy has picked up more rapidly than expected a few months ago. Household consumption has shown a stronger increase than expected and private investment a more moderate decline. Projections for GDP growth among trading partners for 2009 and 2010 have been revised up somewhat, and it appears petroleum investment will be somewhat higher than previously projected. Overall, the estimate for capacity utilisation has been revised up considerably compared with *Monetary Policy Report* 2/09. This would suggest a higher key policy rate (blue bars).

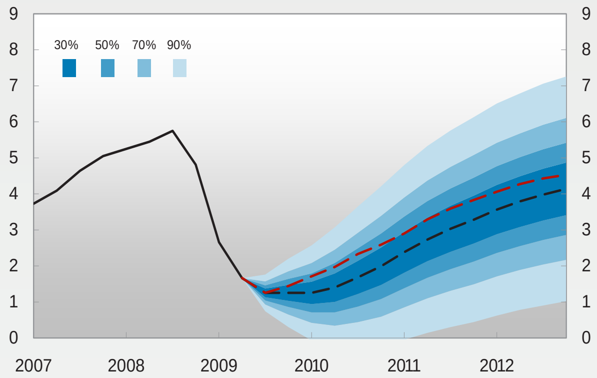
Productivity has been lower than projected, pushing up firms' costs. Corporate profitability is assumed to improve ahead both as a result of higher productivity and because firms are increasing their margins. At the same time, the rise in unemployment has not been as marked as expected. This will probably contribute to somewhat higher wage growth in the years ahead than previously projected. All in all, these factors contribute in isolation to somewhat higher inflation. This would also indicate a somewhat higher key policy rate (yellow bars).

Norwegian money market premiums have fallen back and at a somewhat more rapid pace than assumed in *Monetary Policy Report* 2/09. Premiums are expected to decrease further ahead. This would suggest a somewhat higher key policy rate (green bars).

The interest rate differential between Norway and trading partners has widened. The three-month money market rate differential is 0.4 percentage point higher than at the time of the June *Report* and is now 1.5 percentage points. Risk appetite has increased among market participants. The import-weighted exchange rate (I-44) has appreciated by about 7% since the publication of the June *Report*. This would indicate a lower key policy rate (red bars).

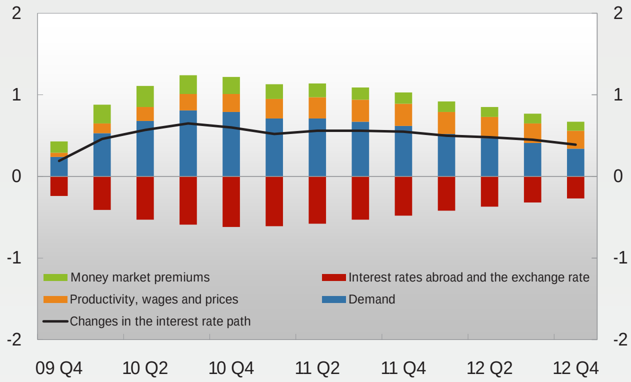
Changes in the projections for other key variables are summarised in Table 1. The changes in the projections reflect the change in the interest rate forecast as shown in Chart 2.

Chart 1 Key policy rate in the baseline scenario in MPR 2/09 with fan chart and key policy rate in the baseline scenario in MPR 3/09 (red line). Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



Source: Norges Bank

Chart 2 Factors behind changes in the interest rate path since MPR 2/09. Accumulated contribution. Percentage points. 2009 Q4 – 2012 Q4



Source: Norges Bank

Table 1 Projections for macroeconomic aggregates in *Monetary Policy Report* 3/09. Percentage change from previous year (unless otherwise stated). Change from projections in *Monetary Policy Report* 2/09 in brackets.

	2009	2010	2011	2012
Mainland demand	0 (1¼)	3¼ (½)	4¼ (-¼)	2¾ (-½)
GDP mainland Norway	-1¼ (¼)	2¾ (¼)	3¼ (-¼)	2¾ (-¼)
Employment	-¼ (¼)	-¼ (¼)	1 (¼)	¾ (-¼)
LFS unemployment (rate)	3¼ (-¼)	3¾ (-¾)	3½ (-½)	3½ (-¼)
CPI	2¼ (0)	1¾ (0)	2¼ (0)	2½ (0)
CPI-ATE	2¾ (¼)	1¾ (0)	2¼ (0)	2½ (0)
CPIXE[1)]	2½ (0)	1¾ (0)	2¼ (0)	2½ (0)
Annual wage growth	4 (0)	4¼ (½)	4½ (¼)	4¾ (0)

1) CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo* 2008/7 and *Staff Memo* 2009/3 from Norges Bank for a description of the CPIXE

Source: Norges Bank

Summary

The global economy is in a deep downturn, but there are signs of renewed growth. Activity in the Norwegian economy has picked up more rapidly than expected. Monetary policy measures combined with petroleum investment and growth in public spending have boosted activity. The downturn in the Norwegian economy may be relatively mild.

The key policy rate was reduced to prevent inflation from falling too far below target and to mitigate the impact of the global downturn on the Norwegian economy. Underlying inflation is now close to 2.5%. It appears that unemployment in the years ahead will remain lower and wage growth somewhat higher than previously projected. Low productivity has probably squeezed profitability in many firms.

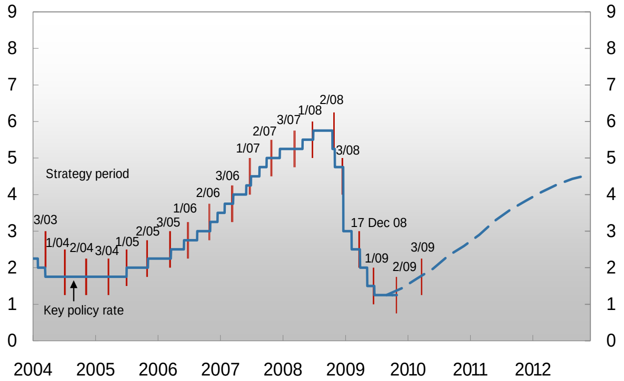
Interest rates are low, resulting in renewed growth in household consumption. At the same time, house prices are rising. Over time, household borrowing may surge again and saving may fall. With low productivity, higher corporate costs, growth in household demand and higher capacity utilisation, inflation may gradually become too high. This would indicate that the interest rate should be raised.

On the other hand, a marked increase in the interest rate in Norway and a wider interest rate differential between Norway and other countries may entail a risk of a stronger-than-projected krone, resulting in an inflation level that is too low. This would indicate that the interest rate should not be raised too rapidly.

Monetary policy cannot fine-tune developments in the economy, but it can mitigate the most severe effects when the economy is exposed to shocks. Overall, the outlook and the balance of risks suggest that the key rate should be gradually increased ahead (see Chart 1.24).

The projections are uncertain. New information may reveal aspects of economic developments that suggest the Norwegian economy is following a different path than projected. Higher capacity utilisation or a weaker krone

Chart 1.24 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 28 October 2009 is not shown in the chart
Source: Norges Bank

may, on the one hand, result in higher-than-projected inflation. On the other hand, inflation may be lower than projected if the krone remains strong or productivity picks up more rapidly. Should the krone appreciate considerably more than projected, the interest rate may be increased to a lesser extent or later than currently envisaged.

Executive Board's strategy

The key policy rate should be in the interval 1¼ - 2¼% in the period to the publication of the next *Monetary Policy Report* on 24 March 2010 unless the Norwegian economy is exposed to new major shocks.

2 The projections

The global economy

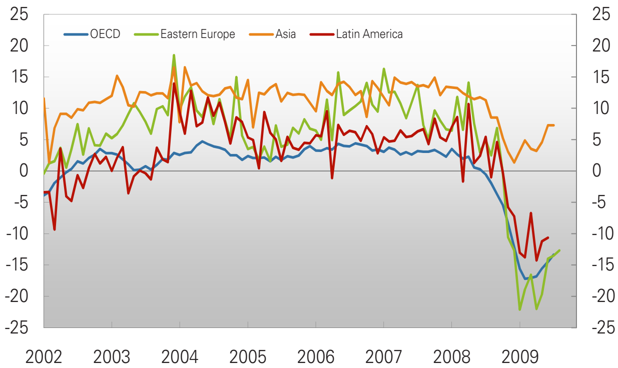
The world economy is in the deepest recession in many decades, but in most countries there are now clears signs that activity is no longer falling.

Global manufacturing output is rising again (see Chart 2.1) and international trade is picking up. Rapid growth in emerging market economies (EMEs) are fuelling exports, providing support to activity growth among Norway's main trading partners. Inventory destocking, prompted by a faster decline in manufacturing production than in demand, will probably turn in the course of the next half-year. Economic policy measures are probably having a stronger and faster impact than assumed in the June *Monetary Policy Report*. In the short run, this will provide considerable impetus to economic growth. Against this background, the growth projection for GDP among trading partners has been revised up for this year and next. Activity is projected to fall by 3½% in 2009, followed by growth of 1¼% in 2010 (see Table 2.1).

Both inventory changes and government measures are temporary. The need to deleverage in the financial and household sectors is still considerable in many advanced economies. Credit conditions in the US and many European countries will probably continue to be tighter than normal for households and businesses for some time ahead. In most advanced economies, consumption growth will be dampened as a result of high and rising unemployment. Low capacity utilisation will lead to low business fixed investment even though the need for replacement is gradually increasing. Substantial budget deficits must be phased out.

On the other hand, growth in EMEs, particularly in Asia, but subsequently also in other regions of the world, is expected to recover rapidly to the levels prevailing prior to the financial crisis. A number of EMEs were in a more favourable position this time than during previous crises.

Chart 2.1 Manufacturing in OECD and emerging markets[1]. Twelve-month change. Per cent. January 2002 – August 2009



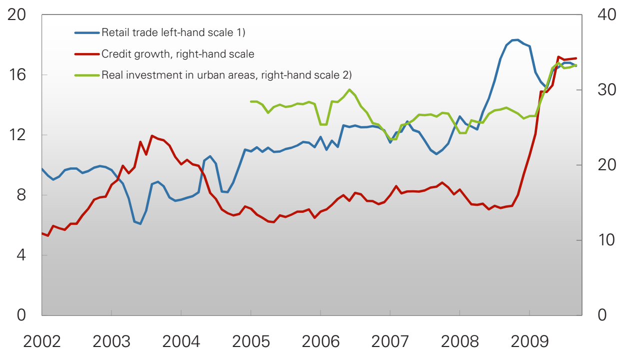
1) Weighted with GDP weights (PPP). See *Economic Commentaries* 8/2009 for countries included in the different regions
Sources: IMF, Thomson Reuters and Norges Bank

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

	2009	2010	2011-12 [1]
US	-2½	1½	2¾
Euro area	-4	½	2
Japan	-5½	1½	1¾
UK	-4½	¾	2½
Sweden	-4¾	1½	3
China	8½	9	9¾
Trading partners [2]	-3½	1¼	2¾

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

Chart 2.2 Investment, credit growth and retail trade in China. Twelve-month growth. January 2002 – September 2009



1) Deflated by the CPI, three-month moving average
2) Year-to-date growth
Sources: Thomson Reuters, CEIC and Norges Bank

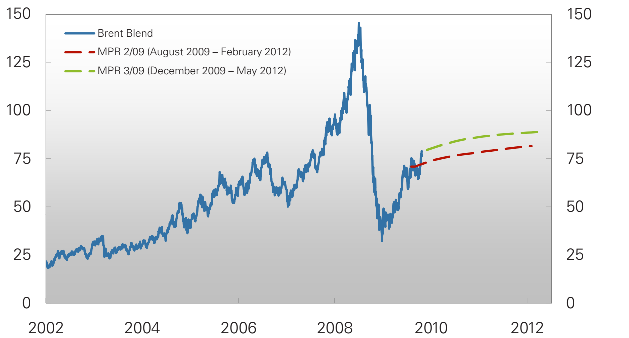
Table 2.2. Projections for consumer prices in other countries (change from previous year, per cent) and oil price

	2009	2010	2011-12[1]
US	-½	1½	1½
Euro area [2]	¼	1¼	1¼
Japan	-1	-¾	¼
UK	2	1½	1¼
Sweden	-¼	1	2¼
China	-½	2½	2
Trading partners [3]	½	1½	1½
Oil price Brent Blend [4]	61.6	82.1	86.9

[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

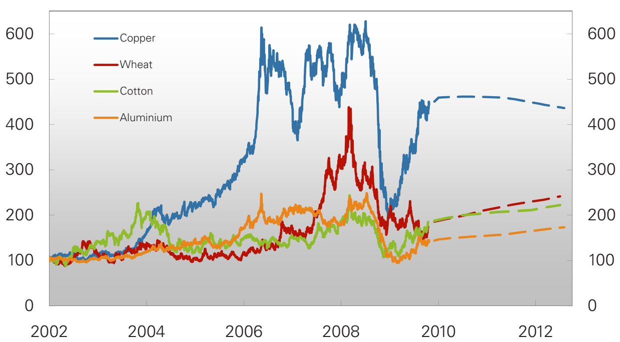
Sources: Eurostat, Thomson Reuters and Norges Bank

Chart 2.3 Oil price (Brent Blend) in USD per barrel. 1 January 2002 – 22 October 2009 Futures prices (broken lines) MPR 2/09 and MPR 3/09



Sources: Thomson Reuters and Norges Bank

Chart 2.4 Commodity prices in USD. Index. 2 January 2002 = 100. 2 January 2002 – 22 October 2009. Futures prices from 22 October 2009 (broken lines). December 2009 – August 2012



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

In recent years, Asian countries have increased current account surpluses and built up foreign exchange reserves. Asian EMEs have therefore been more robust and have had increased leeway for responding to a downturn by means of an expansionary fiscal and monetary policy. In China, activity rebounded quickly. Even if trade has remained sluggish since the sharp contraction around the turn of the year, domestic demand has been higher than expected. Substantial fiscal stimulus and the easing of bank lending standards have also led to growth in the money supply, credit and investment. Retail trade has also shown signs of faster growth in recent months (see Chart 2.2). Against the background of strong domestic demand, our growth projections for China and other Asian EMEs have been revised up for this year and next.

Moderate growth prospects and lower-than-normal capacity utilisation in most advanced economies will lead to low consumer price inflation among our main trading partners throughout the projection period (see Table 2.2). For 2009 and 2010, the projections have been revised up somewhat compared with the projections in the previous *Report*, reflecting higher-than-expected inflation so far this year and higher growth projections.

Oil prices are now around USD 75 per barrel, up by a good USD 5 since summer. The projections in this *Report* are based on an oil price in line with futures prices (see Table 2.2 and Chart 2.3). Futures prices imply an oil price in 2010 and 2011 that is USD 5-10 higher than today's level. The increase in oil prices reflects low growth in oil production, more positive expectations as to the world economy and a weaker US dollar. OECD oil inventories are still ample and OPEC spare production capacity has increased while oil demand remains weak.

The Economist commodity-price index is approximately unchanged on the previous *Report*. Metal prices have increased somewhat owing to improved prospects for the world economy. Food prices have declined following favourable harvests in many regions. Metal futures imply prices at about today's level ahead, while food prices are expected to edge up (see Chart 2.4).

The Norwegian economy in the year ahead

Prices

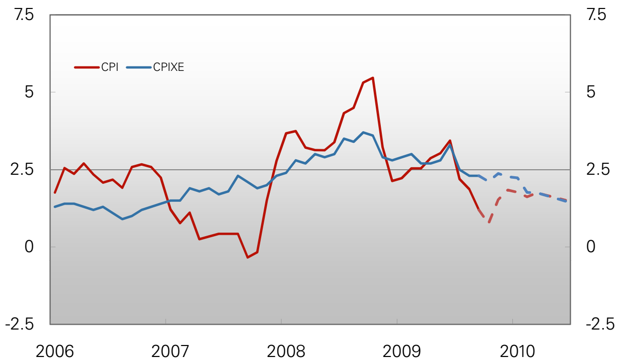
In September, the consumer price index (CPI) was 1.2% higher than in the same month one year earlier (see Chart 2.5). Adjusted for tax changes and excluding temporary changes in energy prices (CPIXE), the rate of increase was 2.3%. Inflation adjusted for tax changes and excluding energy products (CPI-ATE) was 2.4%. Inflation has been somewhat higher than projected in *Monetary Policy Report 2/09*, both for domestically produced goods and services and imported consumer goods.

The rate of increase for domestically produced goods and services has slowed through 2009 (see Chart 2.6). The year-on-year rise was a little higher than 4% at the beginning of the year, but had moved down to 2.8% in September. A slower rise in house rents and food prices has contributed to the decline. After a period of falling productivity, unit labour costs are high. The projections are based on an increase in firms' margins ahead through an increase in prices. Inflation will nevertheless be curbed by slower wage growth from 2008 and a gradual rise in productivity growth (see Chart 2.7). Low interest rates will probably continue to curb the rise in house rents. Overall, the rise in prices for domestically produced goods and services is projected to slow to around 2½% in 2010 Q2. Somewhat further ahead, higher wage growth will push up the rise in domestically produced goods and services.

The rate of increase for imported consumer goods has moved down after rising rapidly in the first half-year. The increase in September reflected higher prices for clothing and footwear. In September, prices were 1.6% higher than in the same month one year earlier. The krone depreciated markedly in autumn 2008, which pushed up the price rise for imported consumer goods. Prices for imported consumer goods measured in foreign currency were approximately unchanged in the first half-year and are expected to edge down through autumn and into next year.[1]

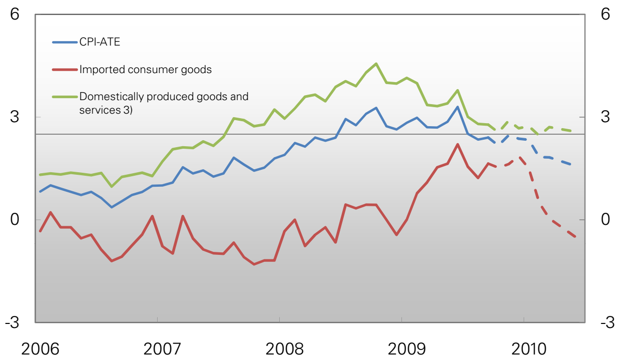
1 On the basis of changes in data material and methodology, the indicator of prices for imported consumer goods measured in a foreign currency now shows a faster rate of increase for this year than applied in previous *Monetary Policy Reports*.

Chart 2.5 CPI and CPIXE[1)]. 12-month change. Per cent. January 2006 – June 2010[2)]



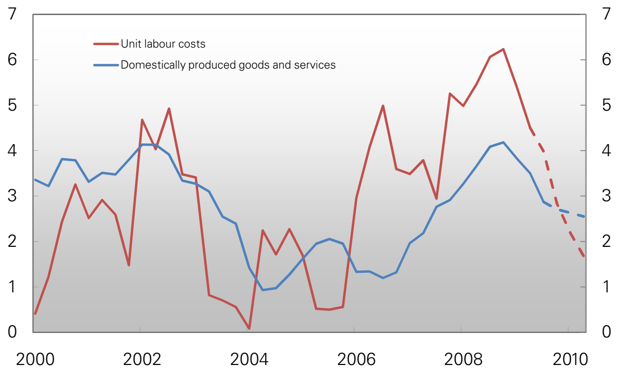
1) CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo 2008/7* and *Staff Memo 2009/3* from Norges Bank for a description of the CPIXE
2) Projections for October 2009 – June 2010 (broken lines). Monthly figures to March 2010, then quarterly figures
Sources: Statistics Norway and Norges Bank

Chart 2.6 CPI-ATE[1)]. Total and by supplier sector. 12-month change. Per cent. January 2006 – June 2010[2)]



1) CPI adjusted for tax changes and excluding energy products
2) Projections for October 2009 – June 2010 (broken lines). Monthly figures to March 2010, then quarterly figures
3) Norges Bank's estimates
Sources: Statistics Norway and Norges Bank

Chart 2.7 Unit labour costs, mainland Norway and prices for domestically produced goods and services in the CPI-ATE[1)]. Four-quarter growth. Smoothed. Per cent. 2000 Q1 – 2010 Q2[2)]



1) Projections from Q3 2009 (broken line)
2) Norges Bank's estimates. Projections from Q4 2009 (broken line)
Sources: Statistics Norway and Norges Bank

CPI adjusted for the frequency of price changes

Indicators of underlying inflation adjust the rate of increase in the consumer price index (CPI) for temporary disturbances. The indicators have different properties and can be based on various assumptions as to which price movements that will have short-term effects on the CPI and permanent price movements. The consumer price index adjusted for tax changes and excluding temporary changes in energy prices (CPIXE) and the consumer prices index adjusted for tax changes and excluding energy products (CPI-ATE) are two of the indicators of underlying inflation that are referred to in the *Monetary Policy Report*. Another indicator is a *trimmed mean* of the twelve-month change in the CPI adjusted for tax changes (CPI-AT), where the sub-indices of goods with the 10 per cent highest and lowest rises are excluded every month. The indicator *weighted median* is a special case of trimmed mean where all price observations except the mid-observation are stripped out based on the weight of sub-indices in the CPI.

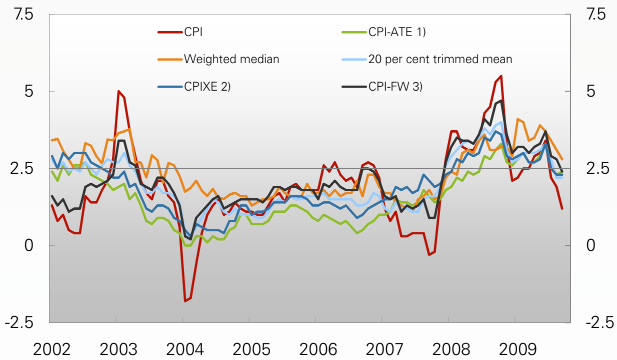
The literature also proposes to follow indicators where slow-changing prices or prices with low-frequency changes (sticky prices) are given a relatively higher weight than fast-changing prices[1]. Prices that take a long time to change in response to major changes in the economy can lead to a misallocation of resources in enterprises. At the same time, prices that change frequently may be influenced by different shocks or temporary changes in business costs and thereby contribute to short-term variations in the CPI. It is conceivable that businesses that seldom change prices give greater weight to long-term developments in their costs. Low-frequency price changes, contrary to high-frequency price changes, may therefore provide more information about business expectations concerning future price and cost inflation. CPI-FW (CPI adjusted for the frequency of price changes) is a new indicator estimated by Norges Bank.[2]

CPI-FW is estimated based on Statistics Norway's 40 sub-indices of goods included in the CPI, but prices with low-frequency changes are weighted upwards and price with high-frequency changes are weighted downwards. CPI-FW moves over time on the same path as the CPI, but the variations are smaller (see Chart 1).

1 See Goodfriend, M., K.A. Mork and U. Söderström: *Norges Bank Watch 2007, An Independent Review of Monetary Policymaking in Norway. Norges Bank Watch Report Series No. 8.* BI Norwegian School of Management.

2 See Simensen A.M. and F. Wulfsberg (2009): CPI-FW a frequency-weighted indicator for underlying inflation. *Economic Commentaries* 7/2009. Norges Bank.

Chart 1. Consumer prices. 12-month change. Per cent.
January 2002 – September 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 and Staff Memo 2009/3 from Norges Bank for a description of the CPIXE
3) CPI adjusted for frequency of price changes
Sources: Statistics Norway and Norges Bank

Prices for imported consumer goods measured in foreign currency are projected to show a decline of ½% this year and ¾% next year (see Chart 2.8). The krone exchange rate has appreciated from weak levels. Combined with the fall in prices for imported consumer goods measured in foreign currency, this will gradually push down the rise in prices for imported consumer goods. The rise in prices for imported consumer goods is projected to slow from 1.5% in 2009 Q3 to -½% in 2010 Q2.

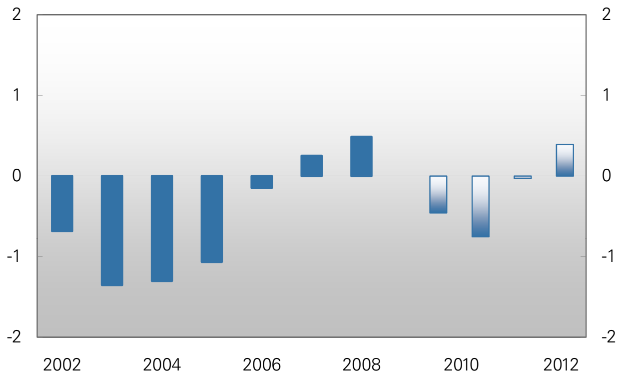
Overall, annual CPI-ATE inflation is projected to slow gradually from 2.4% in 2009 Q3 to 1½% in 2010 Q2. Despite rising quarter-on-quarter inflation for domestically produced goods and services through spring, the temporary rise in CPI-ATE inflation early last summer results in low annual inflation in 2010 Q2. Measured as the rise from the previous year, inflation will probably pick up later in autumn 2010. The projections for the coming quarters are in line with the projections derived from our system for averaging short-term models (SAM) (see Chart 2.9).

Energy prices in the CPI have been lower than projected in the June *Report*, and futures prices for electricity have fallen. This has pushed down the estimated energy price trend which is incorporated in the CPIXE projections (see Chart 2.10). The CPIXE projections will be slightly lower than the CPI-ATE projections in the coming quarters. Annual CPIXE inflation is projected to fall from 2.4% in 2009 Q3 to 1½% in 2010 Q2. Lower energy prices will also push down CPI inflation ahead.

Output and demand

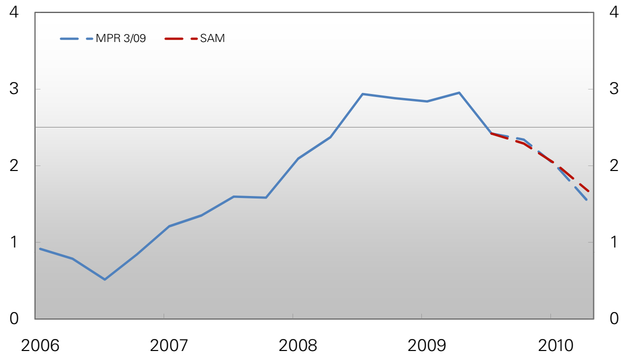
Mainland GDP increased in Q2 after two quarters of negative growth. Growth was somewhat higher than projected in the June *Report*, reflecting solid growth in public demand and private consumption. In September, Norges Bank's regional network contacts reported that activity had edged up in Q3 (see Chart 2.11). The main contribution came from industries providing goods and services to households and the public sector. Public demand will probably continue to show strong growth in the latter half-year. Growth in private consumption is projected to pick up, while the slowdown in both business and housing

Chart 2.8 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Per cent. 2002 – 2012[1)]



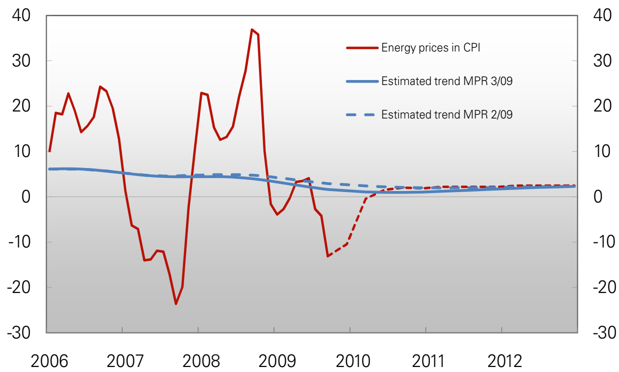
1) Projections for 2009 – 2012
Source: Norges Bank

Chart 2.9 CPI-ATE[1)]. Actual figures, baseline scenario and projections by SAM[2)]. Four-quarter change. Per cent. 2006 Q1 – 2010 Q2[3)]



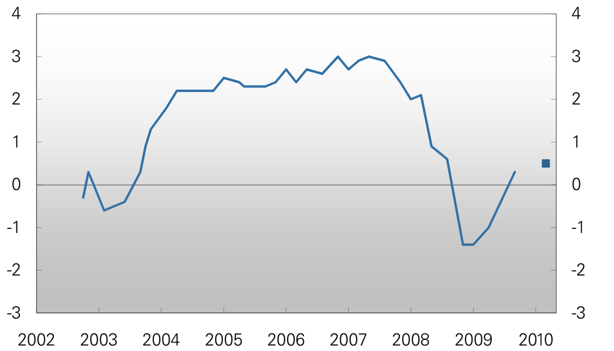
1) CPI adjusted for tax changes and excluding energy products
2) System for averaging models for short-term forecasting
3) Projections for 2009 Q4 – 2010 Q2 (broken lines)
Sources: Statistics Norway and Norges Bank

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



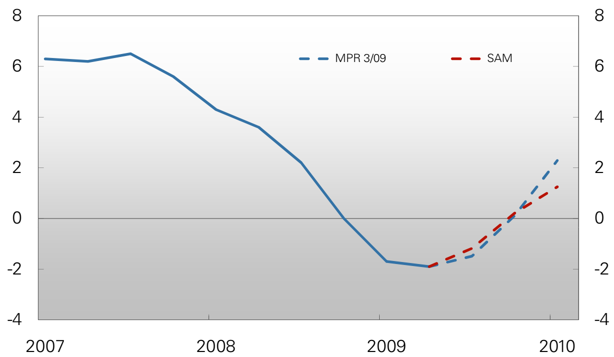
1) The product groups Electricity, gas and other fuels and Fuels and lubricants
2) The trend is estimated using an HP-filter on the actual and projected movements of energy prices in the CPI, see *Staff Memo 2008/7* and *Staff Memo 2009/3* from Norges Bank
3) Projections for October 2009 – December 2012 (broken line)
Sources: Nord Pool, Statistics Norway and Norges Bank

Chart 2.11 Indicator for actual change in production last three months and expected change in production in next six months. Index[1)] October 2002 – March 2010[2)]



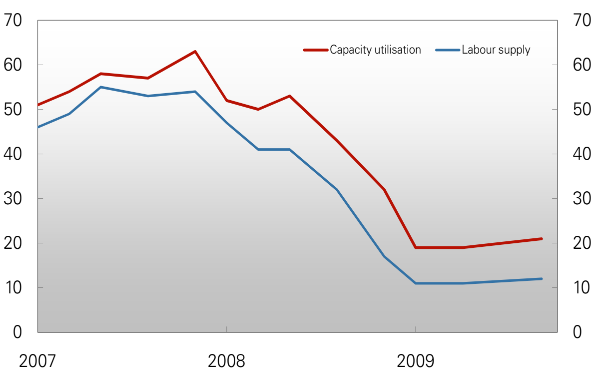
1) The scale runs from -5 to +5, where -5 indicates a sharp fall and +5 indicates strong growth. See article "Norges Bank's regional network" in *Economic Bulletin* 2/05 for further information.
2) Last observation September 2009
Source: Norges Bank's regional network

Chart 2.12 Mainland GDP. Actual figures, baseline scenario and projections by SAM[1)]. Four-quarter change. Volume. Seasonally adjusted. Per cent. 2007 Q1 – 2010 Q1[2)]



1) System for averaging models for short-term forecasting
2) Projections for 2009 Q3 – 2010 Q4 (broken lines)
Sources: Statistics Norway and Norges Bank

Chart 2.13 Capacity utilisation and labour supply[1)]. Per cent. January 2007 – september 2009



1) Share of contacts that will have some or considerable problems accommodating an (unexpected/expected) increase in demand, and the share of contacts where the labour supply is a constrain on production
Source: Norges Bank's regional network

investment will ease after a period. Exports will also pick up slightly. Mainland GDP is projected to grow by about ½%, seasonally adjusted, in 2009 Q3 and Q4 and by a little less than 1% in 2010 Q1 and Q2.

Despite a moderate rebound in both domestic and international activity, prospects for manufacturing and the building and construction sector remain relatively weak. After falling for a long period, manufacturing production picked up again in July and August. The decline in new orders and order reserves, in the shipbuilding industry among others, nevertheless indicates a low production level in the period ahead. According to the regional network, manufacturing production is expected to remain unchanged over the next half-year. Production in the building and construction sector is also expected to remain virtually unchanged, with increased activity in the construction sector underpinning production. Enterprises in the service sector expect production to pick up over the next half-year. Regional network enterprises in the retail sector report that production is rising and expect continued growth ahead.

Our system for averaging short-term models (SAM) projects approximately the same growth for mainland GDP in the latter half of this year as in the baseline scenario (see Chart 2.12). In the first half of 2010, growth is projected to be somewhat higher than SAM-based projections. This is because many of the SAM models give greater weight to short-term indicators where the interest rate has a less pronounced effect than in the baseline scenario.

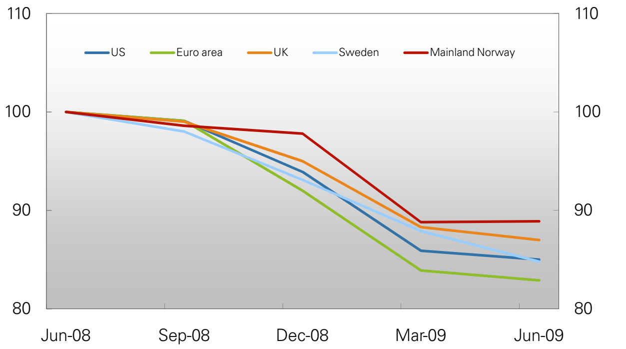
The output gap probably turned negative in the 2009 Q1 after five quarters of GDP growth below estimated potential growth. This means that output is now slightly below the level consistent with balanced economic development. Statistics Norway's business sentiment survey indicates considerable spare capacity in manufacturing. A negative output gap is also in line with the information from the regional network, where more enterprises than normal reported that they could readily accommodate an increase in demand (see Chart 2.13). GDP growth is expected to remain lower than potential growth in the latter half of this year. The output gap is estimated at -1% towards the end of the year. The negative gap is somewhat smaller than the previous estimate and is in line with the slower-than-expected rise in unemployment. In the first half of next year, the gap is expected to be gradually reduced.

Growth in potential GDP has probably edged down in recent quarters. Reduced credit supply owing to the financial crisis has amplified the cyclical downturn in investment and has also impeded business start-ups to replace businesses that have closed. Particularly in manufacturing and the building and construction industry, capacity could be scaled back as a result of closures. As a result, growth in fixed capital and firms' scope for increasing production in the short or medium term has probably been reduced. Lower immigration has gradually contributed to reducing labour force growth. In addition, labour productivity has fallen markedly. Portions of the fall are assumed to be permanent even if productivity growth gradually returns to a more normal level.

The sharp decline in activity among trading partners has reduced demand for Norwegian export products. The decline in Norwegian exports has occurred slightly later and been somewhat more moderate than observed in a number of other countries (see Chart 2.14). The fall in prices for many Norwegian export products towards the end of 2008 has reduced export companies' profitability. Norway's terms of trade have nevertheless remained relatively favourable (see Chart 2.15). According to quarterly national accounts figures, exports fell markedly in the first half-year, but foreign trade statistics showed that traditional merchandise exports increased between 2009 Q2 and Q3. The regional network reports that the export industry is expecting approximately unchanged activity over the next half-year. Mainland exports are projected to fall by 9¼% this year, followed by an increase of 1¾% in 2010 (see Chart 2.16). Looking ahead, we expect export growth to be lower than market growth abroad.

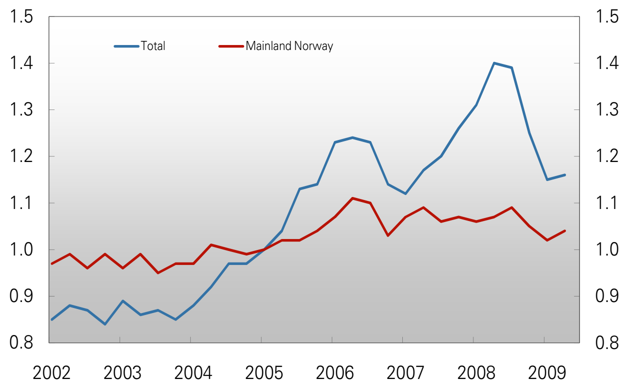
The contraction in private investment has been somewhat more moderate in Norway than in a number of other countries over the past year (see Chart 2.17). Business

Chart 2.14. Exports. Norway[1] and four trading partners[2]. Seasonally adjusted. Index 2008 Q2 = 100. 2008 Q2 – 2009 Q2



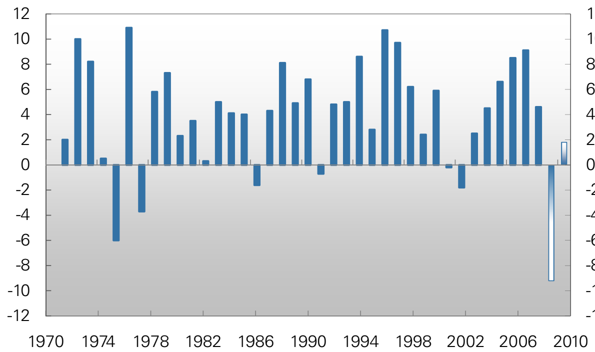
1) Exports from mainland Norway
2) Figures based on OECDs Economic Outlook 85
Sources: OECD and Statistics Norway

Chart 2.15 Terms of trade. Index 2005 Q1 = 1. 2002 Q1 – 2009 Q2



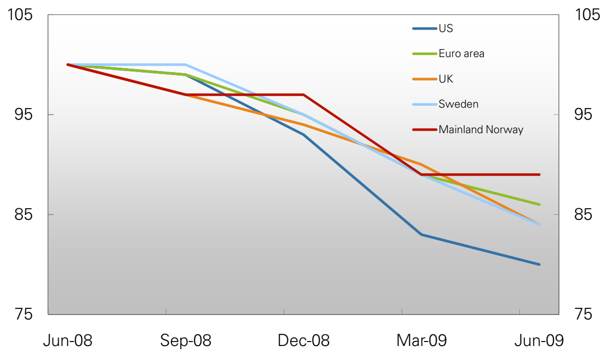
Source: Statistics Norway

Chart 2.16 Exports from mainland Norway. Annual change. Volume. Per cent. 1971 – 2010[1]



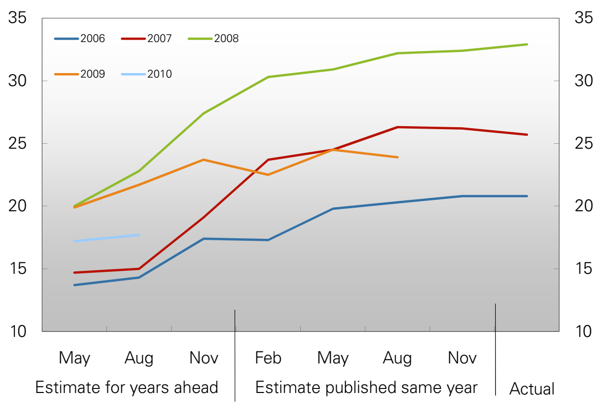
1) Projections for 2009 og 2010
Sources: Statistics Norway and Norges Bank

Chart 2.17 Private investments. Norway and four trading partners. Seasonally adjusted. Index 2008 Q2 = 100. 2008 Q2 – 2009 Q2



1) Investments in mainland Norway
2) Figures based on OECDs Economic Outlook 85
Sources: OECD and Statistics Norway

Chart 2.18 Manufacturing investment statistics. Estimated and actual investment. In billions of NOK. 2006 – 2010



Source: Statistics Norway

investment dropped sharply in the first half-year, but the fall was somewhat smaller than projected in the June *Report*. Investment is expected to continue to fall over the next quarters. Commercial building starts have shown a pronounced decline. Capacity utilisation in manufacturing has moved down to its lowest level since 2002 – 2003, and profitability has weakened. According to the investment intentions survey, manufacturing firms plan to reduce investment further in 2010 (see Chart 2.18). High investment in the energy sector will, however, support business investment. Corporate credit growth is slowing, but Norges Bank's third-quarter lending survey indicates that enterprises' access to bank credit has improved and that this tendency will continue in 2009 Q4. At the same time, borrowing in the bond market has become more accessible and less costly. The decline in business investment will probably come to a halt in the course of 2010 as growth recovers, funding conditions improve further and interest rates remain low.

Housing investment is expected to continue to fall in the latter half of this year, but at a somewhat slower pace than earlier this year. Housing starts are no longer falling, but are at a very low level. Increased spending on home refurbishment is probably restraining the fall in housing investment. According to the regional network, there are signs of a moderate recovery in housing construction, but this is primarily concentrated on detached dwellings and small dwellings. It may take time to see starts of major residential flat building projects. Housing starts are expected to reach close to 20 000 in 2009. This is lower than implied by underlying demand. Statistics Norway's orders statistics show that the fall in new orders for dwellings came to a halt in the first quarter and that it started to rise in the second quarter. The fall in interest rates in the period to summer and improved access to residential mortgages have boosted demand for dwellings. This is reflected in house prices, which showed a seasonally adjusted increase of 12% since the bottom observed in November last year, and in the flattening out of the fall in household credit growth. Housing starts are expected to edge up towards the end of the year and into 2010. Against this background, housing investment may start to increase towards the middle of next year.

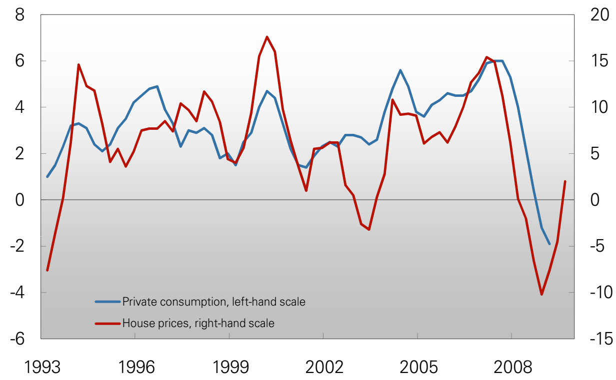
After falling over four consecutive quarters, private consumption increased in 2009 Q2. Consumption growth is expected to gather momentum and be high into next year. Owing to low consumption growth at the beginning of this year, average growth between 2008 and 2009 will nevertheless remain approximately unchanged. Consumption is projected to grow by 5½% in 2010. According to indicators of spending on goods, consumption will be noticeably higher in the third quarter than previously projected. The latest surveys from TNS Gallup and Opinion show that household perceptions of the outlook for the domestic economy, and labour market conditions in particular, are steadily improving. That points to increased consumer spending ahead. At the same time, housing wealth has improved as a result of higher house prices, which may underpin growth in consumer spending (see Chart 2.19). Relatively high, continued population growth will also support consumer spending growth. Growth in wage income is projected to be moderate, but a marked fall in net interest expenses and lower inflation would imply a 5% increase in real disposable income excluding dividend income in 2009 (see Chart 2.20). Growth in real disposable income is projected to drop to 4% in 2010. Household saving has increased as expected. The rise in saving since autumn 2008 is primarily reflected in increased net lending. A portion of the growth in financial saving probably reflects uncertainty concerning the effects of the financial crisis. The saving ratio excluding dividend income is projected at 4¾% (see Chart 2.21). In 2010, the saving ratio is expected to move down, but still remain noticeably higher than the level recorded in 2008.

The labour market

According to quarterly national accounts figures, employment has declined since autumn 2008, but the decline has been more moderate than expected in the June *Report*.

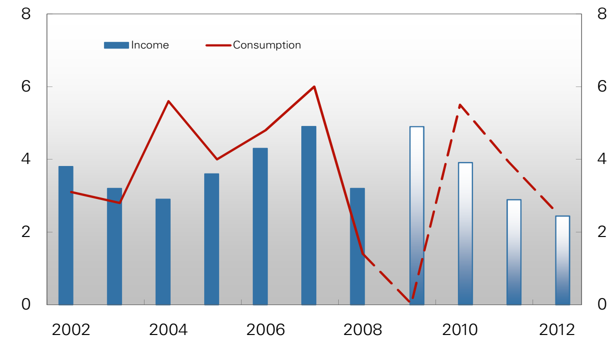
It may have taken time for enterprises to adapt their workforces to the sharp fall in production, and some enterprises may have preferred to retain skilled staff. The number of hours worked, as measured in the quarterly national accounts, has decreased to a somewhat further extent than employment. Enterprises in the regional network report that this reflects lower use of overtime hours, partial lay-

Chart 2.19 Private consumption[1] and real house prices. Four-quarter change. Per cent. 1993 Q1 – 2009 Q3



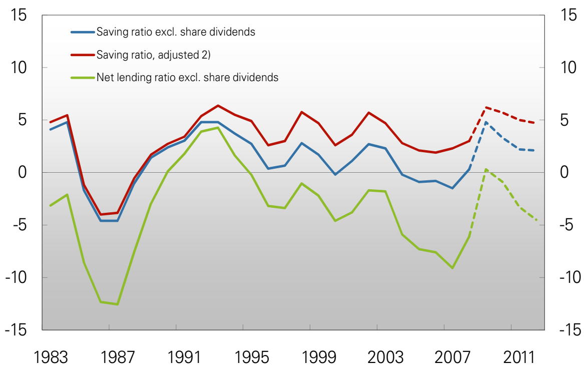
1) Seasonally adjusted and smoothed. Volume
Sources: Statistics Norway and Norges Bank

Chart 2.20 Household real disposable income[1] and consumption[2]. Annual growth. Per cent. 2002 – 2012[3]



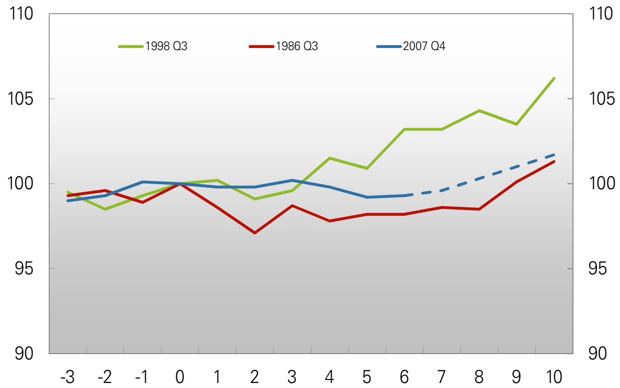
1) Excluding share dividends
2) Includes consumption in non-profit organisations. Volume
3) Projections for 2009 – 2012 (broken line)
Sources: Statistics Norway and Norges Bank

Chart 2.21 Household saving and net lending as a share of disposable income. Per cent. 1983 – 2012[1]



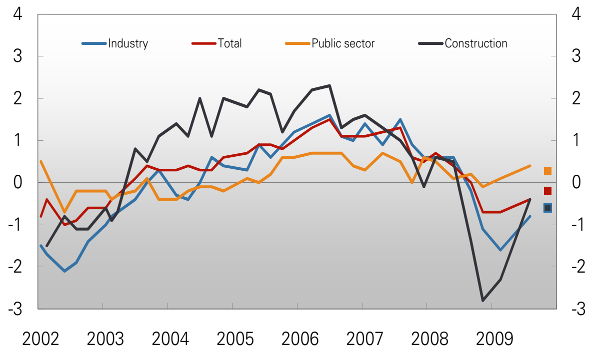
1) Projections for 2009 – 2012 (broken line)
2) Adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2012
Sources: Statistics Norway and Norges Bank

Chart 2.22 Productivity growth in Mainland Norway after a business cycle peak. GDP per person hour (base value). Seasonally adjusted quarterly numbers. Index[1)]



1) Index is set at 100 in the quarter when the capacity utilisation was at its peak
The series labels refer to the peak quarter. Capacity utilisation is estimated using an HP-filter
Sources: Statistics Norway and Norges Bank

Chart 2.23 Indicator for actual change in employment and expected change in employment in next three months. Index.[1)] October 2002 – December 2009[2)]



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
2) Last observation September 2009
Source: Norges Bank's regional network

offs and reduced full-time fractions. In addition, some enterprises report a reduction in new recruitment to replace normal staff retirement, and lower intake of recent graduates. In many sectors, the employment level is still high in relation to production. Between 2008 Q2 and 2009 Q2, productivity for mainland Norway fell by 0.6%. Productivity growth over the past year is the lowest recorded since 1988. In Q2, productivity edged up, but it is still low. It may be that it is particularly problematic to measure changes in employment and output when cycles shift as rapidly as has been the case this time. During the preceding expansion, capacity utilisation peaked towards the end of 2007. Subsequently, productivity has been weaker than in the wake of the previous cyclical downturn (see Chart 2.22). Developments are more similar to the picture from the end of the 1980s. At that point, it also took some time for the number of hours worked to fall markedly.

Employment is expected to continue to drift down to the end of this year even if production edges up. Workforces will in that case be better adapted to the production level so that productivity can increase through the remainder of 2009 and into 2010. Such a path for employment is in line with information from various surveys. According to the regional network, there are prospects of a further fall in employment in manufacturing and the building and construction sector (see Chart 2.23). Enterprises in the retail industry and private services expect approximately unchanged employment ahead, while employment is expected to continue to rise in the public sector. Business sentiment surveys from Statistics Norway and the Confederation of Norwegian Enterprise also indicate reduced need for labour in the coming period. Overall, employment is projected to fall by ¼% in both 2009 and 2010.

At the same time, average working hours will move up again so that the number of hours worked will increase somewhat faster than employment. The number of hours worked is projected to fall by ¾% in 2009, followed by a rise of about ¼% in 2010.

Labour force growth levelled off in Q1, and the labour force has contracted somewhat in recent months. Normally, labour force participation falls when labour demand declines. A rising share of youths is opting for higher education. University and college applicants were record high this autumn and admissions were higher than in previous years. Labour force participation rates among youths under the age of 25 have already shown an appreciable decline. On the other hand, population growth remains firm, with growth projected at 1½% this year, resulting in moderately positive growth in the labour force (see Table 2.3). The fall in labour force participation will probably continue through 2010 and 2011. The projections are based on lower immigration ahead.

The sharp rise in unemployment towards the end of 2008 and the beginning of 2009 came to a halt as early as in April. Subsequently, unemployment has increased again, but at a much slower pace than expected (see Chart 2.24). The moderate growth in unemployment reflects growth in public employment, reduced labour supply among persons under the age of 25 and labour retention among firms pending an increase in demand. Labour immigration has accounted for a considerable share of growth in the labour force in recent years. A large portion found work in the construction industry and manufacturing, where the first job losses seem to have occurred. Some may have returned to their home country, while others are not eligible for unemployment benefits. The share registered as unemployed must therefore be expected to be lower than for persons with longer seniority in the Norwegian labour market.

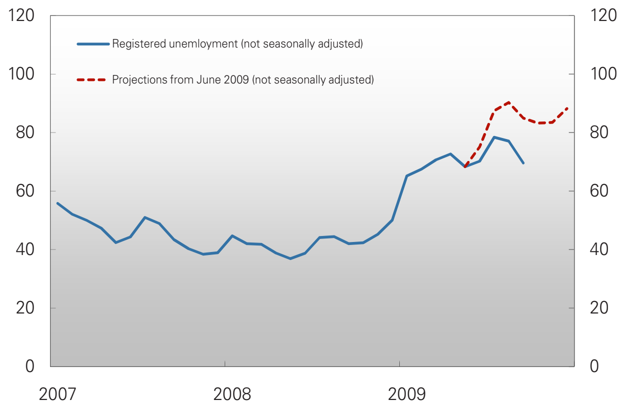
Given the decline in employment, unemployment will continue to increase moderately in the months ahead. Against the background of slower-than-expected growth in unemployment, the projection for unemployment has been revised down considerably for 2009 and 2010. Registered unemployment is projected to increase to 3%, or by around 80 000, at the beginning of 2010 (see Chart 2.25). As measured by the Labour Force Survey (LFS), unemployment will normally be around ¾ percentage point higher than registered unemployment.

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

	2009	2010
Population growth in the age group 15–74	1½	1¼
Contribution from change in population composition	-¼	-¼
Cyclical contribution	-1	-¾
Labour force growth	¼	¼

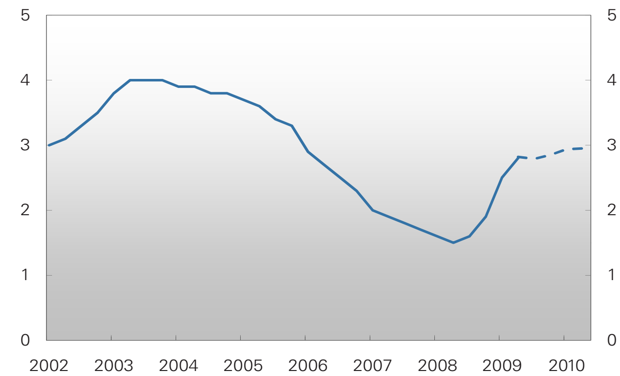
Source: Norges Bank

Chart 2.24 Registered unemployment. In 1000s. Actual figures and Norges Bank's projections from June 2009. January 2007 – December 2009[1)]



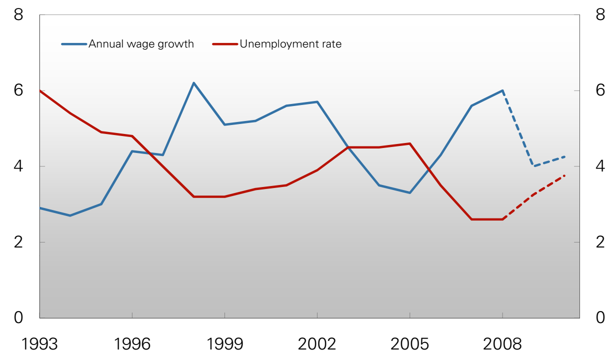
1) Last observation September 2009
Sources: NAV and Norges Bank

Chart 2.25 Registered unemployment. Per cent of labour force. Seasonally adjusted. 2002 1Q – 2010 2Q[1)]



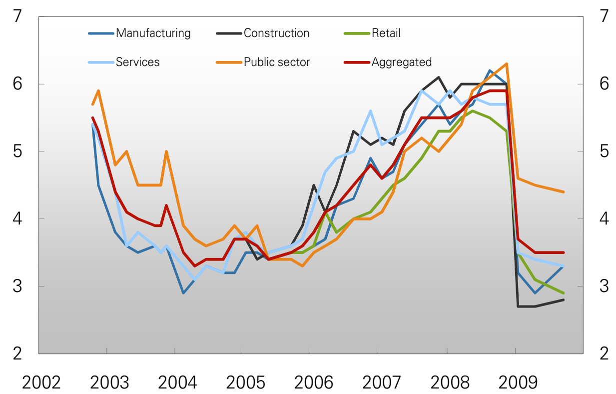
1) Projections for 2009 Q4 – 2010 Q2 (broken line)
Sources: NAV, Statistics Norway and Norges Bank

Chart 2.26 Annual wage growth[1)] and LFS unemployment. Per cent. 1993 – 2010[2)]



1) Including estimated costs of increase in number of vacation days and introduction of mandatory occupational pensions
2) Projections for 2009 and 2010 (broken lines)
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements and Norges Bank

Chart 2.27 Expected annual wage growth current year. Per cent. October 2002 – September 2009



Source: Norges Bank's regional network

Wage growth

Wage growth is projected at 4% in 2009 (see Chart 2.26). According to the social partners, the private sector wage settlement resulted in annual wage growth between 3½% and 4% this year. The pay increase for the public sector was between 4½% and 4¾%. The contribution to wage growth from a high carry-over is considerable this year. Current statistics indicate that wage growth so far this year is broadly in line with the projection for 2009. Weak manufacturing profitability as a result of both a fall in product prices and a low productivity level suggest moderate wage growth ahead. At the same time, wage growth among trading partners is low. Against this background, the competitiveness of internationally exposed industries may weaken further in the period ahead. In isolation, this may contribute to curbing wage growth. On the other hand, relatively low unemployment ahead in Norway will contribute to pushing up wage growth. Wage growth is projected to increase to 4¼% in 2010. The projections imply an increase in real wage growth from 1¾ % this year to 2½% next year.

According to the regional network, wage growth will be between 2.8% and 4.4% in the different industries (see Chart 2.27). According to Perduco's expectations survey for the third quarter, the social partners expect wage growth to range between 3.4% and 4.0% in 2009 and between 3.5% and 4.1% in 2010.

Assumptions concerning fiscal policy and oil investment

Fiscal policy

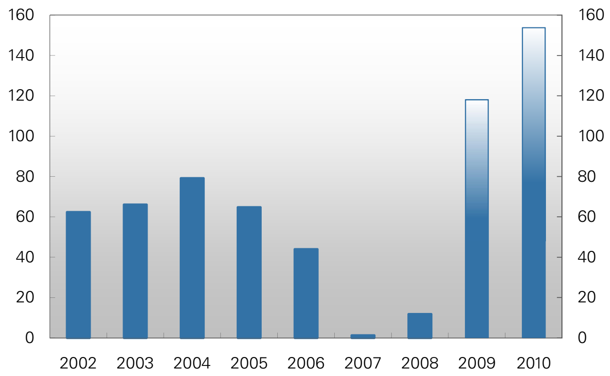
Fiscal policy is expansionary this year. According to the National Budget for 2010, fiscal policy will provide further, albeit milder expansionary impulses to the economy next year. The non-oil deficit will increase by a good NOK 106bn between 2008 and 2009 (see Chart 2.28), and by a further NOK 36bn between 2009 and 2010. Automatic stabilisers will contribute a good two-thirds to this weakening. Of the government's estimated net petroleum revenues in 2010, NOK 153.8bn will be spent over the government budget, while NOK 66.6bn will be transferred to the Government Pension Fund – Global. For 2010, the structural, non-oil budget deficit is estimated at close to NOK 150bn, which amounts to 5.7% of the Fund's capital. The structural, non-oil budget deficit is estimated to increase by 3.0 percentage points of mainland GDP between 2008 and 2009, and by 0.6 percentage point between 2009 and 2010. The National Budget 2010 estimates growth in underlying government budget expenditure at around 11% in 2009 and 5% in 2010.

Our projections are based on an expansionary impetus from fiscal policy in 2010 in line with the National Budget. For 2011 and 2012, the projections are based on the technical assumption that the structural, non-oil budget deficit will remain unchanged from the level in 2010 (see Chart 2.29).

Petroleum investment

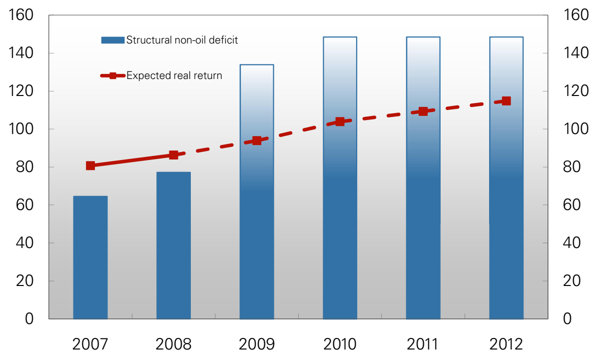
Petroleum investment has increased substantially in recent years (see Chart 2.30). Figures from the quarterly national accounts show that investment continued to expand rapidly in 2009 Q1, but fell by 5% in Q2. Investment is projected to continue to fall in the latter half of this year. Against the background of the high investment level towards the end of 2008 and the beginning of 2009, investment is still estimated to increase by 7½% in volume terms between 2008 and 2009. In value terms, investment is estimated to increase by 10-12%, which is in line with the investment intentions survey for the third quarter.

Chart 2.28 Non-oil budget deficit. In billions of NOK. 2002 – 2010[1)]



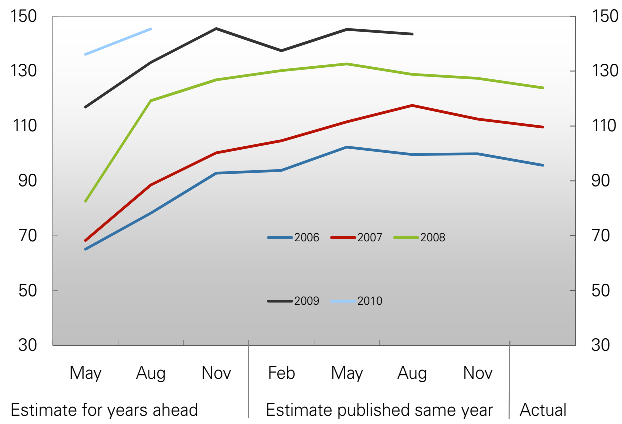
1) Projections for 2009 and 2010
Source: Ministry of Finance

Chart 2.29 Structural non-oil deficit and expected real return on the Government Pension Fund – Global. In billions of 2010 NOK. 2007 – 2012[1)]



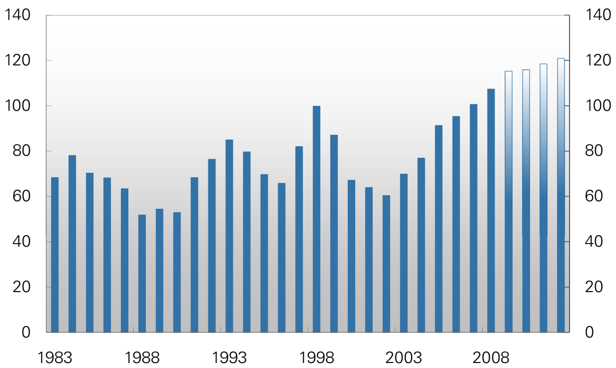
1) Projections from Ministry of Finance and Norges Bank for 2009 – 2012 (broken line).
Sources: Ministry of Finance and Norges Bank

Chart 2.30 Investment statistics for the petroleum industry. Estimated and actual investment. In billions of NOK. 2006 – 2010



Source: Statistics Norway

Chart 2.31 Petroleum investment. Fixed 2006-prices. In billions of 2009 NOK. 1983 – 2012[1)]



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

The investment intentions survey indicates that petroleum investment will continue to be high in 2010. Spending on exploration and production drilling seems to be increasing markedly, but is partly offset by lower spending on goods and services for field development and fields in operation. The change in investment composition will contribute to reducing demand for the Norwegian supplier industry. Several investment projects are planned on the Norwegian continental shelf in the coming years. There are indications that planned investments require an oil price of around USD 70 per barrel to be profitable. Our projections are based on a rise in the oil price in line with oil futures prices. This implies a gradual rise in oil prices from USD 75 per barrel this autumn to around USD 85 per barrel in the beginning of 2012. Against this background, petroleum investment is projected to be high in the period 2010-2012 (see Chart 2.31).

Annex

Boxes 2005 – 2009

Publications in 2008 and 2009 on Norges Bank's website

Regional network: enterprises and organisations interviewed

Monetary policy meetings

Tables and detailed projections

Boxes 2005 – 2009

3 / 2009:
Unwinding of extraordinary measures
CPI adjusted for the frequency of price changes

2 / 2009:
The arrangement for the exchange of government securities for bonds
Structural liquidity
Household behaviour

1 / 2009:
Deep downturn in the global economy
Evaluation of the projections for 2008

3 / 2008:
The NIBOR market
Norwegian financial crisis measures
How does the financial crisis affect developments in the real economy?
A summary of financial market events since June

2 / 2008:
Underlying inflation
SAM - System of models for short-term forecasting

1 / 2008:
Factors driving the rice in domestic and global food prices
Cross-checks for the krone exchange rate
Evaluation of the projections for 2007

3 / 2007:
Liquidity management in Norges Bank
Central bank response to financial turbulence
Household saving
NEMO - a new projection and monetary policy analysis model

2 / 2007:
Is global inflation on the rise?
Developments in productivity growth
How often do firms change their prices?

1 / 2007:
Will the global economy be affected by a slowdown in the US?
Uncertainty surrounding wage growth ahead
Competition and prices
Evaluation of projections for 2006

3 / 2006:
Output gap uncertainty

2 / 2006:
Money, credit and prices - a monetary cross-check
Foreign labour in Norway
Short-term forecasts for mainland GDP in Norway

1 / 2006:
Choice of interest rate path in the work on forecasting
Productivity growth in Norway
The yield curve and economic outlook in the US
Evaluation of Norges Bank’s projections for 2005

3 / 2005:
Uncertainty surrounding future interest rate developments
Accuracy of short-term interest rate expectations
Output gap uncertainty
Increased imports from low-cost countries
Effects of high oil prices on the world economy

2 / 2005:
Developments in the krone exchange rate

1 / 2005:
Criteria for an appropriate future interest rate path
Why are long-term interest rates so low?
Low inflation in the Nordic countries
Developments in household debt
Evaluation of Norges Bank´s projections for 2004

Publications in 2008 and 2009 on Norges Bank's website

Economic commentaries

This series consists of short, signed articles on current economic issues.

2009/6 *Temporary halt in labour migration to Norway?* Kaj W. Halvorsen, Marie Norum Lerbak and Haakon Solheim
2009/5 *The IMF in change – loan from Norges Bank.* Morten Jonassen, Bente Støholen and Pål Winje
2009/4 *Are household debt-to-income ratios too high?* Tor Oddvar Berge and Bjørn Helge Vatne
2009/3 *Norwegian krone no safe haven.* Alexander Flatner
2009/2 *Relationship between key rates and money market rates.* Ida Wolden Bache and Tom Bernhardsen
2009/1 *Higher risk premiums on government debt.* Tom Bernhardsen and Terje Åmås
2008/6 *Asset prices, investment and credit – what do they tell us about financial vulnerability?* Magdalena D. Riiser
2008/5 *Has residential construction been too high in recent years?* Marita Skjæveland
2008/4 *Downturn in the US – crisis or welcome moderation for the world economy?* Hans Petter Wilse
2008/3 *CPIXE, a new indicator of underlying inflation.* Einar W. Nordbø
2008/2 *Effects of higher oil prices on the Norwegian economy.* Haakon Solheim
2008/1 *The rise in oil prices - fundamental and financial factors.* Farooq Akram and Pål Winje

Staff Memo

Staff Memos present reports and documentation written by staff members and affiliates of Norges Bank, the central bank of Norway.

2009/10 *Banking crisis resolution policy - different country experiences.* David G. Mayes
2009/9 *Noregs Bank. Grunntrekk i administrasjon, oppgåver og historie.* Egil Borlaug og Turid Wammer. Norwegian only
2009/8 *Money and credit in Norway.* Christian Kascha
2009/7 *The basic balance.* by Kathrine Lund
2009/6 *Solvensavstand og andre risikoindikatorer for banker* (Distance to insolvency and other risk factors for banks). Per Atle Aronsen and Kjell Bjørn Nordal. Norwegian only
2009/5 *Costs in the Norwegian payment system: questionnaires.* Olaf Gresvik and Harald Haare
2009/4 *Costs in the Norwegian payment system.* Olaf Gresvik and Harald Haare
2009/3 *Teknisk beregning av KPIXE* (Technical calculation of the CPIXE). Marius Nyborg Hov. Norwegian only
2009/2 *Renter og rentemarginer* (Interest rates and interest margins). Asbjørn Fidjestøl. Norwegian only
2009/1 *Effekten av en inndragning av 50-øremynten på inflasjonen* (The effect on inflation of the withdrawal of the 50-øre coin from circulation). Fredrik Wulfsberg. Norwegian only
2008/10 *Comparing monetary policy transparency. The Eijffinger and Geraats index - a comment.* Carl Andreas Claussen
2008/9 *Costs in the Norwegian payment system 2007 – a brief overview of the surveys and results.* Olaf Gresvik and Harald Haare
2008/8 *Trondhjem som hovedsete for Norges Bank – noen faktiske og kontrafaktiske betraktninger* (Trondheim as the location of Norges Bank's headquarters – some factual and counterfactual comments). Lars Fredrik Øksendal. Norwegian only
2008/7 *CPIXE and projections for energy prices.* Einar W. Nordbø

2008/6 *Payment habits at point of sale. Different methods of calculating use of cards and cash in Norway.* Olaf Gresvik and Harald Haare
2008/5 *Stress testing the enterprise sector's bank debt - a micro approach.* Eivind Bernhardsen and Bjørne Dyre Syversten
2008/4 *Improving and evaluating short term forecasts at the Norges Bank.* Hilde C. Bjørnland, Anne Sofie Jore, Christie Smith and Leif Anders Thorsrud
2008/3 *The relationship between the key policy rate and macroeconomic variables: A simple cross-check for Norway.* Tom Bernhardsen
2008/2 *A suite-of-models approach to stress-testing financial stability.* Henrik Andersen, Tor O. Berge, Eivind Bernhardsen, Kjersti-Gro Lindquist and Bjørn Helge Vatne
2008/1 *Simple cross-check models for the krone exchange rate.* Tom Bernhardsen

Economic Bulletin

The articles are written by Norges Bank employees and are peer-reviewed.

2009/1:

Evaluation of Norges Bank's projections for 2008. Bjørn E. Naug
Costs in the payment system. Olaf Gresvik og Harald Haare
Macroeconomic shocks – effects on employment and the labour supply. Haakon Solheim
Economic perspectives. Address by Governor Svein Gjedrem at the meeting of Norges Bank's Supervisory Council on 12 February 2009
NEMO – a new macro model for forecasting and monetary policy analysis. Leif Brubakk and Tommy Sveen

2008/2:

Who is borrowing – for what – and can they afford it? A study of comprehensive micro data for Norwegian households through 2006. Bjørn Helge Vatne
Price-setting behaviour of Norwegian firms – results of a survey. Nina Langbraaten, Einar W. Nordbø and Fredrik Wulfsberg
Rising food prices – a driving force behind inflation? Tove Katrine Sand and Bente Støholen
Stress testing of banks' profit and capital adequacy. Henrik Andersen and Tor Oddvar Berge
Economic implications of copulas and extremes. Lorán Chollete

2008/1:

Jarle Bergo: A professional monetary policymaker steps down. Arne Jon Isachsen
Economic perspectives. Address by Governor Svein Gjedrem
Collateral for loans from Norges Bank – consequences of changes in the rules. Bjørn Bakke, Knut Sandal and Ingrid Solberg
On commodity derivatives and the Norwegian initiatives to create a fish derivatives market. Gunnvald Grønvik
The effects of economic news on Norwegian market interest rates. Knut Eeg
Evaluation of Norges Bank's projections for 2007. Raymond Lokshall

Regional network: enterprises and organisations interviewed

A/S Th. Marthinsen Sølvvarefab-rikk
ABB AS
Accenture AS
Adecco Norge AS
Adecco Norge AS, Hamar
Advokatfirmaet Thommessen AS
Af gruppen ASA
Ahlsell Norge AS
AIT Otta AS
Aker MH AS
AKVA Group ASA
Alexandra Hotel AS
Alta kommune
Alvdal skurlag AL
Alvdal Tynset sport AS
Amfi Namsos
Arena treningssenter AS
Arendal kommune
Asko Agder AS
Avigo AS
Avinor AS
Axess AS
B&T låsservice AS
Bakers AS
Bakke el-installasjon AS
Becotek AS
Bergans fritid AS
Bilia AS
Bilsenteret Namsos AS
Biotec Pharmacon ASA
Birkenes kommune
BN entreprenør AS
Bohus AS
Bohus Møbel-Sven AS
Boligpartner AS
Borregaard
Br. Dyrøy AS
Bring Logistics AS, Stavanger
Brødrene Harsjøen AS
Bussbygg AS
Bussen trafikkselskap AS
Bygg og maskin AS
Byggmakker Norge AS
Byggservice Nord-Østerdal AS
Bærum kommune
Bø fiskeindustri AS
Bø kommune
Baatservice gruppen
Caiano hotelldrift AS
Chriship AS
City syd AS
Clarkes AS
Comhouse AS
Consto AS
Coop Haugaland BA
Coop Midt-Troms BA
Dale og Bang kommunikasjon
DDB Oslo AS
Diplom-Is AS, Brevik
DnB NOR bank ASA, region Sør-landet
DnB NOR eiendom AS
E A Smith AS
E. Flasnes transport AS
Eiendomsmegler 1 Midt-Norge AS
Eiendomsmegler Vest AS
Elkjøp Finnsnes AS
Elverum kommune
Ernst & Young AS
Evensen & Evensen AS
Expert ASA
Falkanger sko AS
Ferner Jacobsen AS
Fesil AS
Figgjo AS
First Hotel Victoria
Fjeldseth AS
Fjordkjøkken AS
Folk i husan eiendomsmegling AS
Forestia AS
Fosnavaag Seafood AS
Foss fabrikker AS
Furnes hamjern holding AS
Furset gruppen AS
Gange Rolv AS
Gausdal kommune
Gausdal landhandleri AS
Gilje tre AS
Gresvig ASA, Sport
Grunnarbeid AS
Grytnes betong AS
Halliburton Norge Holding AS
Hamco bygg AS
Hans H. Iversen AS
Hansa Borg bryggerier ASA
Haram kommune
Harstad kommune
Harstad mekaniske verksted AS
Havila AS
Helse Fonna HF
Helse Sunnmøre HF
Herlige Stavanger restauranter AS
Herøy kommune
Hoff norske potetindustrier SA
Hovden Møbel AS
HRG Nordic, Bodø og Tromsø
Hunderfossen Familiepark AS
Huurre Norway AS
Hydro aluminium AS
Hydro Aluminium Structures Rau-foss AS
Hå kommune
IBM Centre of Excellence Oil & Gas
IKEA AS, Åsane
IKM gruppen AS
Ikon AS
Inmedia AS
Intra AS

Ipec Kristiansand AS
ISS Facility Services AS
IT partner Finnmark AS
Jensen møbler AS
Jobbnorge AS
Johan Kjellmark AS
Jærentreprenør AS
Kanstad trelast AS
KLP eiendom Trondheim AS
Komplett ASA
Kongsberg gruppen ASA
KPMG AS, Bodø
KPMG AS, Stavanger
Krogsveen Hamar AS
Kroken caravan AS
Kruse Smith AS, Forus
Kvestor Pro AS
Landskapsentreprenørene AS
Larsen Atterås & Brosvik AS
Lians caravan & fritid AS
Lier kommune
Lillehammer kommune
Lindesnes kommune
Link signatur AS
Litra AS
Lofotprodukt AS
L'Oréal Norge AS
Lyse energi AS
Mainstream Norway AS
Majas salong AS
Malo sagbruk AS
Manpower AS, Bodø
Marine Cybernetics AS
Melby snekkerverksted AS
Mesta konsern AS
Mester Grønn AS
Mills DA
Minera AS
Moelven limtre AS
Moelven Nordia AS
Moelven Nordia AS, Trondheim
Moelven Van Severen AS
Moelven Våler AS
Multiconsult AS, Trondheim
Møre og Romsdal kornsilo ANS
Namsos kommune
Naustvoll & Aursand arkitekter AS
NAV Nord-Trøndelag
NAV Vest-Agder
NCC Construction AS
Nesje AS
Nesseplast AS
Nexans Norway AS, Rognan
Nidar AS
Nielsen Norge AS
Nikita gruppen AS
Nobia AS
Norautron AS
Norbitech AS
NorDan AS, Hedmark/Oppland
Nordlandsbanken ASA
Nordlandssykehuset HF
Norengros Johs Olsen AS
Norgesgruppen ASA
Norgestaxi Trondheim AS
Norsk sjømat AS
Notar eiendom Ålesund AS
Notodden mur- og entreprenørforretning AS
Novagroup AS
Nycomed Pharma AS
Næringsråd i Arendal kommune
Obos
Offshore & Trawl Supply AS
Olav Thon eiendomsselskap ASA
Optimera AS
Oracle Norge AS
Oras Nordland AS
Orkidéekspressen AS
Os ID AS
Overhalla cementvare AS
P4 Radio hele Norge ASA
PA Consulting Group AS
Peterson Linerboard AS, Ranheim
Petter Gagama AS
Picasso frisør AS
Plasto AS
Polarkonsult AS
Privatmegleren AS
Proffice AS
Protan AS
Proviantgruppen AS
ProxII AS
Quality Hotel Augustin AS
Radisson SAS Hotel Norge
Ragasco AS
Randaberg kommune
Rasmus Tallaksen AS
REC Scancell AS
Redcats AS
Reinertsen AS
Reklamehuset Roxrud AS
Rema 1000 Norge AS, region vest
Restco AS
Revisorkonsult AS
Rica ishavshotell Tromsø
Rofiskgruppen AS
Romerike trelast AS
Romsdal bygg AS
Romsdals budstikke AS
Ruukki profiler AS
Røros-tweed AS
Rørosbanken Røros sparebank
Saga Boats AS
Samarbeidende revisorer AS
SATS Norge AS, Langnes
Scandic Hotel Kristiansand
Securitas AS, avd Olje og gass
Sensonor AS
SG finans AS, Trondheim
Siemens AS, Industry Solutions
Signal bredbånd AS
Sinkaberg-Hansen AS
SIVA selskapet for industrivekst SF
Skagen AS

Skagerak energi AS
Skedsmo kommune
SKS produksjon AS
Smurfit Kappa Norpapp AS
Sogn billag AS
Solem Hartmann AS
Sortland kommune
Spar kjøp AS
Sparebank 1 gruppen AS
Sparebank 1 Midt-Norge
Sparebanken Hedmark, Nord-Østerdal
Sparebanken Møre region Romsdal og Nordmøre
Sparebanken Volda Ørsta
Sportshuset AS
Stansefabrikken Lillesand AS
Steni AS
Stiftelsen Akvariet i Bergen
Stormoa Butikksenter
Storvik AS
Strømsholm fiskeindustri AS
STX Norway Offshore AS
Sunnmørsposten AS
Sveins auto AS
Sørlandet sykehus HF
Sør-Norge aluminium AS
T Kverneland & sønner AS
Tamnes transport AS
Taubåtkompaniet AS
TeleD AS
Telenor Norge
Ticket feriereiser AS
Time sparebank
Toyota Førde AS
Toyota Haugesund AS
Trafikk & anlegg AS
Transportfirma J Høiback
Trend trim Lillesand AS
Trioving AS
Trondheim kommune
Tynset kommune
Tyrholm & Farstad AS
Ullevål sykehus
Veidekke entreprenør AS, distrikt Bergen
Veidekke entreprenør AS, Indre Østland
Via Travel Norge AS
Vikeså glass AS
Vintervoll AS
Voice Norge AS
Volmax AS
Weatherford Laboratories AS
Westco miljø AS
Westnofa industrier AS
YIT Building Systems AS
YIT Building Systems AS, Kristiansand
YIT Building Systems AS, Ålesund
Østerdal billag AS

Monetary policy meetings
with changes in the key policy rate

Date	Key policy rate[1)]	Change
24 March 2010		
3 February 2010		
16 December2009		
28 October 2009	**1.5**	**+0.25**
23 September 2009	1.25	0
12 August 2009	1.25	0
17 June 2009	1.25	-0.25
6 May 2009	1.5	-0.5
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

[1)] The key policy rate is the interest rate on banks' sight 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 fromprevious year/quarter		GDP	Mainland GDP	Private consumption	Public consumption	Mainland fixed investment	Petroleum investment[1]	Mainland exports[2]	Imports
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		2.1	2.6	1.4	3.8	2.4	6.6	4.6	4.4
2008[3]	Q1	0.4	0.4	0.3	1.0	-6.4	-0.6	1.0	0.7
	Q2	0.6	0.6	-0.4	0.6	0.6	-0.8	-0.3	-0.9
	Q3	-0.9	0.1	-0.9	1.0	0.9	2.8	-1.7	0.5
	Q4	0.4	-1.0	-0.7	1.4	-0.6	5.2	-0.8	-4.3
2009[3]	Q1	-0.8	-1.3	-0.4	1.4	-7.7	10.2	-8.3	-10.3
	Q2	-1.3	0.3	0.6	2.0	0.9	-5.8	0.4	2.2
2008-level, in billions of NOK		2548	1830	991	490	380	122	459	733

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

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]
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
	Mar	2.5	2.7	2.7	2.5	2.7	2.6
	Apr	2.9	2.7	2.7	2.9	2.8	2.9
	Mai	3.0	2.9	2.8	2.9	2.9	2.9
	June	3.4	3.3	3.3	3.4	3.3	3.5
	July	2.2	2.5	2.5	2.1	2.6	2.2
	Aug	1.9	2.3	2.3	1.8	2.5	1.8
	Sep	1.2	2.4	2.3	1.1	2.5	1.4

[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 and *Staff Memo* 2009/3 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	Percantage change from previous year (unless otherwise stated)				
			Projections			
	2008	2008	2009	2010	2011	2012
Prices and wages						
CPI		3.8	2¼	1¾	2¼	2½
CPI-ATE[1)]		2.6	2¾	1¾	2¼	2½
CPIXE[2)]		3.1	2½	1¾	2¼	2½
Annual wage growth [3)]		6	4	4¼	4½	4¾
Real economy						
GDP	2548	2.1	-1½	1¾	2½	1¾
GDP, mainland Norway	1830	2.6	-1¼	2¾	3¼	2¾
Output gap, mainland Norway [4)]		2	-1	-½	0	¼
Employment		3.1	-¼	-¼	1	¾
Labour force, LFS		3.1	¼	¼	¾	¾
LFS unemployment (rate)		2.6	3¼	3¾	3½	3½
Registered unemployment		1.7	2¾	3	2¾	2¾
Demand						
Mainland demand [5)]	1861	2.2	0	3¼	4¼	2¾
- Private consumption	991	1.4	0	5½	4	2½
- Public consumption	490	3.8	5¾	3	.	.
- Fixed investment, mainland Norway	380	2.4	-7½	-2½	.	.
Petroleum investment [6)]	122	6.6	7½	0	2½	2½
Mainland exports [7)]	459	4.6	-9¼	1¾	.	.
Imports	733	4.4	-8	2¾	.	.
Interest rate and exchange rate						
Key policy rate (level) [8)]		5.3	1¾	2¼	3½	4¼
Import-weighted exchange rate (I-44) [9)]		90.8	94	91	93	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 and *Staff Memo* 2009/3 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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2009