



NORGES BANK

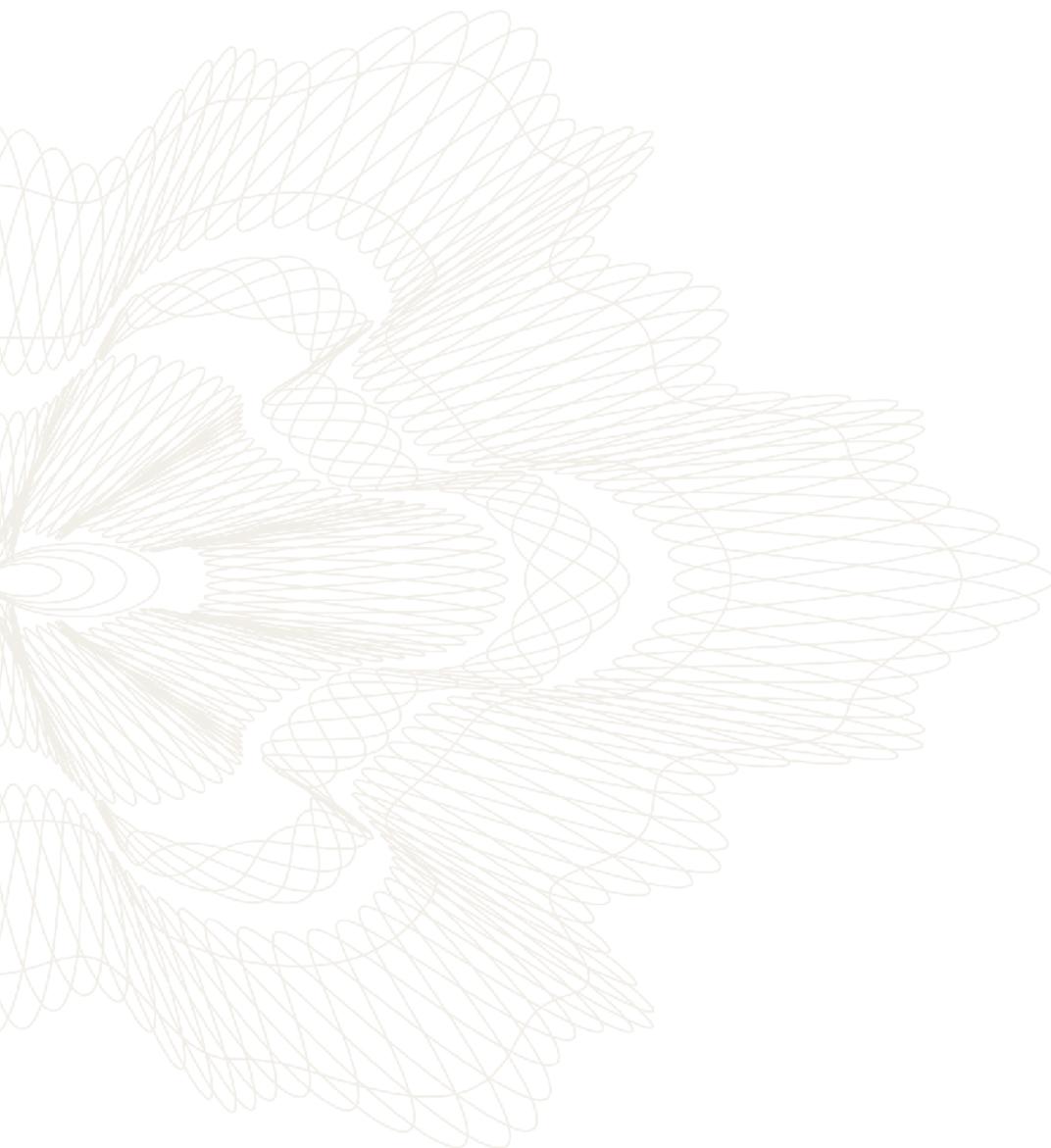
# Monetary Policy Report

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Reports from the Central Bank of Norway No. 1/2010



# Monetary Policy Report 1/2010



Norges Bank

Oslo 2010

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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 3 December, the Executive Board discussed relevant themes for the *Report*. At the Executive Board meeting on 11 March, the economic outlook was discussed. On the basis of this discussion and a recommendation from Norges Bank's management, the Executive Board adopted a monetary policy strategy for the period to the publication of the next *Report* on 23 June 2010 at the meeting held on 24 March. 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 5 May and 23 June.

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This *Monetary Policy Report* is based on information in the period to 18 March 2010.

The monetary policy strategy in Section 1 was approved by the Executive Board on 24 March 2010.

## 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](http://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

### Gradual increase in the key policy rate

In preparing this *Report*, 600 enterprises were contacted through Norges Bank's regional network. The main impression is that output is rising, but growth is not high and some industries are still in decline. The current level of activity appears to be somewhat below the level expected in autumn 2009. Wage growth also appears to be weaker than projected and inflation may be somewhat lower than anticipated.

Growth is strong in Asia, but the upswing in Europe is only moderate. In recent months, developments have been fairly weak among Norway's neighbouring countries. Rapidly rising government debt has fuelled uncertainty about developments, and fiscal tightening has begun in some countries. Low interest rates have contributed to holding up activity. Since autumn, expectations of interest rate hikes in Europe and the US have been moved forward into the future and the Norwegian krone has been stronger than expected.

Norges Bank raised the key policy rate by a total of 0.50 percentage point towards the end of 2009. The Executive Board's strategy is that the key policy rate should be in the interval 1½–2½% in the period to the publication of the next *Monetary Policy Report* on 23 June unless the Norwegian economy is exposed to new major shocks.

The projections in this *Report* do not differ substantially from those in the *October Report*. Based on our current assessment, the interest rate increase will occur somewhat later than expected in autumn 2009, more in line with the outlook in summer 2009. The projections in this *Report* imply that the key policy rate will increase to about 2½% around the end of the year and increase further towards a more normal level thereafter.

Jan F. Qvigstad  
24 March 2010

# 1 Monetary policy assessments and strategy

## The economic situation

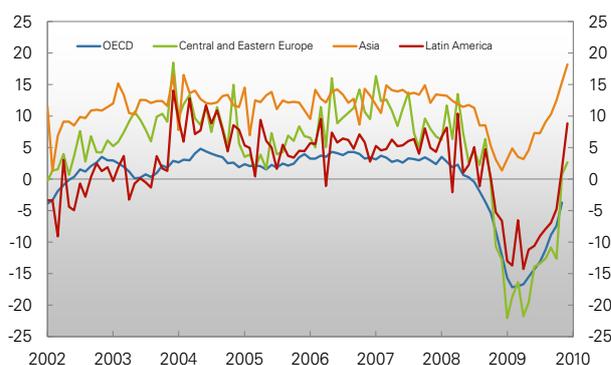
The most acute phase of the global economic crisis appears to have passed. Output growth has resumed in most parts of the world and the recovery has been strongest in emerging market economies in Asia (see Chart 1.1). It appears, however, that the upturn in advanced economies will only be moderate. Substantial spare output capacity will continue to have an impact on many countries ahead.

The crisis has given rise to new imbalances that will dampen the recovery. Fiscal deficits are substantial in many countries and government debt is rising rapidly. Higher risk premiums on government bonds have pushed up borrowing costs for some governments. Deficits have increased markedly because of reduced tax revenues and stimulus measures to underpin activity, but also due to government support measures for banks. Debt growth may become self-reinforcing unless tax revenues increase or spending is reduced quickly enough. Reducing government debt in the US and many European countries will probably take several years.

Even with substantial tax cuts, strong growth in public spending and low interest rates, unemployment has risen considerably in both the US and Europe. In many countries, unemployment has grown by 3–4 percentage points (see Chart 1.2). There is a risk that unemployment will become entrenched, perhaps particularly in Europe.

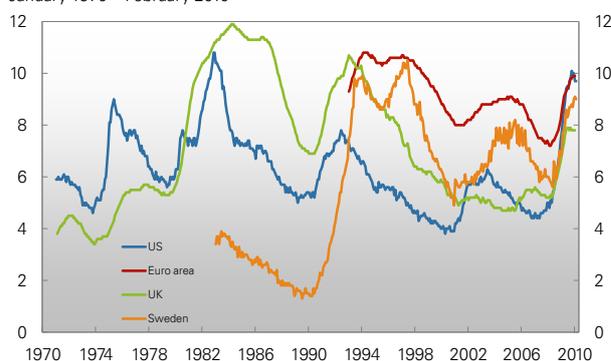
Commodity prices fell sharply in autumn 2008, resulting in very low inflation in most countries through 2009. Commodity prices have now rebounded and inflation has moved up, but inflation expectations have remained stable. Spare capacity and high unemployment will nonetheless exert downward pressure on inflation in the years

Chart 1.1 Manufacturing output in OECD and emerging markets<sup>1)</sup>. Twelve-month change. Per cent. January 2002 – December 2009



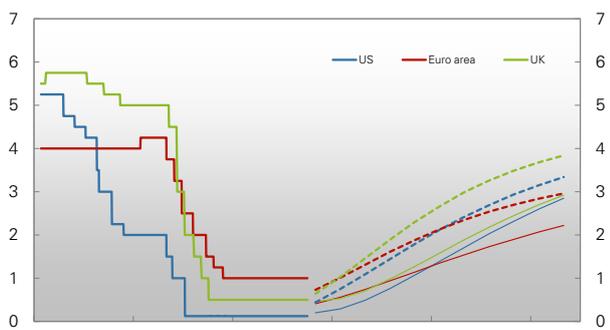
1) Weighted by GDP weights (PPP). See Economic Commentaries 8/2009 for an overview of countries included in the different regions  
Sources: IMF, Thomson Reuters and Norges Bank

Chart 1.2 Unemployment. Share of labour force. Per cent. Seasonally adjusted. January 1970 – February 2010



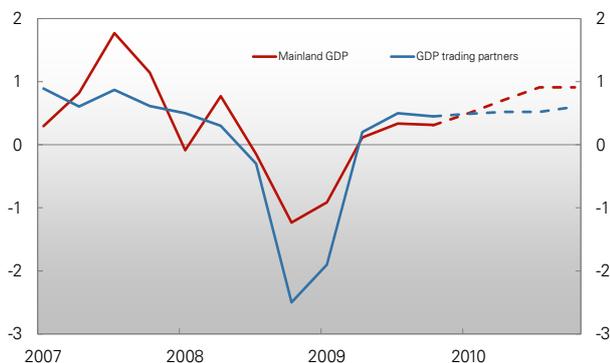
Source: Thomson Reuters

Chart 1.3 Key rates and estimated forward rates at 28 October 2009 and 18 March 2010.<sup>1)</sup> Per cent. 1 June 2007 – 31 December 2012<sup>2)</sup>



1) Broken lines show estimated forward rates as at 28 October 2009. Thin lines show forward rates as at 18 March 2010. Forward rates are based on Overnight Indexed Swap (OIS) interest rates  
2) Daily figures from 1 June 2007 and quarterly figures as at 18 March 2010  
Sources: Bloomberg and Norges Bank

Chart 1.4 GDP growth on previous quarter. Norway and trading partners. Seasonally adjusted. Per cent. 2007 Q1 – 2010 Q4<sup>1)</sup>



1) Projections from 2010 Q1  
Sources: Statistics Norway, OECD, Thomson Reuters and Norges Bank

Chart 1.5 Credit to households<sup>1)</sup> and house prices. 12-month change. Per cent. January 2002 – February 2010<sup>2)</sup>



1) Credit from domestic sources, C2  
2) House prices to February. Credit growth to January  
Sources: Statistics Norway, OPAK, the real estate industry (NEF, EFF, FINN.no and ECON Pöyry), OBOS and Norges Bank

ahead. Consumer price inflation among Norway's trading partners is expected to be 1½% in 2010 and around 1¾% in 2012.

Forward rates among trading partners have fallen markedly since the *October Report*. Imbalances related to high unemployment and high debt in some countries have dampened growth expectations. At the same time, China has tightened economic policy and implemented measures to restrain bank lending growth.

Key rates are close to zero in many countries. A number of central banks have signalled that key rates will be kept low for an extended period, and key rate expectations abroad fell through autumn and winter. Market participants do not anticipate a rise in key rates in the US, the euro area and the UK until the end of 2010 (see Chart 1.3). Sveriges Riksbank expects to begin raising the key rate this summer and that the rate can be gradually increased thereafter. In Norway, market participants still expect the key policy rate to rise, but key rate expectations have fallen markedly and are now lower than projected in the *October Report*.

Equity markets have risen by about 60–70% since the trough at the beginning of March 2009. Oslo Børs reached a peak around the turn of the year, but fell back somewhat in the first two months of 2010, partly reflecting unrest in government bond markets. Overall prices on Oslo Børs are nonetheless around 13% higher than at the end of October 2009.

Spot prices for oil (Brent Blend) have hovered around USD 70–80 per barrel since the *October Report*, underpinned by the recovery in emerging market economies. OPEC has also restricted output. OECD oil stocks are still at elevated levels and OPEC spare production capacity is high. The price of oil for delivery one year ahead is approximately USD 83.

Forward prices indicate that other commodity prices may also rise somewhat ahead. Since the *October Report*, metals prices have increased as a result of improved global economic prospects, although they are still somewhat lower than in summer 2008.

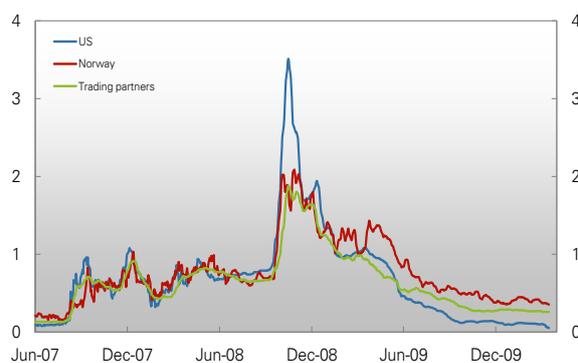
Growth in the Norwegian economy came to a halt in autumn 2008, and Norway entered a downturn in early 2009. Mainland GDP fell by 1½% in 2009. The decline appears to have ended in 2009 Q2. Capacity utilisation is lower than normal, but the downturn seems to be relatively mild (see Chart 1.4).

Activity has been underpinned by substantial interest rate cuts combined with higher public spending and high oil investment. Information that has emerged since the October *Report* indicates that the recovery in the Norwegian economy is continuing. Enterprises in Norges Bank's regional network report moderate growth, although with considerable differences across sectors. Growth is particularly evident in the service industry, while manufacturing and building and construction activity is still low. Exports have picked up after an earlier and somewhat stronger rebound in world trade than expected. Private consumption showed a slightly more moderate increase than expected in the latter half of 2009. The household saving ratio increased markedly in 2009 and at the end of the year was at its highest level since the end of the 1970s. House prices have been somewhat higher than expected, but fell slightly in February. Household credit growth has been relatively stable in recent months at 6–7% (see Chart 1.5).

During the financial crisis, the spread between money market rates and the key rate widened. In autumn 2008, premiums had reached 2 percentage points. Since then, premiums have fallen back and are now around 0.4 percentage point (see Chart 1.6). This is in line with the projections in the October *Report*. Norges Bank raised the key policy rate on two occasions by a total of 0.50 percentage point in 2009 Q4. The feed-through to bank lending rates has so far been somewhat smaller. The average private lending rate increased by 0.09 percentage point from 2009 Q3 to Q4, but the December interest rate increase will probably not feed through until 2010. Weighted mortgage lending rates have increased by 0.24 percentage point since the key rate was raised for the first time in October (see Chart 1.7).

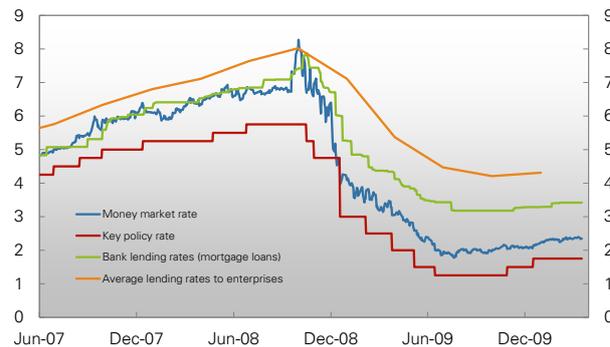
The interest rate differential between Norway and trading partners has increased. The three-month money market

Chart 1.6 Difference between 3-month money market rate and key rate expectations in the market. Percentage points, 5-day moving average. 1 June 2007 – 18 March 2010



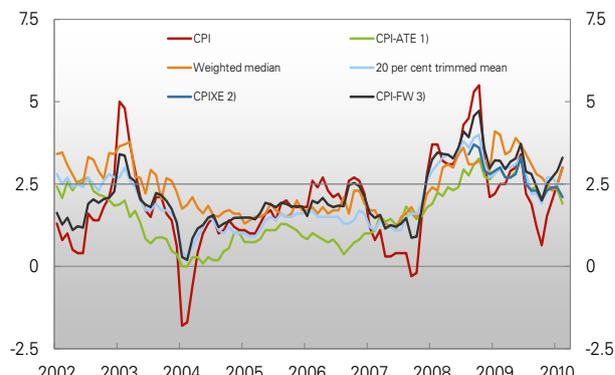
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 1.7 Key policy rate, money market rate<sup>1)</sup>, weighted bank lending rates on new loans<sup>2)</sup> and average lending rates to enterprises<sup>3)</sup>. Per cent. 1 June 2007 – 18 March 2010



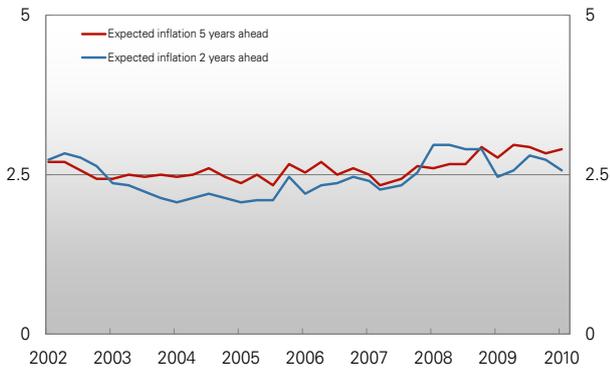
1) 3-month NIBOR (effective)  
 2) Interest rate on new mortgage loans of NOK 1m within 60% of purchase price with variable interest rate. Figures for the 20 largest banks, weighted according to market share  
 3) Non-financial enterprises, 2007 Q2 – 2009 Q4  
 Sources: Norsk familieøkonomi AS, Statistics Norway and Norges Bank

Chart 1.8 Consumer prices, 12-month change. Per cent. January 2002 – February 2010



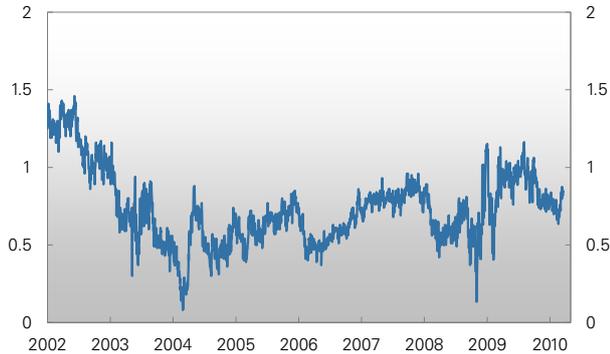
1) CPI adjusted for tax changes and excluding energy products  
 2) CPI adjusted for tax changes and excluding temporary changes in energy prices. CPIXE is a real time series. See *Staff Memo 7/2008* and *3/2009* from Norges Bank for a description of the CPIXE  
 3) CPI adjusted for frequency of price changes. See *Economic commentaries 7/2009* from Norges Bank for a description of the CPI-FW  
 Sources: Statistics Norway and Norges Bank

Chart 1.9 Expected consumer price inflation 2 and 5 years ahead.<sup>1)</sup>  
Per cent. 2002 Q1 – 2010 Q1



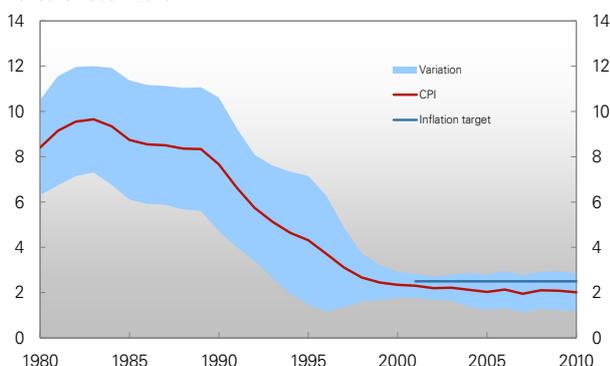
1) Average of expectations of employer/employee organisations and economists (financial industry experts, macro analysts and academia)  
Sources: TNS Gallup and Perduco

Chart 1.10 5-year forward rate differential 5 years ahead between Norway and the euro area. Percentage points. 1 January 2002 – 18 March 2010



Sources: Thomson Reuters and Norges Bank

Chart 1.11 Inflation. Moving 10-year average<sup>1)</sup> and variation<sup>2)</sup> in CPI<sup>3)</sup>.  
Per cent. 1980 – 2010



1) The moving average is calculated 10 years back  
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 CPI from this Report form the basis for this estimate  
Sources: Statistics Norway and Norges Bank

rate differential is now 1.7 percentage points. This is 0.3 percentage point higher than at the time of the October Report.

The krone exchange rate has remained fairly stable through winter, although it is somewhat stronger than projected in October. Measured by the import-weighted exchange rate index (I-44), the krone has appreciated by approximately 1% since the publication of the October Report.

In Norway, various measures of underlying inflation have been close to 2½% in recent months (see Chart 1.8). Lower wage growth, reduced capacity utilisation and low global inflation have counterbalanced the effects of high energy prices and the krone depreciation in autumn 2008. The various measures of underlying inflation have been broadly in line with expectations since the October Report. Energy prices in the consumer price index (CPI), however, have risen more than expected in the October Report.

According to Perduco's expectations survey, long-term inflation expectations were revised up by most groups in the survey in 2010 Q1 following some decline in 2009 Q4. Inflation five years ahead is expected to be about 3% (see Chart 1.9). Inflation expectations among financial market participants can also 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 bond premiums. In recent months, the differential has been in this range (see Chart 1.10), indicating that long-term inflation expectations for Norway are close to 2.5%.

## 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. Over the past ten years, average inflation has been close to, but somewhat below 2.5% (see Chart 1.11). Consumer price inflation has ge-

nerally 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 1.8). 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 from autumn 2008 to summer 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 October 2009, developments in the Norwegian economy were more favourable than expected in June. There was also a sense of growing optimism in other countries and interest rate expectations rose. The forecast for the key policy rate was revised up and Norges Bank's analyses indicated that the key rate could be gradually raised to around 2% in the first half of 2010. In 2009 Q4, the key policy rate was raised by a total of 0.50 percentage point to 1.75%.

In the period to the turn of the year and thereafter, developments have been more mixed. Underlying inflation is now below target and there are prospects that inflation will fall to a somewhat lower level through 2010 than projected in October. Growth in the Norwegian economy appears to have been somewhat lower towards the end of 2009 and into 2010 than projected earlier. This has probably contributed to somewhat lower capacity utilisation now than envisaged in autumn 2009. With these prospects, both the objective of keeping the rise in consumer prices close to the inflation target and the objective of stable developments in output and employment indicate that the key policy rate should be kept low for a period ahead.

The low interest rate level among Norway's trading partners also pushes down the interest rate level in Norway. Market participants have again revised down their interest rate expectations. A markedly wider interest rate differential against other countries would probably result in a stronger krone for a period. A substantial appreciation of the krone would make it difficult to bring inflation up to

## 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.

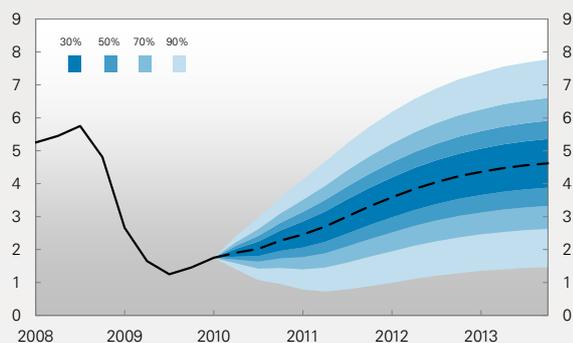
In the assessment, potential effects of asset prices, such as property prices, equity prices and the krone exchange rate on the prospects for output, employment and inflation are also taken into account. Assuming the criteria above have been satisfied, the following additional criteria are useful:

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.

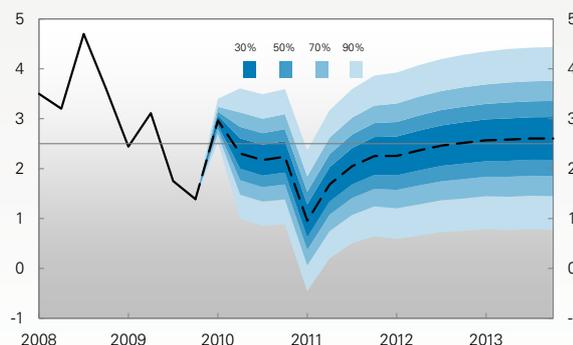
5) As a cross-check for interest rate setting, it should be possible to explain any substantial and systematic deviations from simple monetary policy rules.

Chart 1.12a Projected key policy rate in the baseline scenario with fan chart. Quarterly figures. Per cent. 2008 Q1 – 2013 Q4



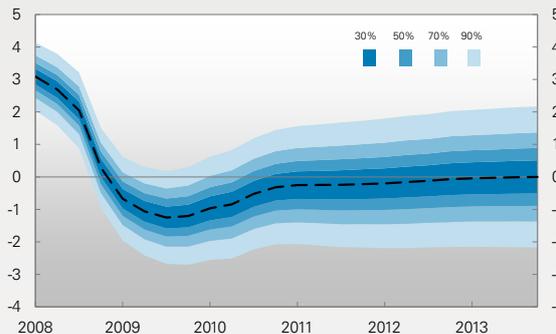
Source: Norges Bank

Chart 1.12c Projected CPI in the baseline scenario with fan chart. 4-quarter change. Per cent. 2008 Q1 – 2013 Q4



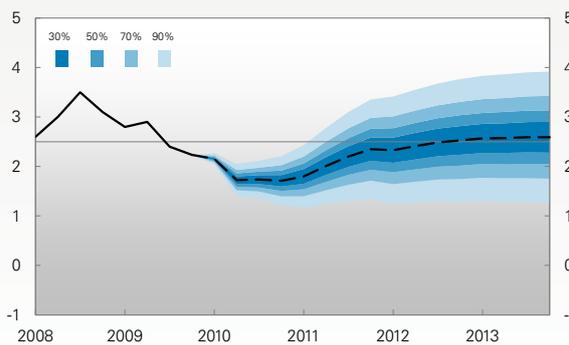
Sources: Statistics Norway and Norges Bank

Chart 1.12b Estimated output gap<sup>1)</sup> in the baseline scenario with fan chart. Quarterly figures. Per cent. 2008 Q1 – 2013 Q4



1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP  
Source: Norges Bank

Chart 1.12d Projected CPIXE<sup>1)</sup> in the baseline scenario with fan chart. 4-quarter change. Per cent. 2008 Q1 – 2013 Q4



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

target within a reasonable time horizon. A strong krone might also result in lower activity in exposed industries and thereby lower capacity utilisation in the Norwegian economy.

On the other hand, house prices have risen sharply since the trough in November 2008 and are now higher than the June 2007 peak level. Household debt growth has remained stable at around 6–7% in recent months. The aim of guarding against the risk of debt accumulation, with abrupt changes in behaviour that could disturb activity and inflation somewhat further ahead, suggests that the interest rate should be brought closer to a more normal level. At the same time, the new guidelines for prudent residential mortgage lending issued by Finanstilsynet (the

Financial Supervisory Authority of Norway) may curb household debt accumulation.

An overall assessment of the outlook and the balance of risks suggest that the key rate should be gradually increased to a more normal level in the years ahead (see Charts 1.12 a-d). New information suggests that the key rate should be raised somewhat later than projected in the October *Monetary Policy Report* (see Chart 1.13 and the box on page 16). The interest rate forecast implies an interest rate level of around 2½% at the turn of the year 2010-2011.

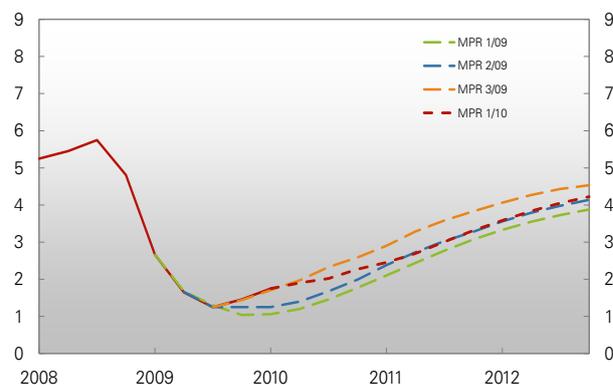
Money market premiums are expected to revert to the previous normal level of approximately 0.25 percentage

point as from 2010 Q3 (see Chart 1.14). Furthermore, the krone is expected to remain at about the current level to the end of Q3 and then gradually depreciate somewhat thereafter (see Chart 1.15).

The interest rate is set with a view to stabilising inflation over time close to 2.5% and bringing capacity utilisation back to a normal level (see Chart 1.16). The Norwegian economy is expected to pick up gradually through the remainder of 2010 and in 2011. Capacity utilisation is projected to be close to a normal level in 2011 and to reach this level in 2012. The recovery in the Norwegian economy is being driven by continued high growth in demand for goods and services in the household sector and after a period by demand in the corporate sector. Oil investment, on the other hand, is projected to decline by about 6% over the next two years. A further pickup in world trade will support export growth. Measured by relative labour costs, Norwegian labour has never been as costly as it is now (see Chart 1.17). As a result, the Norwegian export industry may lose market shares ahead. There are no prospects of another rise in export prices as sharp as in the 2000s, when Norway's terms of trade improved considerably.

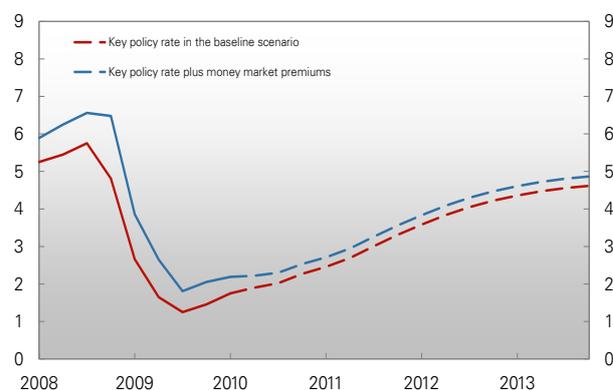
Consumer price inflation is expected to fall to somewhat below 2% in 2010 following the krone appreciation over the past year. Inflation is expected to pick up gradually thereafter to 2.5% towards the end of the projection period as capacity utilisation reaches a normal level and the effect of the krone appreciation unwinds. It appears that wage growth in 2010 will be lower than previously projected. Annual wage growth is now projected at 3¾%. Towards the end of the projection period, wage growth is expected to pick up to between 4½ and 5%. The projections are based on a gradual rise in productivity. Improved productivity will ease cost pressures for firms. The projections are also based on increased scope for firms to strengthen profitability by raising prices. Registered unemployment is estimated to have reached a peak of 3% or approximately 80 000 at the beginning of 2010.

Chart 1.13 Key policy rate in the baseline scenario in MPR 1/09, MPR 2/09, MPR 3/09 and MPR 1/10. Per cent. 2008 Q1 – 2012 Q4



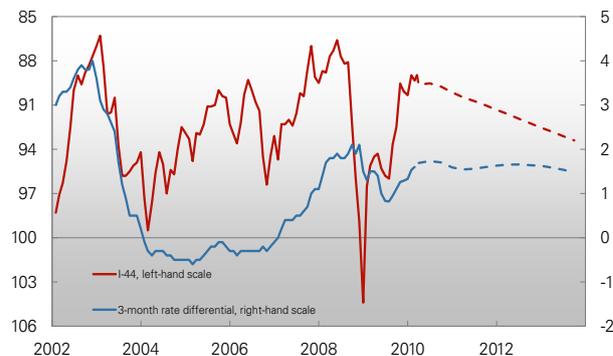
Source: Norges Bank

Chart 1.14 Key policy rate in the baseline scenario and key policy rate plus premiums in the Norwegian money market.<sup>1)</sup> Per cent. 2008 Q1 – 2013 Q4



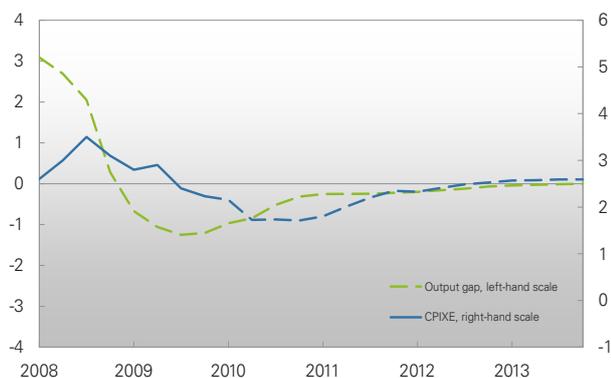
1) Norges Bank's projections from 2010 Q2  
Source: Norges Bank

Chart 1.15 Three-month money market rate differential between Norway and trading partners and the import-weighted exchange rate index (I-44)<sup>1)</sup>. Monthly- (historical) and quarterly figures (ahead). January 2002 – December 2013



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

Chart 1.16 Projected inflation<sup>1)</sup> and output gap in the baseline scenario. Per cent. Quarterly figures. 2008 Q1 – 2013 Q4



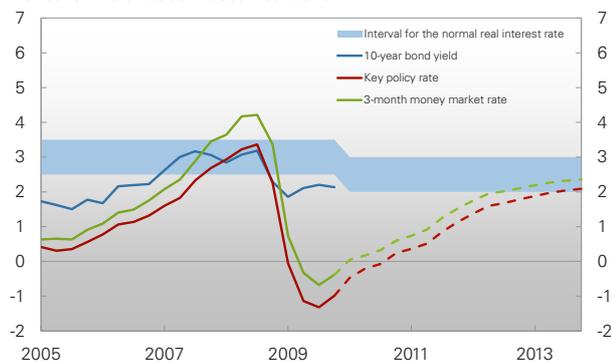
1) CPI adjusted for tax changes and excluding temporary changes in energy prices. From August 2008, CPIXE is a real time series. See Staff Memo 7/2008 and 3/2009 from Norges Bank for a description of the CPIXE  
Sources: Statistics Norway and Norges Bank

Chart 1.17 Real exchange rate. Deviation from mean over the period 1970 – 2009. Per cent. 1970 – 2010<sup>1)</sup>



1) The squares show the average so far in 2010. A rising curve indicates weaker competitiveness  
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements, Ministry of Finance and Norges Bank

Chart 1.18 Real interest rates based on 3-month money market rate<sup>1)</sup>, key policy rate<sup>1)</sup>, 10-year bond yield<sup>2)</sup> and the normal real interest rate in Norway. Per cent. March 2005 – December 2013



1) Deflated by the 12-quarter moving average (centred) of inflation measured by the CPI. Projections for the CPI from this Report and the inflation target form the basis for this estimate.  
2) 10-year swap rate deflated by the inflation target.  
Sources: Statistics Norway and Norges Bank

A real interest rate that is lower than the normal real interest rate will stimulate activity, even after the effects of the decrease itself have dissipated. The interval for the normal level of the real interest rate is estimated at 2–3% (see box on page 22). The real interest rate will increase and approach the normal real interest rate in the course of the projection period (see Chart 1.18).

The interest rate forecast is assessed in the light of simple monetary policy rules that can be robust to different assumptions about the functioning of the economy. 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. 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 may 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 latter half of 2010 (see Chart 1.19).

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 variables. The rule includes inflation developments, wage growth, mainland GDP and other central bank key rates. The interest rate in the previous period is also important. This rule shows an increase in the key policy rate ahead broadly in line with the projections in this Report (see Chart 1.20).

Forward money market rates provide another cross-check for the interest rate forecast. Estimated forward rates indicate that financial market participants expect money market rates to rise approximately to the same extent as currently projected (see Chart 1.21).

## Changes in the projections since *Monetary Policy Report 3/09*

The interest rate forecast in this *Monetary Policy Report* has been revised down compared with the *October Report* (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.

Forward rates among trading partners have fallen markedly since the *October Report* and the interest rate differential between Norway and trading partners has widened. The three-month money market rate differential is now

1.7 percentage points. This is 0.3 percentage point higher than at the time of the *October Report*. Measured by the import-weighted exchange rate (I-44), the krone so far in 2010 is approximately 2% stronger than projected in October. This contributes to lower imported inflation and would indicate a somewhat lower key policy rate (see red bars).

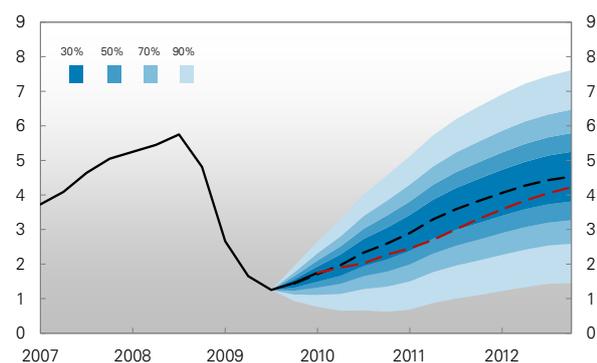
Energy prices have risen more sharply than assumed in the *October Report*, contributing in isolation to higher inflation. Lower-than-expected wage growth, on the other hand, is exerting downward pressure on inflation. On balance, these factors will contribute to somewhat lower inflation ahead than previously envisaged, indicating that the key policy rate should be lower (see orange bars).

Growth in the Norwegian economy appears to have been somewhat slower towards the end of 2009 and into 2010 than projected in the *October Report*. This has

probably contributed to somewhat lower-than-expected capacity utilisation, partly as a result of a decline in oil investment. Household consumption in the latter half of 2009 has also shown a somewhat smaller increase than expected. Exports, on the other hand, have picked up after an earlier and somewhat stronger rebound in world trade than expected. Growth in oil investment is projected to be somewhat lower than envisaged in the *October Report*. On balance, the estimate for capacity utilisation has been revised down slightly compared with the *October Report*. This would suggest that the key policy rate should be lower (see blue bars).

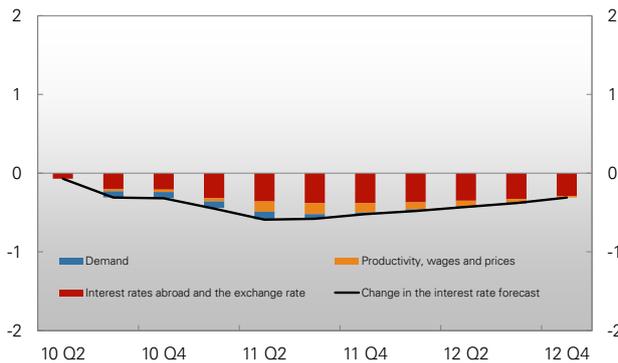
Changes in the projections for other key variables are summarised in Table 1. The changes in the projections reflect the change in the interest rate forecast as shown in Chart 2.

Chart 1 Key policy rate in the baseline scenario in MPR 3/09 with fan chart and key policy rate in the baseline scenario in MPR 1/10 (red line). Per cent. Quarterly figures. 2007 Q1 – 2012 Q4



Source: Norges Bank

Chart 2 Factors behind changes in the interest rate forecast since MPR 3/09. Accumulated contribution. Percentage points. 2010 Q2 – 2012 Q4



Source: Norges Bank

Table 1 Projections for macroeconomic aggregates in *Monetary Policy Report 1/10*. Percentage change from previous year (unless otherwise stated). Change from projections in *Monetary Policy Report 3/09* in brackets.

	2010	2011	2012	2013
CPI	2½ (¾)	1¾ (-½)	2½ (0)	2½
CPI-ATE	1½ (-¼)	2 (-¼)	2½ (0)	2½
CPIXE <sup>1)</sup>	1¾ (0)	2 (-¼)	2½ (0)	2½
Annual wage growth	3¾ (-½)	4¼ (-¼)	4¾ (0)	4¾
Mainland demand	3 (-¼)	4¼ (0)	3¼ (½)	2¼
GDP mainland Norway	2¼ (-½)	2¾ (-½)	2½ (-¼)	2¼
Output gap mainland Norway <sup>2)</sup>	-¾ (-¼)	-¼ (-¼)	-¼ (-½)	0
Employment	0 (¼)	¾ (-¼)	1 (¼)	½
LFS unemployment (rate)	3¾ (0)	3¾ (¼)	3½ (0)	3½

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

<sup>2)</sup> The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP

Source: Norges Bank

## Uncertainty surrounding the projections

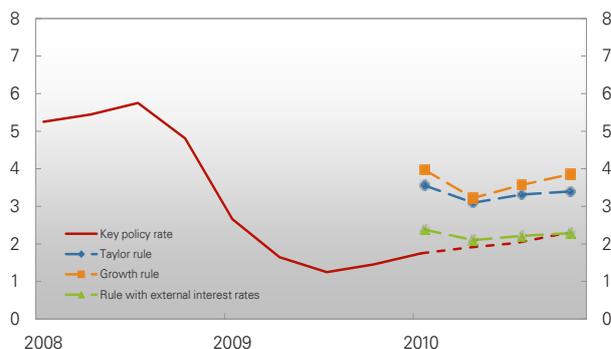
The projections for the key policy rate, inflation, output and other variables are based on our assessment of the economic situation and our perception of the functioning of the economy and of monetary policy. If economic developments are broadly in line with projections, economic agents can expect that 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 projected.

In line with the National Budget for 2010, our projections are based on the assumption that the structural non-oil deficit for 2010 will remain at the same level to the end of the projection period. This implies that the structural non-oil deficit will not revert to 4% of the Government Pension Fund Global (GPF) until 2018. The projections in this *Report* suggest that capacity utilisation in the Norwegian economy may rise to a normal level in the course of roughly two years. The fiscal rule implies that the fiscal deficit should be reduced to about 4% of the capital in the GPF when the economy resumes a normal level of activity. If economic developments are broadly in line with projections, a fiscal stance in line with the fiscal rule could result in a lower interest rate and a weaker krone than projected.

The uncertainty surrounding our projections is illustrated using fan charts (see Charts 1.12a-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.<sup>1</sup>

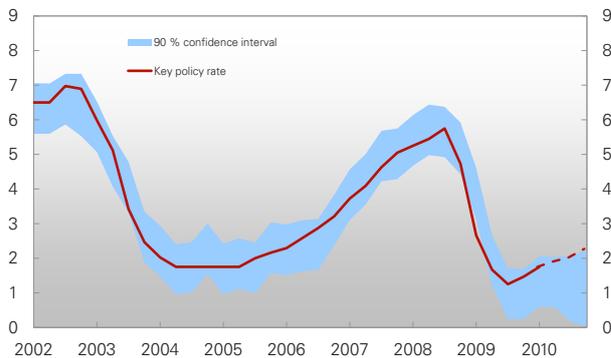
Household spending is expected to remain high. Expectations indicators show that households have become more optimistic. The saving ratio is record high. If uncertainty eases and unemployment levels off, there is a possibility of a steep fall in the saving ratio and a sharper rise in consumption than currently envisaged.

Chart 1.19 Key policy rate and calculations based on simple monetary policy rules<sup>1)</sup>. Per cent. 2008 Q1 – 2010 Q4



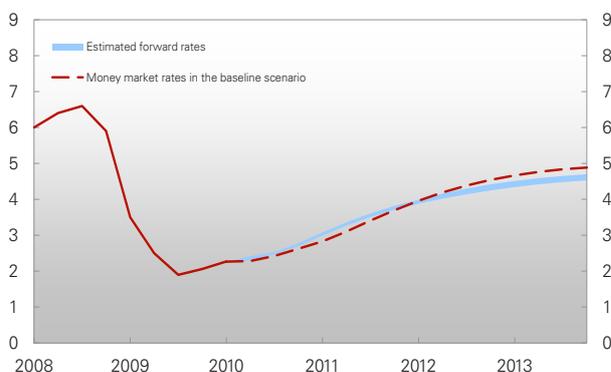
1) The calculations are based on Norges Bank's projections for the output gap, consumer prices adjusted for tax changes and excluding temporary changes in energy prices (CPIXE) and three-month money market rates. To ensure comparability with the key policy rate the simple rules are adjusted for risk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

Chart 1.20 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.<sup>1)</sup> Per cent. 2002 Q1 – 2010 Q4



1) Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and key policy rates among trading partners. The equation is estimated over the period 1999 Q1 – 2010 Q1. See *Staff Memo 3/2008* for further discussion  
Source: Norges Bank

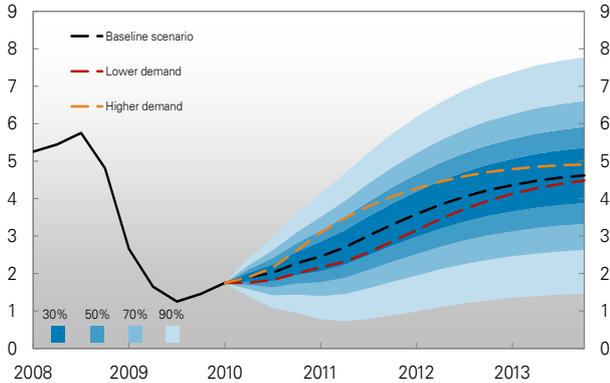
Chart 1.21 Three-month money market rates in the baseline scenario and estimated forward rates<sup>1)</sup>. Per cent. Quarterly figures. 2008 Q1 – 2013 Q4



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 5 - 18 March 2010  
Source: Norges Bank

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

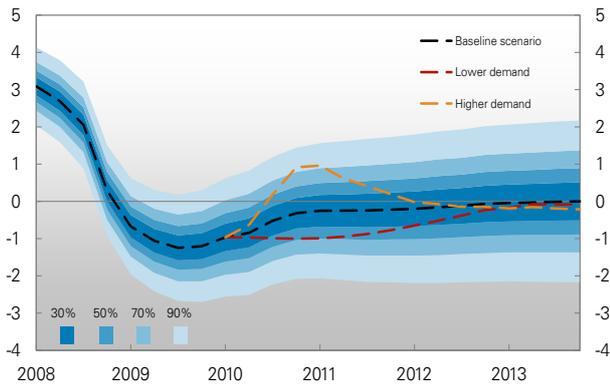
Chart 1.22a Key policy rate in the baseline scenario and in the alternative scenarios. Per cent. Quarterly figures. 2008 Q1 – 2013 Q4



Source: Norges Bank

Charts 1.22 a-c (yellow lines) illustrate the effects of household demand that is about 2% higher than expected over roughly the next two years and a gradual fall in the saving ratio towards zero. 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%.

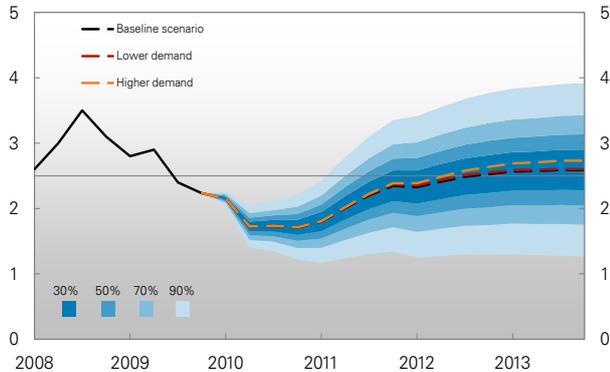
Chart 1.22b Output gap in the baseline scenario and in the alternative scenarios. Per cent. Quarterly figures. 2008 Q1 – 2013 Q4



Source: Norges Bank

Norwegian exports are expected to hold up, but the export industry is losing market shares due to Norway's high cost level. Norwegian manufacturing may lose additional market shares and the import content of oil investment may increase more than currently envisaged. This will contribute to a fall in exports and a weaker impetus from oil investment to the Norwegian economy, as illustrated in Charts 1.22 a-c (red lines) where exports in the years ahead are approximately 4% lower than projected. The interest rate is kept lower for a longer period in order to ensure that capacity utilisation holds up and inflation returns to target.

Chart 1.22c CPIXE<sup>1)</sup> in the baseline scenario and in the alternative scenarios. Per cent. 2008 Q1 – 2013 Q4



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

## Summary

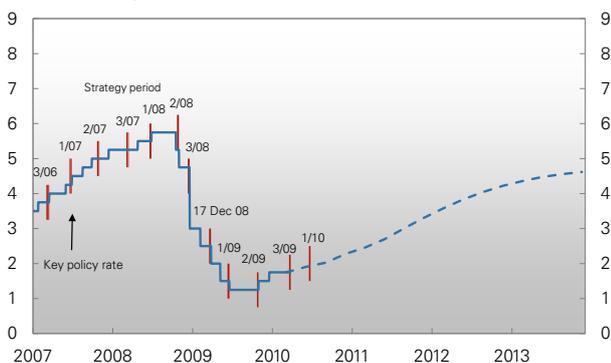
The most acute phase of the global economic crisis appears to have passed. Output growth has resumed in most parts of the world. It appears, however, that the upturn in advanced economies will only be moderate and that the economies of many countries will be marked by considerable spare output capacity and high unemployment ahead. The crisis has given rise to new imbalances that will dampen the recovery. Weak prospects have contributed to a marked decline in interest rate expectations in many countries.

Activity in the Norwegian economy picked up towards the end of 2009. The interest rate was raised by 0.50 percentage point towards the end of the year with a view to maintaining inflation at 2.5% over time. New information suggests that the recovery in the Norwegian economy is continuing, but that capacity utilisation is probably somewhat lower than anticipated in autumn 2009. Combined with lower interest rates abroad, a stronger krone and lower wage growth suggest that the interest rate forecast should be revised down somewhat in relation to the *October Report*.

Interest rates in Norway are low. The effect on private consumption of the substantial interest rate cuts in 2008 and 2009 has probably not been exhausted and high consumption growth is expected to continue in 2010. House prices have risen. The new guidelines for prudent residential mortgage lending issued by Finanstilsynet (the Financial Supervisory Authority of Norway) may curb household debt accumulation. Over time, household borrowing may nevertheless increase considerably and saving may fall. The aim of guarding against the risk of future imbalances that may disturb activity and inflation somewhat further ahead suggests that the interest rate should be gradually brought closer to a more normal level.

On the other hand, a marked interest rate increase in Norway and a wider interest rate differential between Norway and other countries may entail a risk of a considerably stronger-than-projected krone, resulting in inflation that is too low. This will make it difficult to bring inflation up to target within a reasonable time horizon. A strong kro-

Chart 1.23 Interval for the key policy rate at the end of each strategy period, actual developments<sup>1)</sup> and projected key policy rate in the baseline scenario. Per cent. January 2007 – December 2013



1) The Executive Board's decision of 24 March 2010 is not shown in the chart  
Source: Norges Bank

ne may also lead to lower activity in exposed industries and thereby lower capacity utilisation in the Norwegian economy. This suggests 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, although somewhat later than envisaged in October 2009 (see Chart 1.23).

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-than-projected krone may result in higher inflation than currently envisaged. On the other hand, inflation may be lower if the krone remains strong or activity in the Norwegian economy proves to be weaker than projected.

### Executive Board's strategy

The key policy rate should be in the interval 1½–2½% in the period to the publication of the next *Monetary Policy Report* on 23 June unless the Norwegian economy is exposed to new major shocks.

## The level of the normal interest rate

The level of the normal real interest rate in Norway is estimated at between 2% and 3%. With an inflation target of 2.5%, Norges Bank estimates the normal level of short-term interest rates to be 4½–5½% (three-month money market rates). The assumed point estimate of the normal interest rate is unchanged on the October Report.<sup>1</sup>

The normal interest rate may be regarded as the interest rate level that over time is consistent with inflation at target and normal capacity utilisation in the economy. Monetary policy is then neither expansionary nor contractionary.

A key question is whether the low, long-term rates prevailing today (Chart 1) are the result of expectations of lower potential growth or lower inflation over the next ten years and thus a lower long-term interest rate level. This

does not seem to be the case. In contrast with spot rates, implied forward rates are less affected by the current cyclical situation and reflect to a greater extent future growth and inflation expectations.<sup>2</sup> Chart 2 shows implied forward rates for Norway (implied five-year rates five years ahead, alternatively based on government bond yields and swap rates, and implied one-year rates nine years ahead based on swap rates). In the period 2007–2010, forward rates based on swap rates have ranged between 5% and just below 6%, while forward rates estimated on the basis of government bond yields have been somewhat lower, at around 5% over the past year. Market participants do not appear to have revised down their long-term interest rate expectations as a result of the financial crisis. Developments in recent years indicate that the market expects money market

rates in the long term to be in the range 4½–5½%.

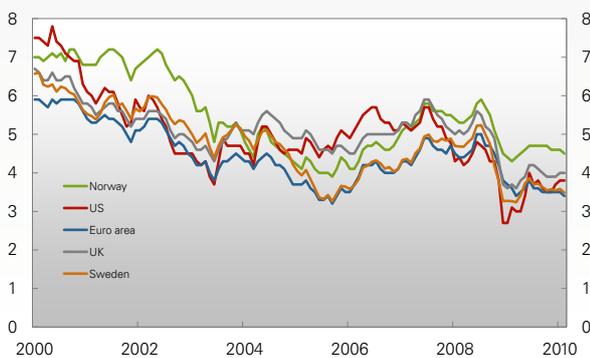
The normal interest rate is closely linked to potential economic growth. The consensus forecast from Consensus Economics, which is an average of predictions made by various market participants, predicts economic growth in Norway in the range 2½–2¾% in the period 2014–2019. This is in line with our estimates for the normal real interest rate.

See *Economic Commentaries* 1/2010 for further discussion of the normal interest rate.

1 The normal interest rate has previously been estimated (since *Inflation Report* 3/2005) to be in the lower end of the range 2½–3½%.

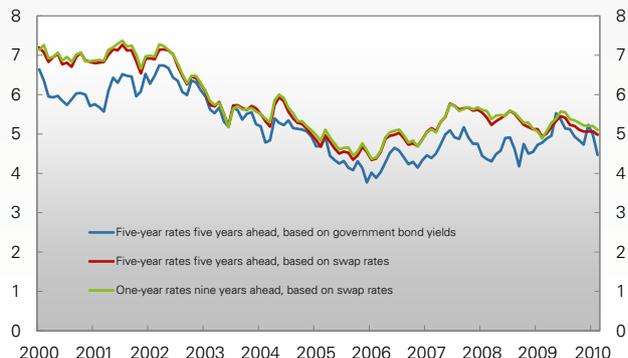
2 In the absence of maturity premiums and other risk premiums, implied forward interest rates can be interpreted as market expectations as to future interest rates.

Chart 1 10-year swap rates for selected countries. January 2000 – February 2010



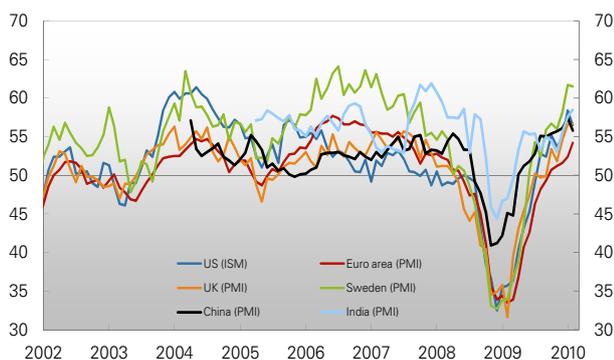
Source: Thomson Reuters

Chart 2 Nominal forward interest rates for Norway. January 2000 – February 2010



Source: Thomson Reuters

Chart 2.1 Leading indicators for the manufacturing sector. Diffusion index. Seasonally adjusted. January 2002 – February 2010



Source: Thomson Reuters

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

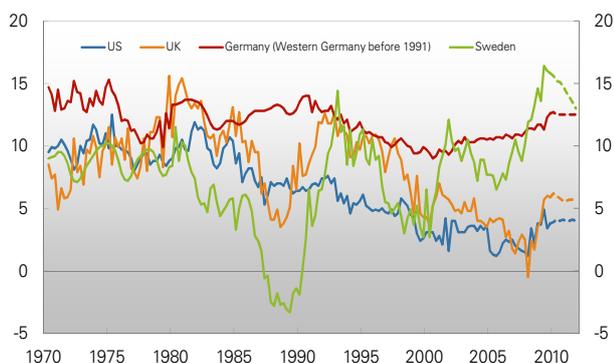
	2010	2011	2012-13 <sup>1)</sup>
US	2¾	2½	3
Euro area	1	1½	2¼
Japan	1½	1¾	1¾
UK	1¼	2½	2¾
Sweden	1¾	3	3¼
China	9½	9½	9
Trading partners <sup>2)</sup>	2	2½	3

<sup>1)</sup> Average annual growth

<sup>2)</sup> Export weights, 26 important trading partners

Sources: Eurostat and Norges Bank

Chart 2.2 Household saving ratio. Per cent of disposable household income. 1970 Q2 – 2011 Q4. Projections from OECD for 2010 Q1 – 2011 Q4



Source: OECD Economic Outlook 86

## 2 The projections

### The global economy

The sharp fall in activity in the global economy now seems to have passed and developments have stabilised among most of Norway's trading partners. Growth rates vary widely across countries and a number of countries are expected to continue to record sluggish growth rates. So far, growth has been strongest in emerging Asia, primarily China, but also in South Korea and Singapore. In the US and Japan, growth was also solid towards the end of 2009, while activity among European trading partners weakened. Leading indicators point to positive growth in manufacturing output in the period ahead (see Chart 2.1). GDP growth among trading partners is projected at 2% this year, while the projection for next year remains unchanged at 2½% (see Table 2.1).

In addition to the cost of rescuing the banking system, tax revenues have weakened while social security and benefit spending has increased in most advanced economies. This has resulted in a sharp deterioration in government finances, which will have to be followed by a period of substantial tightening (see *Economic Commentaries 2/2010* for a further discussion of government debt in OECD countries). As from next year, Norway's main trading partners, with the exception of Sweden, are expected to commence fiscal tightening, which will curb growth in overall demand for goods and services.

Household saving has increased markedly in response to the financial crisis, and saving is expected to remain high or rise in many countries (see Chart 2.2). At the same time, investment growth is being hampered by very low capacity utilisation and sluggish growth in household consumption.

The picture is considerably brighter for emerging market economies, and a number of factors point to sustained high growth. Investment rates have been high for several years (see Chart 2.3) and productivity growth is strong. India and China, in particular, still have substantial labour force reserves. In the period following the Asian

crisis in the latter half of the 1990s, many countries bolstered public finances. Even if the recent crisis was met with considerable easing in these countries too, it did not give rise to the same imbalances that advanced countries are now facing.

Against the backdrop of moderate growth prospects, inflation among trading partners is expected to remain low through the projection period. Even though the growth capacity of many economies has been reduced as a result of the financial crisis, use of labour resources and business sector capacity will be lower than normal in the coming years. Future fiscal tightening will also curb underlying cost pressures. Consumer price inflation projections for 2010 have been revised up somewhat as a result of a pick-up in activity and higher inflation towards the end of 2009 and so far this year. Consumer price inflation for the following years is now projected at about 1¾%.

Oil prices are just below USD 80 per barrel, a small increase since the October *Monetary Policy Report*. In euro and krone terms, prices have increased more, reflecting the appreciation of the US dollar. The projections in this *Report* are based on an oil price in line with futures prices (see Table 2.2 and Chart 2.4). Futures prices indicate that oil prices in 2011-2013 will be about USD 5 higher than today's level. This must be seen in the light of expectations of continued solid growth in emerging economies, which are making a growing contribution to global oil demand. In addition, OPEC is steadily gaining market power because growth in oil supply from non-OPEC countries is gradually stagnating. Oil prices may nevertheless edge down if the recovery in the world economy loses momentum, particularly since OECD oil stocks are still at elevated levels and OPEC spare production capacity is relatively high.

*The Economist* commodity-price index has increased somewhat since the October *Report*, primarily reflecting improved prospects for the world economy. Futures prices indicate a further rise in most commodity prices. However, like oil, inventories are fairly high for many commodities. Other commodity prices may therefore also fall if the global economic recovery proves to be weaker than envisaged at present.

Chart 2.3 Investment as a share of GDP. Per cent. 1980 – 2008

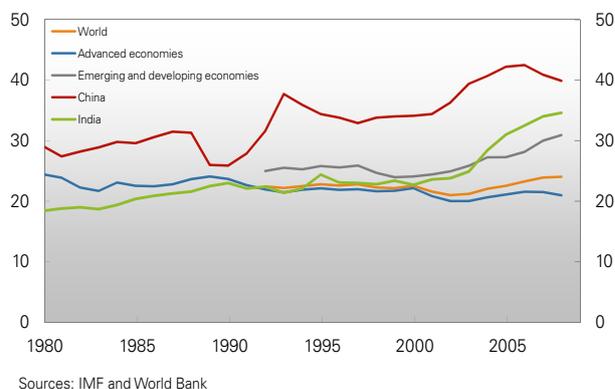


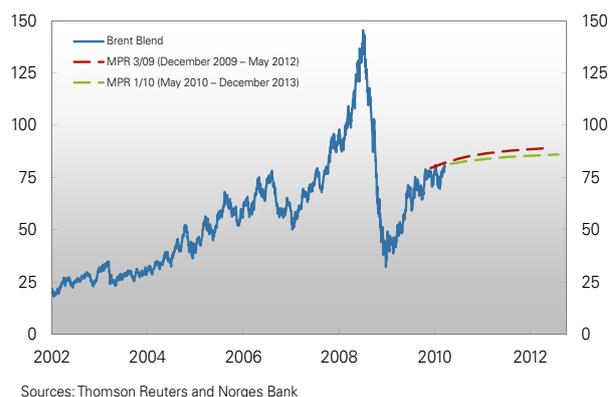
Table 2.2. Projections for consumer prices in other countries (change from previous year, per cent) and oil price

	2010	2011	2012-13 <sup>1)</sup>
US	1¾	1½	1½
Euro area <sup>2)</sup>	1¼	1	1½
Japan	-1	-¼	¼
UK	2	1½	2
Sweden	1¼	2½	2¾
China	3	2½	2
Trading partners <sup>3)</sup>	1½	1½	1¾
Oil price Brent Blend <sup>4)</sup>	80	83.7	85.6

<sup>1)</sup> Average annual rise  
<sup>2)</sup> Weights from Eurostat (each country's share of total euro area consumption)  
<sup>3)</sup> Import weights, 26 important trading partners  
<sup>4)</sup> Futures prices (average for the past five trading days). USD per barrel. For 2010, an average of spot prices so far this year and futures prices for the rest of the year is used

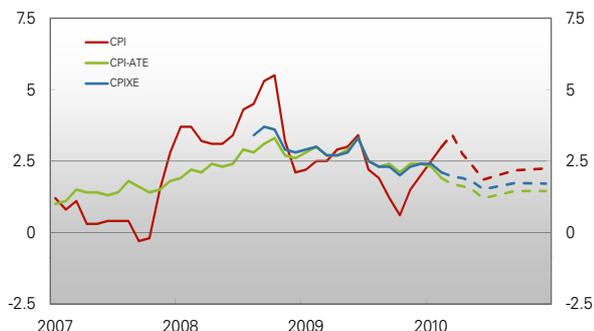
Sources: Eurostat, Thomson Reuters and Norges Bank

Chart 2.4 Oil price (Brent Blend) in USD per barrel. 1 January 2002 – 18 March 2010  
 Futures prices (broken lines) MPR 3/09 and MPR 1/10



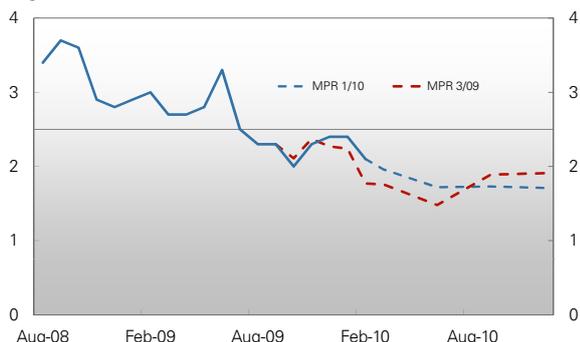
Sources: Thomson Reuters and Norges Bank

Chart 2.5 CPI, CPI-ATE<sup>1)</sup> and CPIXE<sup>2)</sup>. 12-month change. Per cent. January 2007 – December 2010<sup>3)</sup>



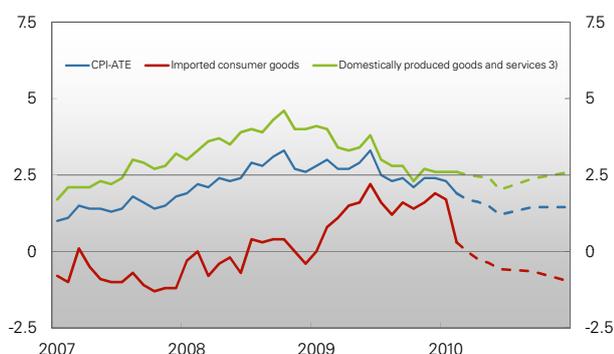
1) CPI adjusted for tax changes and excluding energy products  
 2) CPI adjusted for tax changes and excluding temporary changes in energy prices. Real time figures. See *Staff Memo 7/2008* and *3/2009* from Norges Bank for a description of the CPIXE  
 3) Projections for March 2010 – December 2010 (broken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

Chart 2.6 CPIXE<sup>1)</sup>. 12-month change. Per cent. August 2008 – December 2010<sup>2)</sup>



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

Chart 2.7 CPI-ATE<sup>1)</sup>. Total and by supplier sector. 12-month change. Per cent. January 2007 – December 2010<sup>2)</sup>



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

## The Norwegian economy in the year ahead

### Prices

In February, the consumer price index (CPI) was 3.0% 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 2.1%. Electricity prices have proved to be higher than projected in the *October Report*. This has also pushed up the energy price trend incorporated in the CPIXE calculation. CPIXE inflation is thus somewhat higher than projected in the *October Report* (see Chart 2.6). Inflation adjusted for tax changes and excluding energy products (CPI-ATE) has fallen over the past year (see Chart 2.7). In February, CPI-ATE inflation was 1.9%, down from 3.0% in February one year earlier. CPI-ATE inflation has moved broadly in line with that projected in the *October Report*, both for domestically produced goods and services and imported consumer goods.

The rise in prices for domestically produced goods and services has slowed over the past year, moving down to 2.6% in February this year, primarily as a result of a lower rise in prices for services and food. The effects from higher food prices in 2009 Q1 on annual inflation are now unwinding. Moreover, Norges Bank's regional network reports that price competition in the grocery trade has intensified. The annual rise in food prices is expected to be subdued in the coming quarters.

The fall in productivity and rapid wage growth through 2007 and 2008 have pushed up firms' costs per unit of output to a high level. These costs have probably not been passed on fully to prices, with an attendant reduction in margins. It is thus expected that margins will have to be increased ahead. Higher productivity growth and lower wage growth will reduce growth in business costs (see Chart 2.8). Increased demand for goods and services should make it possible for firms to increase margins somewhat further by raising prices. All in all, the rise in prices for domestically produced goods and services is projected to decline to 2¼% in Q2 before rising to 2½% in Q4.

The depreciation of the krone exchange rate in 2008 pushed up the rate of increase in prices for imported consumer goods (see Chart 2.7). The krone has since appreciated and prices for imported consumer goods measured in a foreign currency have fallen. Prices for imported consumer goods measured in a foreign currency are projected to fall by ½% in 2010 and the krone is expected to be about 4½% stronger in 2010 than the average for 2009. The rise in prices for imported consumer goods in krone terms is expected to fall from ¾% in Q1 to -½% in Q2. The krone appreciation and lower prices abroad for Norwegian imported goods are expected to contribute to a further fall in the rise in prices for imported consumer goods to around -1% in Q4.

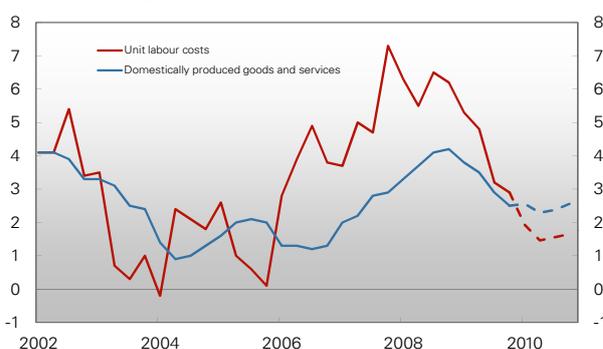
Overall, CPI-ATE inflation is projected to decelerate from 2% in Q1 to about 1½% in Q2. A higher rate of increase in prices for domestically produced goods and services will thereafter contribute to keeping annual inflation at 1½% to the end of the year. CPI-ATE inflation is projected to rise by 1½% between 2009 and 2010. The projections are somewhat lower than the projections derived from the Bank's system for averaging short-term models (SAM) (see Chart 2.9). The projections in this *Report* assume that the effects of the krone appreciation are stronger than in SAM. The projections are still well within the uncertainty intervals in the short-term models.

Against the background of high energy futures prices, year-on-year CPIXE inflation is now projected at around a quarter percentage point higher than CPI-ATE inflation throughout 2010. CPIXE is projected to increase by 1¾% between 2009 and 2010. The CPI is projected to rise by 2½% in the same period. High energy prices will contribute to holding up CPI inflation.

### Output and demand

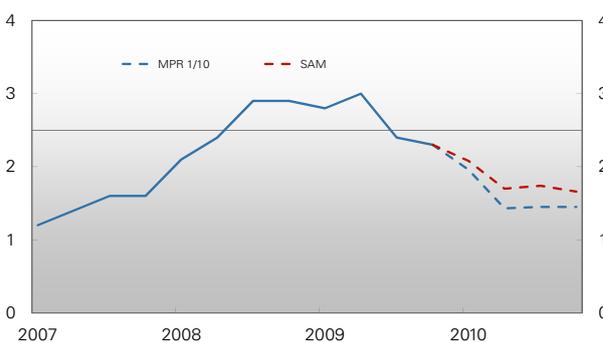
Mainland GDP increased moderately through autumn last year, and less than projected in the *October Report*. Growth in mainland exports, private consumption and public demand countered the fall in private investment. Exports and private consumption are expected to continue to grow and business and housing investment to pick up gradually. Cold winter weather may have curbed pro-

Chart 2.8 Unit labour costs in mainland Norway and prices for domestically produced goods and services in the CPI-ATE<sup>1)</sup>. Four-quarter change. Per cent. 2002 Q1 – 2010 Q4<sup>2)</sup>



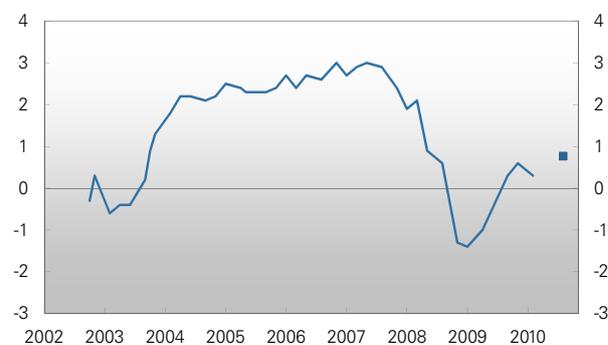
1) Norges Bank's estimates  
2) Projections for 2010 Q1 – 2010 Q4 (broken lines)  
Sources: Statistics Norway and Norges Bank

Chart 2.9 CPI-ATE<sup>1)</sup>. Actual figures, baseline scenario and projections by SAM<sup>2)</sup>. Four-quarter change. Per cent. 2007 Q1 – 2010 Q4<sup>3)</sup>



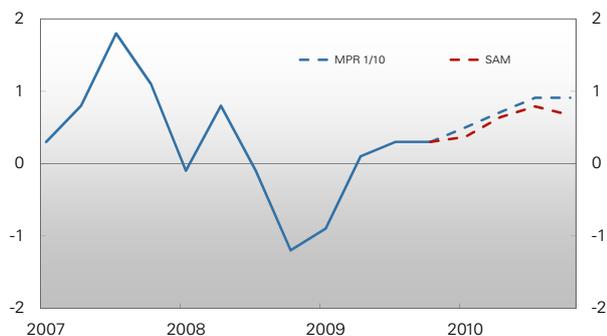
1) CPI adjusted for tax changes and excluding energy products  
2) System for averaging models for short-term forecasting  
3) Projections for 2010 Q1 – 2010 Q4 (broken lines)  
Sources: Statistics Norway and Norges Bank

Chart 2.10 Indicator of actual change in production past three months and expected change in production next six months. Index<sup>1)</sup>. October 2002 – August 2010<sup>2)</sup>



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 2/09* for further information  
2) Last observation February 2010  
Source: Norges Bank's regional network

Chart 2.11 Mainland GDP. Actual figures, baseline scenario and projections by SAM<sup>1)</sup>. Quarterly change. Volume. Seasonally adjusted. Per cent. 2007 Q1 – 2010 Q4<sup>2)</sup>



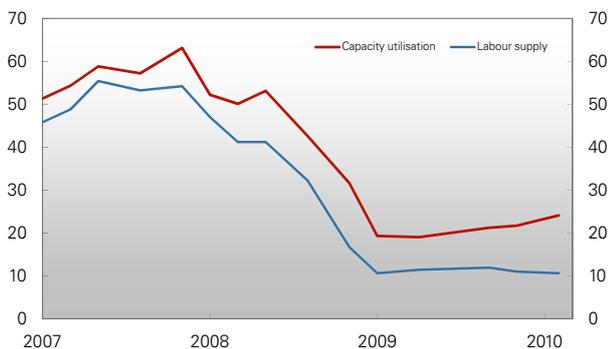
1) System for averaging models for short-term forecasting  
2) Projections for 2010 Q1 – 2010 Q4 (broken lines)

Sources: Statistics Norway and Norges Bank

duction growth in Q1. Mainland GDP is projected to increase by ½% in Q1 and by ¾% in Q2. In the latter half-year, growth is projected at slightly below 1% in each quarter.

Reports from Norges Bank's regional network in February suggested that output growth will remain relatively weak in the coming quarters (see Chart 2.10), but with wide variations across industries. The suppliers to the oil industry expects activity to continue to shrink. The building and construction industry also expects a further fall in output, while reports from household suppliers and exporters suggest an increase in output ahead.

Chart 2.12 Capacity utilisation and labour supply.<sup>1)</sup> Per cent. January 2007 - February 2010



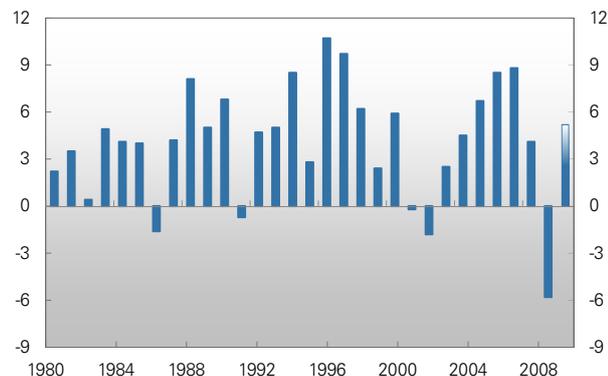
1) Share of contacts that will have some or considerable problems accommodating an (unexpected/expected) increase in demand, and the share of contacts where production is constrained by labour supply

Source: Norges Bank's regional network

The Bank's system for averaging short-term models (SAM) projects somewhat weaker growth ahead than in the baseline scenario (see Chart 2.11). This is because many of the SAM models give weight to short-term indicators where the interest rate has a less pronounced effect than in the baseline scenario.

GDP growth has been somewhat weaker than expected. It is estimated that this has resulted in somewhat lower capacity utilisation, or a somewhat larger negative output gap, at the beginning of 2010 than projected in the October *Report*. Statistics Norway's business sentiment survey indicates that spare capacity in manufacturing remains high. Low capacity utilisation is also consistent with the information from the Bank's regional network, where a higher-than-normal number of enterprises note that they would have little difficulty accommodating an increase in demand (see Chart 2.12). In the period ahead, output is projected to grow somewhat faster than potential output. The output gap is projected at about -¼% around the end of 2010.

Chart 2.13 Exports from mainland Norway. Annual change. Volume. Per cent. 1980 – 2010<sup>1)</sup>



1) Projections for 2010

Sources: Statistics Norway and Norges Bank

It is likely that the financial crisis and the economic downturn have reduced growth in potential output since autumn 2008. Tighter credit conditions intensified the cyclical downturn in investment and may have reduced business starts. Lower growth in labour immigration has curbed labour force growth. In addition, productivity has declined markedly. In the period ahead, potential GDP growth is expected to pick up. The normalisation of financial

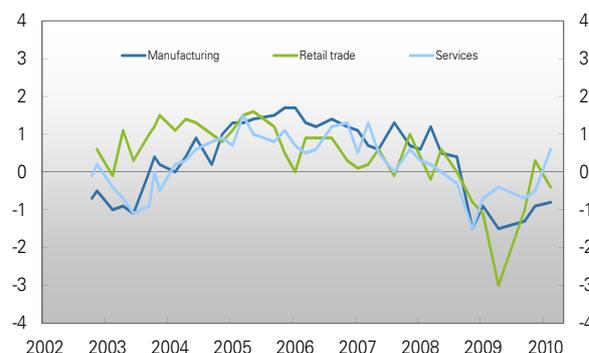
markets has improved companies' capacity to increase production. Higher demand will prompt companies to reemploy capacity closures. Nevertheless, some of the fall in the productivity level in 2008 is believed to be permanent even if productivity growth gradually returns to a more normal level.

Traditional goods and services exports have picked up in recent quarters. Growth in world trade is expected to continue in the period ahead. Nominal external trade figures indicate that the volume of exports increased further in Q1. Export companies in the Bank's regional network report that new orders have increased and that activity is expected to increase in the coming six months. Growth in mainland exports is projected at 5¼% between 2009 and 2010 (see Chart 2.13). The projection implies a loss of market share for Norwegian exporters ahead.

The fall in business investment seems to be nearing an end. Information from the Bank's regional network indicates that investment in private services will pick up in the course of the year (see Chart 2.14). Reports from manufacturing firms in the regional network suggest that manufacturing investment will fall between 2009 and 2010. This is consistent with Statistics Norway's first-quarter investment intentions survey for manufacturing, mining and quarrying (see Chart 2.15). Corporate credit growth is still on the decline, but Norges Bank's fourth-quarter survey of bank lending showed that banks have eased credit standards for the corporate sector. Commercial building starts have picked up somewhat since summer. Order stocks and new orders for the commercial building industry have also moved up somewhat in recent quarters. Investment in the electricity sector will increase in 2010 according to the investment intentions survey. Growth in mainland business investment is projected to resume from Q2 this year. Investment will nevertheless decline by about 5% between 2009 and 2010.

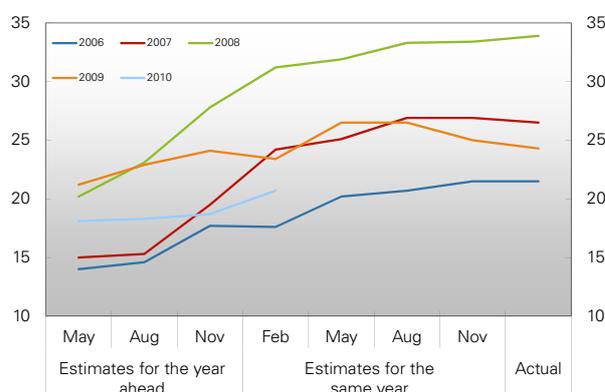
Growth in private consumption increased through 2009. Indicators of consumer goods spending suggest that growth will continue in Q1. Increased car purchases made a substantial contribution to the upswing in the latter half of 2009. Lower growth in car purchases ahead is likely

Chart 2.14 Investment plans for next 12 months compared with past 12 months. Index<sup>1)</sup>. October 2002 – February 2010



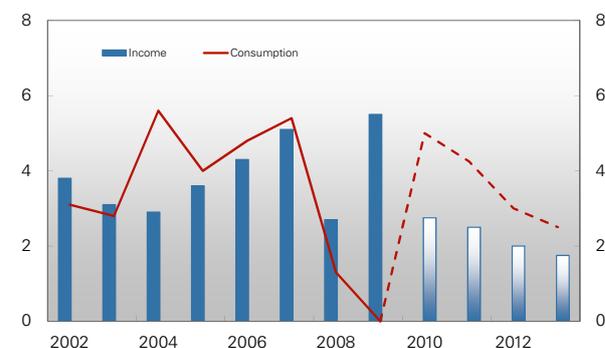
1) The scale runs from -5 to +5, where -5 indicates a sharp fall and +5 indicates strong growth. See article 'Norges Bank's regional network' in *Economic Bulletin 2/09* for further information  
Source: Norges Bank's regional network

Chart 2.15 Investment statistics for manufacturing, mining and quarrying. Estimated and actual investments. In billions of NOK. 2006 – 2010



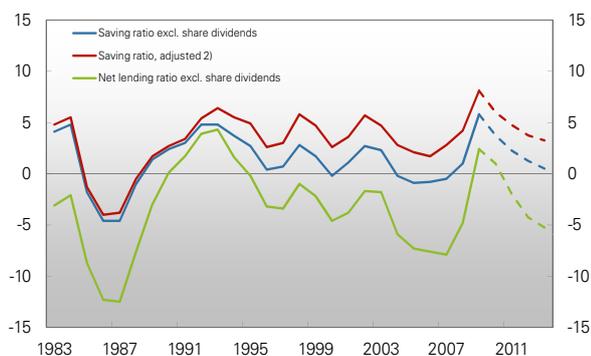
Source: Statistics Norway

Chart 2.16 Household real disposable income<sup>1)</sup> and consumption<sup>2)</sup>. Annual change. Per cent. 2002 – 2013<sup>3)</sup>



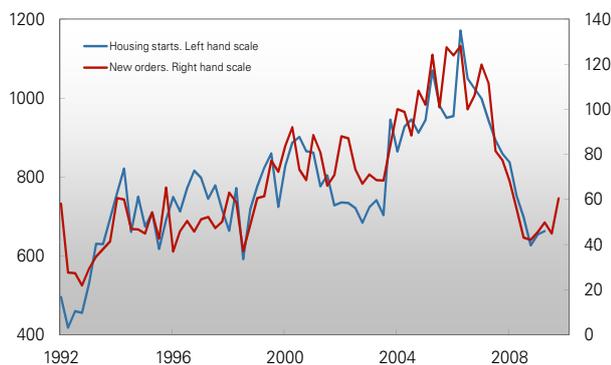
1) Excluding share dividends  
2) Includes consumption in non-profit organisations. Volume  
3) Projections for 2010 – 2013 (broken line)  
Sources: Statistics Norway and Norges Bank

Chart 2.17 Household saving and net lending as a share of disposable income. Per cent. 1983 – 2013<sup>1)</sup>



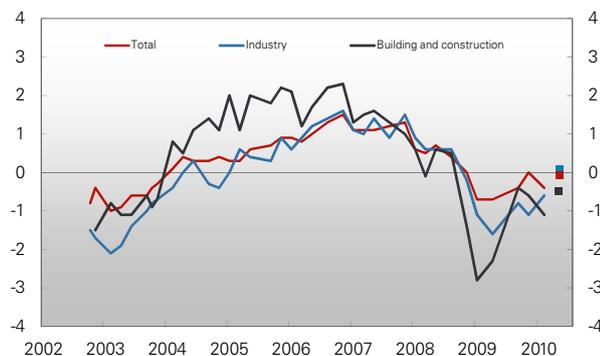
1) Projections for 2010 – 2013 (broken lines)  
 2) Adjusted for estimated reinvested share dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2013  
 Sources: Statistics Norway and Norges Bank

Chart 2.18 Housing starts<sup>1)</sup> and new orders received for housing starts<sup>2)</sup>. 1992 Q3 - 2009 Q4



1) In 1000s of square meters. Seasonally adjusted  
 2) Value index deflated by the housing investments deflator in the national accounts. Displaced two quarters forward  
 Sources: Statistics Norway and Norges Bank

Chart 2.19 Indicator of actual change in employment and expected change in employment in next three months.<sup>1)</sup> Per cent. October 2002 – May 2010<sup>2)</sup>



1) Composite indicator to end-2004. Split into "past 3 months" and "3 months ahead" as from 2005  
 2) Last observation February 2010  
 Source: Norges Bank's regional network

to drag down somewhat on consumption growth. In spite of the low interest rate level, the household saving ratio increased to a historically high level in 2009. This probably reflected high household debt levels, with a need for some households to consolidate, and a large degree of uncertainty owing to prospects of higher unemployment and a fall in the value of housing wealth. At the same time, household real disposable income (excluding dividend income) increased by 5½% (see Chart 2.16). Almost half of this is attributable to a lower interest rate level. Debt burdens remain high, but the stabilisation of unemployment at a relatively low level has eased the uncertainty. This is reflected in the improvement in household confidence indicators. The interest rate level is still low. In addition, house prices have increased. Against this background, the saving ratio (excluding dividend income) is expected to decline from 5¾% in 2009 to somewhat below 4% in 2010 (see Chart 2.17). With growth in household real disposable income (excluding dividend income) projected at 2¾%, private consumption is projected to grow by 5% in 2010.

Housing investment was about 30% lower in 2009 than in 2007. The decline primarily reflects a fall in large apartment project starts in recent years. The number of housing starts is expected to increase ahead. New home sales are on the rise and house prices have shown a marked increase since the trough in 2008. Statistics Norway's order statistics for building and construction show that residential building orders increased through 2009 (see Chart 2.18). The Bank's regional network contacts report that large apartment projects will commence in the first half of this year. Housing starts are expected to increase to around 22 000 in 2010. Housing investment is nevertheless expected to fall by about 4% between 2009 and 2010. Housing starts will still be lower than implied by demographic developments.

### The labour market

Employment stopped falling in 2009 Q4. Total mainland employment had declined by about 30 000 since autumn 2008. Developments have been broadly in line with that projected in the *October Report*.

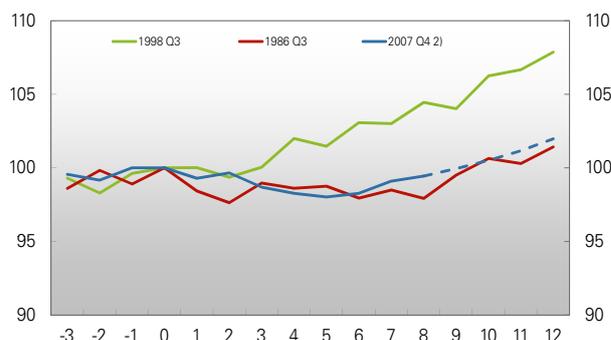
During the downturn the number of hours worked has fallen somewhat more than the number of employed. According to the Bank's regional network, reduced use of overtime hours, partial lay-offs and reduced hours worked among part-timers have resulted in lower average working hours. Increased sickness absence also had an impact.

The number of hours worked and employment measured in persons are projected to remain virtually unchanged through the first half-year, followed by a small increase in the latter half of the year. A majority of the enterprises in the Bank's regional network reports that they are not planning to change employment in the next three months (see Chart 2.19). Enterprises in building and construction still expect a moderate decline, while manufacturing employment is expected to remain unchanged. Perduco's expectations survey for Norges Bank indicates that employment may increase somewhat in the next 12 months.

The number of hours worked has fallen somewhat more than projected in the *October Report*. At the same time, output growth was lower than expected, with productivity growth broadly in line with that projected in the latter half of 2009. Output growth is expected to increase gradually through 2010, while growth in the number of hours worked shows a relatively small increase. As a result, employment will gradually become more consistent with the level of production, and productivity will rise further through 2010 approximately in line with the projections in the *October Report*. Compared with previous downturns, productivity growth remains weak (see Chart 2.20).

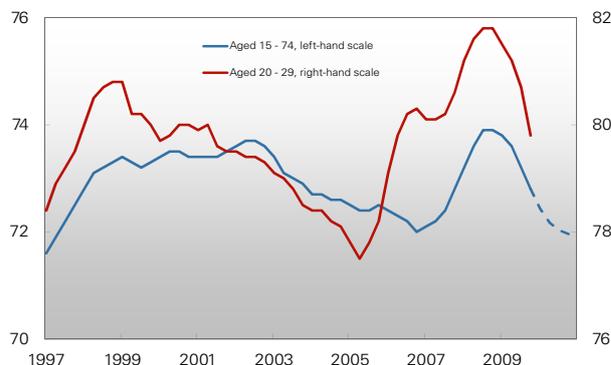
Owing to a fall in labour force participation, the labour force was lower at the end of 2009 than at the beginning of the year in spite of underlying growth in the working-age population. Some people exit the labour force or choose not to enter the labour force when labour demand falls. The considerable fall in labour force participation, particularly among younger age groups, may partly reflect the sharp increase in participation towards the end of the upturn (see Chart 2.21). The Bank's projections are based

Chart 2.20 Development in mainland productivity after a business cycle peak. GDP per personhour. Seasonally adjusted. Quarterly figures. Index<sup>1)</sup>



1) The index is set at 100 in the quarter when capacity utilisation was at its peak. The series labels refer to the peak quarter. Capacity utilisation is estimated using an HP-filter  
2) Projections for 2010 Q1 – 2010 Q4 (broken line)  
Sources: Statistics Norway and Norges Bank

Chart 2.21 Labour force as percentage of population. Average over past four quarters. 1997 Q1 – 2010 Q4<sup>1)</sup>



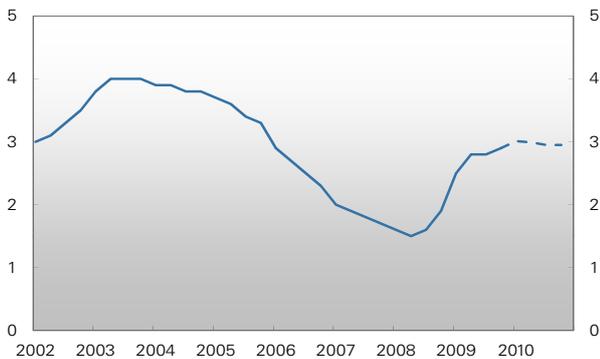
1) Projections for labour force aged 15-74 from 2010 Q1 – 2010 Q4 (broken line)  
Sources: Statistics Norway and Norges Bank

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	1½
Contribution from change in population composition	-¼	-½
Cyclical contribution	-1¼	-¾
Labour force growth	0	¼

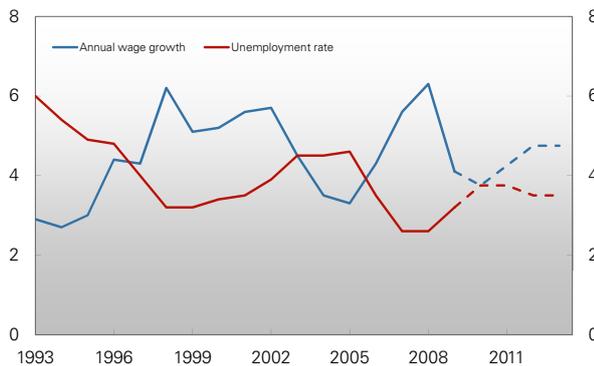
Sources: Statistics Norway and Norges Bank

Chart 2.22 Registered unemployment. Percentage of labour force. Seasonally adjusted. 2002 1Q – 2010 4Q<sup>1)</sup>



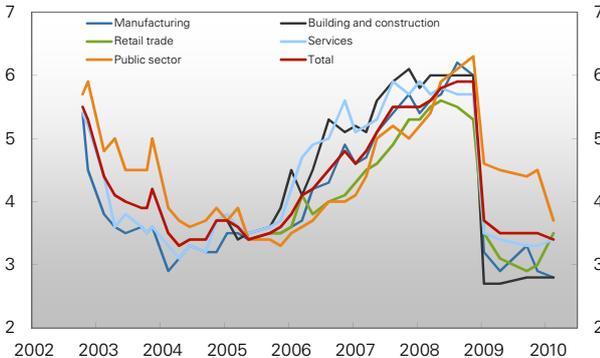
1) Projections for 2010 Q1 – 2010 Q4 (broken line)  
Sources: Norwegian Labour and Welfare Administration, Statistics Norway and Norges Bank

Chart 2.23 Annual wage growth<sup>1)</sup> and LFS unemployment. Per cent. 1993 – 2013<sup>2)</sup>



1) Including estimated costs of increase in number of vacation days and introduction of mandatory occupational pensions  
2) Projections for 2010 - 2013 (broken lines)  
Sources: Statistics Norway, Technical Reporting Committee on Income Settlements and Norges Bank

Chart 2.24 Expected annual wage growth each year. Per cent. October 2002 – February 2010



Source: Norges Bank's regional network

on an increase of ¼% in the labour force in 2010 (see Table 2.3).

Unemployment continued to rise through the latter half of 2009, but at a slower pace than earlier in the downturn, as projected in the *October Report*. On the basis of the employment and labour force projections, unemployment as measured by the Labour Force Survey will increase to about 3¾% at the end of 2010. Registered unemployment is projected to remain approximately at today's level throughout the year (see Chart 2.22).

### Wage growth

The Technical Reporting Committee on Income Settlements estimates annual wage growth at 4.1% in 2009, which is in line with the estimate in the *October Report*. The Bank's wage projection for 2010 has been revised down by a half percentage point to 3¾% (see Chart 2.23). The uncertainty facing exposed industries is still considerable and wage growth among trading partners is low. A reserve of foreign labour and persons who have temporarily exited the labour force, and who may rapidly return, is probably pulling down wage growth. Wage earners' share of the income in the mainland economy is at a high level. On the other hand, unemployment will probably level off at a lower level than in previous downturns, and in some sectors of the economy unemployment is still low. High electricity prices in 2010 owing to cold winter weather may limit growth in purchasing power, but temporary variations in electricity prices do not influence real income growth over time. The enterprises in the regional network expect wage growth to be between 2.8% and 3.7% this year (see Chart 2.24) According to Perduco's expectations survey for Norges Bank, the social partners expect wage growth to range between 3.2% and 3.6% in 2010.

## Assumptions concerning fiscal policy and petroleum investment from 2010 to 2013

### Fiscal policy

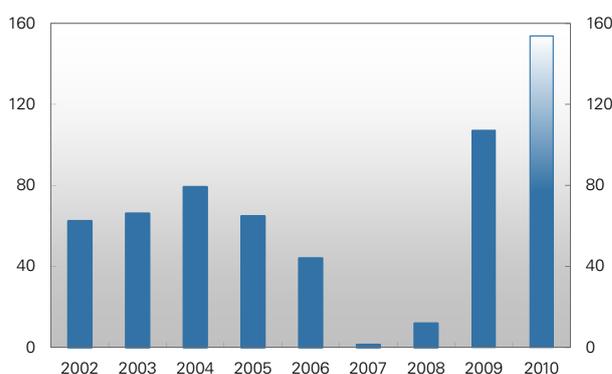
Fiscal policy was very expansionary in 2009. On the basis of the final budget for 2009, the increase in the structural, non-oil budget deficit between 2008 and 2009 can be estimated at 2.7% of mainland trend GDP. Expenditure growth was estimated at 10.6%. The non-oil deficit was estimated at NOK 107.2bn in the final budget (see Chart 2.25). The non-oil deficit increased by NOK 95bn between 2008 and 2009, of which the automatic stabilisers accounted for about half.

The National Budget for 2010 will provide further, but milder impulses to the economy this year. The structural, non-oil budget deficit is projected at NOK 148.5bn in 2010 (see Chart 2.26), or at an estimated 5.7% of the Government Pension Fund Global (GPFG). Of the government's estimated net petroleum revenues in 2010, NOK 153.8bn will be spent via the central government budget, while NOK 66.6bn will be transferred to the GPFG.

The projections in this *Report* are based on information from the final budget and the projections in the National Budget for 2010. This implies a somewhat stronger fiscal impulse between 2009 and 2010 than assumed in the October *Report*. The projections for 2011, 2012 and 2013 are based on the technical assumption that the structural, non-oil budget deficit is maintained at the level from 2010, in line with the technical projections in the National Budget (see Chart 2.26). This implies a gradual return of the structural, non-oil budget deficit to 4% of the value of the GPFG. According to the calculations, this will not be the case until 2018 even when taking into account that the value of the GPFG was a good NOK 40bn higher at the beginning of 2010 than estimated in the National Budget.

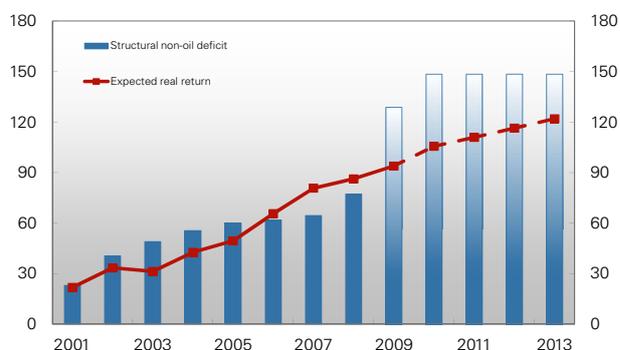
Preliminary national accounts figures show weaker growth in general government consumption and investment in 2009 than estimated in the National Budget for 2010. This

Chart 2.25 Non-oil budget deficit. In billions of NOK. 2002 – 2010<sup>1)</sup>



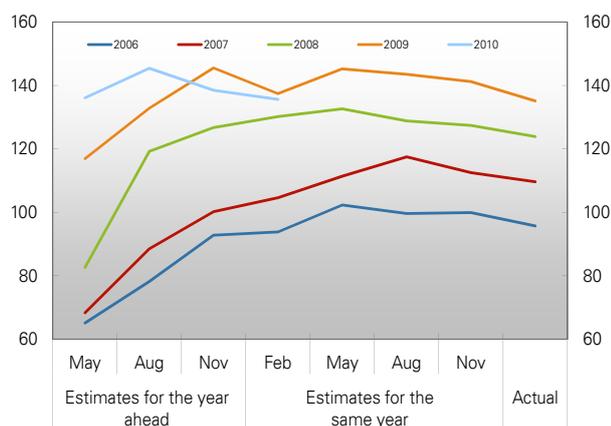
1) Projections for 2010  
Source: Ministry of Finance

Chart 2.26 Structural, non-oil deficit and expected real return on the Government Pension Fund Global. In billions of 2010 NOK. 2001 – 2013<sup>1)</sup>



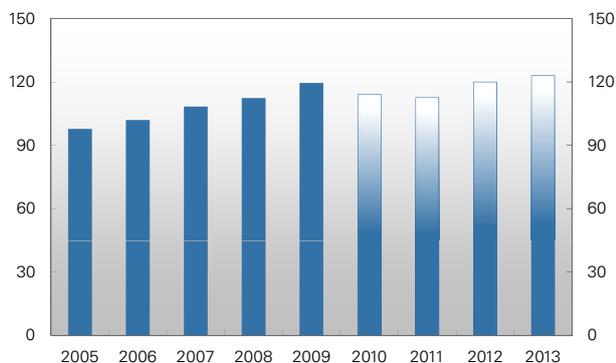
1) Projections from Ministry of Finance and Norges Bank for 2009/2010 – 2013  
Sources: Ministry of Finance and Norges Bank

Chart 2.27 Investment statistics for the petroleum industry. Estimated and actual investment. In billions of NOK. 2006 – 2010



Source: Statistics Norway

Chart 2.28 Petroleum investments. Constant 2007 prices. In billions of NOK. 2005 – 2013<sup>1)</sup>



<sup>1)</sup> Projections for 2010 – 2013  
Sources: Statistics Norway and Norges Bank

is in line with somewhat lower growth in underlying government expenditure in 2009 in the final budget than that estimated in the National Budget. The projections in this *Report* are based on the assumption that some of the growth in government expenditure has been moved forward from 2009 to 2010. As a result, growth in government consumption and investment in 2010 is higher than assumed in the National Budget.

### Petroleum investment

Petroleum investment has increased substantially in recent years (see Chart 2.27). Statistics Norway's investment intentions survey shows that the value of petroleum investment increased from NOK 124bn in 2008 to NOK 135bn in 2009. Investment increased in spite of postponements and cancellations of a number of projects after the financial crisis unfolded in autumn 2008. This reflects that investment in 2009 was to a large extent determined by contracts that were concluded prior to the financial crisis. Petroleum investment still showed a substantial decline through 2009.

Petroleum investment is expected to drop further this year and next, followed by a pick-up in 2012 and 2013 (see Chart 2.28). The investment decline this year and next reflects postponements of projects and the near completion of large investment projects such as Gjøa, Skarv and Valhall Redevelopment. However, the decline will be curbed by the expected start-up this year of the projects Goliat and Gudrun and the building of a new housing platform for the Ekofisk field. The total volume of petroleum investment is projected to fall by about 4½% in 2010 compared with the investment figure for 2009 in the quarterly national accounts (QNA).<sup>1</sup> Expectations of continued high oil prices and the commencement of new projects, for example in the Ekofisk area, will contribute to an upturn in investment towards the end of the projection period.

<sup>1</sup> The investment intentions survey implies that the QNA figure for the value of petroleum investment in 2009 will be revised downwards by nearly NOK 3bn at the time of the next publication.

## Box

Evaluation of the projections for 2009

## Evaluation of the projections for 2009

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

The short-term projections are based on an overall assessment of current information and projections from several types of models. Norges Bank's system for averaging short-term models, SAM<sup>1</sup>, provides input to short-term forecasts for inflation and mainland GDP, but the projections can deviate from SAM when additional information emerges. In the longer term, the forecasts are based on the model NEMO, which is an aggregated equilibrium model for the Norwegian economy.<sup>2</sup> This box provides an evaluation of Nor-

ges Bank's projections for 2009.<sup>3</sup>

Norges Bank orients monetary policy towards inflation of close to 2.5% over time. Under normal circumstances, the interest rate is therefore set so that the forecast for inflation is close to the inflation target in the medium term.

As a result of the financial crisis in autumn 2008 and subsequent developments, the forecasts for 2009 which were published before the crisis were off the mark. In relation to the projections published in autumn 2008, the downturn in the Norwegian economy after the financial crisis proved to be considerably more pronounced. The global downturn was deeper than expected. As a result, the demand for Norwegian export goods fell substantially more than expected. In addition, the household saving ratio increa-

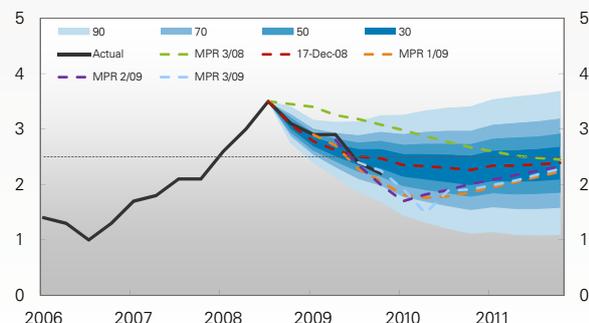
sed more than expected in spite of substantial interest rate cuts. At the same time, enterprises chose to maintain their workforce levels even though production fell. The decline in the output gap thus turned out to be smaller than developments in production would have implied.

The Bank's projections for 2009 published in autumn 2008 are examined in greater detail below. Detailed projections were published in *Monetary Policy Report 3/08* at the end of October. These projections did not capture the full effects of the crisis. Prospects rapidly weakened in the following weeks and already on 17 December 2008, Norges Bank published new projections (see Table 1).

### Inflation lower than expected

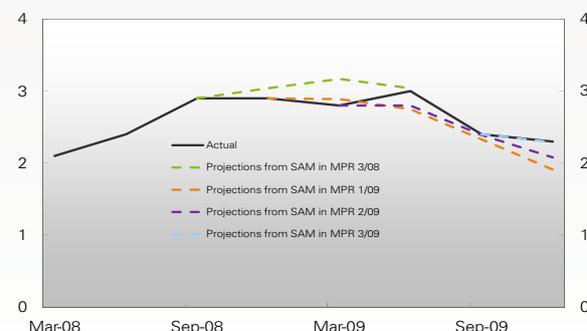
The inflation projection for 2009 published on 17 December 2008

Chart 1 CPIXE<sup>1)</sup>. Actual figures and projections from selected reports. Fan chart from monetary policy meeting 17 December 2008. Four-quarter change. Per cent. 2006 Q1 - 2011 Q4



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

Chart 2 CPI-ATE<sup>1)</sup>. Actual figures and projections by SAM published in selected reports. Four-quarter change. Per cent. 2008 Q1 - 2009 Q4



1) CPI adjusted for tax changes and excluding energy products  
2) See box "SAM – System of models for short-term forecasting" in *Monetary Policy Report 2/08*  
Sources: Statistics Norway and Norges Bank

was fairly accurate for the first half of 2009, but inflation proved to be somewhat lower than projected in the final half-year (see Chart 1). Inflation for domestically produced goods and services in particular declined at a faster rate than projected, which may be ascribed to reduced scope among firms to pass on costs to prices owing to low growth in demand. While CPI inflation was 2.1% in 2009, consumer prices adjusted for tax changes and excluding temporary changes in energy prices (CPIXE) and consumer prices adjusted for tax changes and excluding energy products (CPI-ATE) rose by 2.6%.

The CPI-ATE projections derived from our system for averaging short-term models, SAM, provided a fairly accurate picture of movements through the year (see Chart 2), and were broadly consistent with Norges Bank's projections.

Energy prices fell sharply after the financial crisis, resulting in lower CPI and CPIXE inflation through 2009 than projected in *Monetary Policy Report 3/08* (see Chart 1).

### Fall in activity

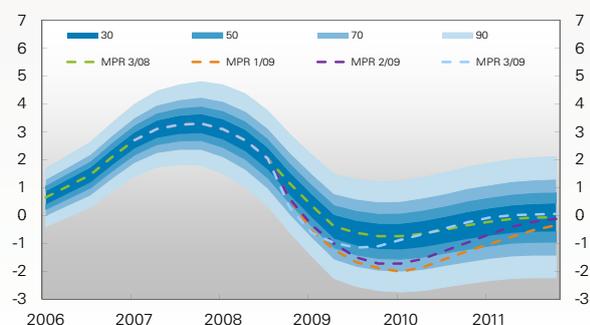
Mainland GDP fell by 1.5% between 2008 and 2009. As a result, the level of activity proved to be considerably lower than projected in *Monetary Policy Report 3/08*, and the fall was also somewhat more pronounced than projected on 17 December 2008 and in *Monetary Policy Report 1/09*.

Activity towards the end of 2008 and the beginning of 2009, in particular, proved to be lower than projected. A sharper-than-expected contraction in the world economy resulted in significantly weaker-than-projected developments in mainland exports in 2009. Heightened uncertainty surrounding economic develop-

ments, high funding costs and tighter bank lending practices led to lower private consumption and business investment than projected earlier. At the same time, lower interest rates and inflation boosted growth in household real income. The saving ratio therefore increased more than projected. In relation to the projections published in autumn 2008, the fiscal stimulus package engendered higher public demand and the fall in oil prices resulted in a smaller increase in petroleum investment.

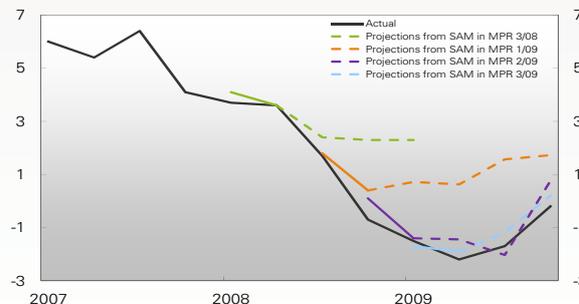
At the beginning of 2009, capacity utilisation was lower than projected in *Monetary Policy Report 3/08* (see Chart 3), and fell further through the first half of the year. In spite of the sharper-than-expected downturn in the economy, employment fell less than projected in autumn 2008, and considerably less than projected in *Monetary Policy Report 1/09*. Firms chose to maintain

Chart 3 Output gap<sup>1)</sup>. Projections in MPR 3/08 with fan chart and projections from selected reports. Per cent. 2006 Q1 – 2011 Q4



1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP  
Source: Norges Bank

Chart 4 Mainland GDP. Actual figures and projections by SAM<sup>1)2)</sup> published in selected reports. Four-quarter change. Volume. Seasonally adjusted. 2007 Q1 - 2009 Q4



1) See box "SAM – System of models for short-term forecasting" in *Monetary Policy Report 2/08*  
2) The unbroken lines in the SAM series show mainland GDP according to the quarterly national accounts at the time projections were made  
Sources: Statistics Norway and Norges Bank



seemed that firms' productivity was lower than previously projected, and the projection for underlying inflation was revised up somewhat. The forecast for the key policy rate was adjusted upwards somewhat in both *Monetary Policy Report 2/09* and *Monetary Policy Report 3/09*, and the key policy rate was raised by a total of 0.5 percentage point towards the end of the year.

The change in the interest rate forecast through the year as a whole was not substantial (see Chart 9).

### 2009 from a longer time perspective

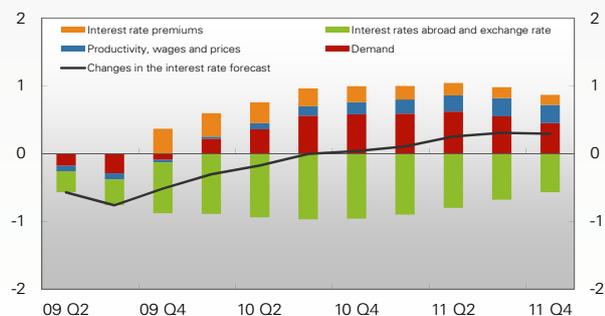
Norges Bank's first projection for 2009 was published in 2006. Underlying inflation was well below target at that time, but economic growth was high. The key policy rate was low and rising gradually (see Chart 8). Low interest rates

and high capacity utilisation were expected to bring inflation up to target in the course of 2009. Projections from other institutions showed an inflation rate of a little less than 2.5% in 2009 (see Charts 5 and 6).

The cyclical upturn proved to be stronger than first expected, and the key policy rate was raised faster than projected in 2006. In summer 2008, inflation had exceeded the target somewhat. The outlook suddenly changed when the financial crisis in autumn 2008 plunged the world economy into recession. In *Monetary Policy Report 3/08* and at the monetary policy meeting on 17 December Norges Bank lowered its projections for mainland GDP growth in 2009 and the inflation projections were pulled down (see Charts 5, 6 and 7).

- 1 See further discussion on "SAM – System of models for short-term forecasting" in *Monetary Policy Report 2/08*.
- 2 See article "NEMO – a new macromodel for forecasting and monetary policy analysis" in *Economic Bulletin 1/2009*.
- 3 *Staff Memo* "Evaluation of Norges Bank's projections for 2009" to be published in May, will provide a more detailed evaluation of the projections for 2009.
- 4 The institutions in the sample are: The Confederation of Norwegian Enterprise, Danske Bank, DnB NOR, Handelsbanken, Ministry of Finance, Nordea, SEB and Statistics Norway. Only a few of the institutions published projections for 2009 in 2006 and 2007.
- 5 For a further discussion of changes in interest rate forecasts through 2009, see Norges Bank's *Annual Report* (the *Report* will be published in Norwegian on 26 March and in English in late April).

Chart 9 Factors behind changes in the interest rate path from the monetary policy meeting 17 December 2008 to MPR 3/09.<sup>1)</sup> Percentage points. 2009 Q2 – 2011 Q4



<sup>1)</sup> The bars are a technical illustration of changes in the interest rate forecast as a result of news and new assessments  
Source: Norges Bank

Table 1 Projections and assumptions for main economic aggregates for 2009. From *Monetary Policy Report 3/08* to *Monetary Policy Report 3/09*. Percentage change from 2008 unless otherwise stated

	MPR 3/08	17 Dec. 08 <sup>1)</sup>	MPR 1/09	MPR 2/09	MPR 3/09	Actual <sup>2)</sup>
<b>Prices and wages</b>						
CPI	3		2	2¼	2¼	2.1
CPI-ATE	3		2½	2½	2¾	2.6
CPIXE	3¼	2½	2½	2½	2½	2.6
Annual wage growth <sup>3)</sup>	4¾		4	4	4	4.1
<b>Real variables</b>						
GDP	1		-1¼	-1½	-1½	-1.5
Mainland GDP	¼	-½	-1	-1½	-1¼	-1.5
Output gap for mainland Norway <sup>4)</sup>	-¼		-1¼	-1¼	-1	-1
Employment, persons	-¾		-1½	-½	-¼	-0.4
Labour force, LFS	0		0	½	¼	0
LFS unemployment (rate)	3¼		4¼	3½	3¼	3.2
<b>Demand</b>						
Mainland demand	-1¼		-1¼	-1¼	0	-1.2
-Private consumption	¾		0	-¼	0	0
-Public consumption	3½		5¼	5¾	5¾	5.2
- Mainland gross investment	-14		-13½	-13	-7½	-12.1
Petroleum investment	10		2½	5	7½	6.4
Mainland exports	¾		-7¼	-9½	-9¼	-5.8
Imports	-1¼		-5¼	-6¾	-8	-9.7
<b>Interest and exchange rate</b>						
Key policy rate (level)	4¼	2¼	1¾	1¾	1¾	1.8
Import-weighted exchange rate (I-44)	94.2		95	96	94	93.8
<b>International economy and oil price</b>						
GDP, trading partners <sup>5)</sup>	½	-½	-3	-4	-3½	-3.4
External price impulses	½		-1½	-1¾	-½	-0.6
Oil price, USD per barrel (level)	71.9		48.9	61.2	61.6	63.3

<sup>1)</sup> At the monetary policy meeting on 17 December 2008. Norges Bank presented new forecasts for the interest rate path and a few key variables

<sup>2)</sup> Figures from the national accounts are preliminary

<sup>3)</sup> Annual wage growth based on Technical Reporting Committee's definitions and calculations

<sup>4)</sup> The output gap measures the percentage difference between mainland GDP and estimated potential mainland GDP

<sup>5)</sup> Export weights. 26 main trading partners. Source: National sources

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

## Annex

Boxes 2006 – 2010

Publications in 2009 and 2010 on Norges Bank's website

Regional network: enterprises and organisations interviewed

Monetary policy meetings

Tables and detailed projections

## Boxes 2006 – 2010

### 1 / 2010

The level of the normal interest rate  
Evaluation of the projections for 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 rise 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

## Publications in 2009 and 2010 on Norges Bank's website

### Economic commentaries

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

- 2/2010 *Public finances – the difficult path back to sustainable levels.* Unni Larsen and Bente Støholen
- 1/2010 *What is the level of the normal interest rate?* Tom Bernhardsen and Arne Kloster
- 9/2009 *Housing and debt.* Bjørn Helge Vatne
- 8/2009 *Emerging market economies – an ever more important driver for the global economy.* Sofie Jebsen, Unni Larsen and Bente Støholen
- 7/2009 *CPI-FW: a frequency weighted indicator of underlying inflation.* Agnes Marie Simensen and Fredrik Wulfsberg
- 6/2009 *Temporary halt in labour migration to Norway?* Kaj W. Halvorsen, Marie Norum Lerbak and Haakon Solheim
- 5/2009 *The IMF in change – loan from Norges Bank.* Morten Jonassen, Bente Støholen and Pål Winje
- 4/2009 *Are household debt-to-income ratios too high?* Tor Oddvar Berge and Bjørn Helge Vatne
- 3/2009 *Norwegian krone no safe haven.* Alexander Flatner
- 2/2009 *Relationship between key rates and money market rates.* Ida Wolden Bache and Tom Bernhardsen
- 1/2009 *Higher risk premiums on government debt.* Tom Bernhardsen and Terje Åmås

### Staff Memo

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

- 3/2010 *Risikopremien på norske kroner* (The risk premium on the Norwegian krone). Leif Andreas Alendal. Norwegian only
- 2/2010 *Background information, annual address 2010.* Norges Bank Monetary Policy
- 1/2010 *Dokumentasjon av enkelte beregninger til årstalen 2010* (Background information, annual address 2010). Norges Bank Pengepolitikk. Norwegian only
- 11/2009 *Beregning av vektorer til Regionalt nettverk* (Calculation of weights for Norges Bank's regional network). Kjetil Martinsen and Fredrik Wulfsberg. Norwegian only
- 10/2009 *Banking crisis resolution policy - different country experiences.* David G. Mayes
- 9/2009 *Norges Bank. Grunntrekk i administrasjon, oppgaver og historie* (Norges Bank. An overview of the Bank's administration, tasks and history). Egil Borlaug and Turid Wammer. Norwegian only
- 8/2009 *Money and credit in Norway.* Christian Kascha
- 7/2009 *The basic balance.* Kathrine Lund
- 6/2009 *Solvensavstand og andre risikoindikatorer for banker* (Distance to insolvency and other risk factors for banks). Per Atle Aronsen and Kjell Bjørn Nordal. Norwegian only
- 5/2009 *Costs in the Norwegian payment system: questionnaires.* Olaf Gresvik and Harald Haare
- 4/2009 *Costs in the Norwegian payment system.* Olaf Gresvik and Harald Haare
- 3/2009 *Teknisk beregning av KPIXE* (Technical calculation of the CPIXE). Marius Nyborg Hov. Norwegian only
- 2/2009 *Renter og rentemarginer* (Interest rates and interest margins). Asbjørn Fidjestøl. Norwegian only
- 1/2009 *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

## Economic Bulletin

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

### 2/2009

*Productivity growth in Norway 1948–2008.* Kåre Hagelund

*Norges Bank's regional network: fresh and useful information.* Henriette Brekke and Kaj W. Halvorsen

*Household net lending – what the micro data indicate.* Magdalena D. Riiser

### 1/2009:

*Evaluation of Norges Bank's projections for 2008.* Bjørn E. Naug

*Costs in the payment system.* Olaf Gresvik and 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

## Regional network: enterprises and organisations interviewed

3B-Fiberglass Norway AS	Aukra Midsund offshore AS	Byggma ASA
3T Produkter AS	Avantor ASA	Byggmester Grande AS
62 Nord AS	Avinor AS, Trondheim lufthavn	Byggmester Markhus AS & Markhus bygg AS
7. himmel AS	Baker Hughes Norge AS	Børstad transport AS
Acando AS	Bardu kommune	Cappgemini Norge AS, Trondheim
Account-IT AS	Bates United AS	Carshine AS
Adam og Eva frisør AS	Bautas AS, Trondheim	CC Mart'n Gjøvik drift AS
Adecco Norge AS, Trondheim	BearingPoint Norway AS	Chiron AS
Adresseavisen AS	Beitostølen Resort AS	Clarion Hotel Ernst AS
Advokatfirmaet Schjødt AS	Bergen Group ASA	Clas Ohlson AS
Ahead frisør	Bergen kino AS	Color Line AS
Air Products AS	Bergene Holm AS	Comfort Hotel Hammer AS
Aker Pusnes AS	Bergens tidene AS	Comrod AS
Aker Stord AS	Berg-Hansen reisebureau AS	ConocoPhillips Norge
Aker Verdal AS	Berg-Hansen reisebureau AS, Kristiansand	Coop elektro, Bodø
Aktietrykkeriet AS	Bertel O. Steen Rogaland AS	Coop NKL BA
Alcoa Norway ANS	Betong Øst AS	Coop Nord SA
Alcoa Norway ANS, Lista	Biltema Sørlandsparken	Coop Vest BA
Alcoa Norway ANS, Mosjøen	Biobag International AS	Coop Økonom BA
Alleen auto AS	Birkenes byggsenter AS	Cowi AS
Alu-rehab AS	Bjerkreim kommune	Cowi AS, Trondheim
Amfi drift AS	Bjørge ASA	CSC Norge AS
A-møbler AS	BKK AS	Dale bruk AS
Andøy kommune	Black Design AS	Dark AS
Anleggsgartnerfirma Strandman AS	Bohus Bomøbler AS	Dedicare AS
Apollo reiser	Bohus interiørsenter AS	Deloitte AS, Stavanger
Apply TB AS	Bohus møbelhuset AS	Devold of Norway AS
APS Norway AS	Borealis arkitekter AS	Diakonhjemmet
Aquaterm AS	Br. Reme AS	Dinamo Norge AS
Arbor-Hattfjelldal AS	Bravida AS	DnB NOR bank ASA, Kongsvinger
Arendal auto AS	Brende AS	DnB NOR eiendom AS, Alta
Arendal bryggeri AS	Britannia Hotel AS	DnB NOR næringsmegling AS, Trondheim
Arki arkitektar AS	Brude Safety AS	DNH Den norske høyttalerfabrikk AS
Arntzen de Besche advokatfirma AS	Brunvoll AS	Dokka Fasteners AS
Artec Aqua AS	Brødrene Bakk AS	Dokken og Moen murmesterforretning AS
Asker kommune	Brødrene Dahl AS	Dolly Dimple AS
Asplan Viak AS, Stavanger	Brødrene Røsand AS	Doosan Moxy AS
Asplan Viak AS, Trondheim	BSH husholdningsapparater AS	
Atelier Ekren AS	Bunnpriskjeden AS	
	Busengdal transport AS	

Du verden AS	Finsbråten AS	H. Mydland AS
EDB Business Partner ASA	Firda media AS	Hadsel kommune
EFD Induction AS	Fitjar kommune	Hafjell alpinsenter AS
Egersund Group AS	Fjord Line AS	Halden kommune
Eidskog kommune	Fjord1 MRF AS	Hamar kommune
Eiendomsmegler 1 AS	Flekkefjord kommune	Hammerø & Storvik Molde AS
Eiendomsmegler 1 SR-eiendom AS	Flora kommune	Hamworthy AS
Eiendomsmegleren Nord Norge AS	FMC Technologies AS	Handelsbanken, Trondheim
Eiendomsspar AS	Fokus bank	Handelshuset Martinsen AS
Eiendomsør og bygg AS	Fokus bank, Tromsø	Handicare AS, Lillehammer
Eigersund kommune	Fokus Krogsveen AS	Harila Alta AS
Ekornes ASA	Fossberg hotell AS	Harstad sparebank
Elektro Bodø AS	FotoKnudsen AS	Hedalm Anebyhus AS
Elektrotema Agder AS	Framnes fiskeindustri AS	Hedalm Anebyhus AS, Nord-Vest
Elkem AS, Salten verk	Franzefoss pukk AS	Hedmark fylkeskommune
Elkem Thamshavn AS	Fredrikstad kommune	Hegnar hotell AS
Elkjøp giganten Forus	Frost entreprenør AS	Helgeland rør AS
Elkjøp stormarked Bodø	Fuglefjellet AS	Hellvik hus AS
Ellingsen Seafood AS	Fugro Oceanor AS	Helse Bergen HF
Elprice AS	Fædrelandsvennen AS	Helse Finnmark HF
Eltek ASA	Galvano AS	Helse Midt-Norge RHF
Entreprenør M Kristiseter AS	Gausdal Bruvoll BA	Hogg Robinson Nordic AS
Eramet Norway AS	Geelmuyden Kiese AS	Holm grafisk AS
ErgoGroup AS	Gilstad trelast AS	Hordaland fylkeskommune
ErgoGroup AS, Furnes	Gjensidige forsikring BA, Hamar	Hotel Norge AS, Kristiansand
Ernst & Young AS, Stavanger	Gjensidige forsikring BA, Ålesund	Hotel Central, Elverum
Ernst & Young AS, Tromsø	Gjøvik kommune	Hotell Wessel
Esko-Graphics Kongsberg AS	Glamox ASA	HTH kjøkken Oslo AS
Esmeralda AS	Glåmdalen AS	Hunton fiber AS
Euronics Norge AS	Godstrafikk og bilspedisjon AS	Hurtigruten ASA
Europris Sørlandsparken Pluss	Goman bakeriet AS, Trondheim	Hydro Aluminium Profiler AS
Evje- og Hornnes kommune	Gran Taralrud AS	Håg AS
Fabelaktiv AS	Gravdahl AS	Hårek AS
Fagbokforlaget Vigmostad & Bjørke AS	Grenland Group ASA	IBM Norge
Fame fotografene AS	Grenland Group ASA	ICA Norge AS
Farsund bygg AS	Grieg Logistics AS	Ide møbler Bodø AS
Felleskjøpet Rogaland Agder BA	Grilstad AS, Brumunddal	IKEA AS, Forus
Fesil AS, Rana metall	G-Sport Nord AS	IKEA Norge AS
Findus industrier AS	Gudbrandsdalens uldvarefabrik AS	Industriverktøy AS
Finnmark mur og puss AS	Gunnar Hippe AS	Industrivisualisering AS
	Gunnar Klo AS	Innoventi AS
	H & M Hennes & Mauritz AS	Innvik Sellgren industrier AS
		Interfil AS

ISS Facility Services AS, region Telemark & Vestfold, Østfold, Buskerud	Lerum fabrikk AS	Møbelringen AS
IT partner Tromsø AS	Lerøy Hydrotech AS	Møllergruppen AS
Itella Logistics AS	Lindorff AS	Møre båtservice AS
Ivar Mjåland AS	LKAB Norge AS	Møre eiendomsmegling AS
JC Decaux Norge AS	Lom kommune	Møretre AS
Jernbaneverket	Lom møbelindustri AS	Nannestad kommune
Jernia ASA	Lom og Skjåk sparebank	Naper informasjonsindustri AS
Jiffy Products International AS	Loppa kommune	Narvik kommune
JM byggholt AS	LPO arkitekter AS	Narvik megler'n AS
John Galten AS	Lundegården Bar & Brasserie AS	National Oilwell Varco Hjelset AS
Jotunheimen og Valdresruten bil-selskap AS	Luxo Norge AS, Kirkenær	NAV Aust-Agder
Kappahl AS	Lycro AS	NAV Sør-Trøndelag
KBS kjøpesenter	Madsen bil AS	NAV Vest-Agder
Kirkenes trelast AS	Madshus AS	NAV Vestfold
Kirkestuen transport AS	Malvik kommune	Nera Networks AS
Kjeldstad trelast AS	Manpower AS	Nerland granitindustri AS
Kjøpmannshuset Norge AS	Manpower AS, Hedmark og Oppland	Nettbuss Sør AS
Kleive betongbygg AS	Manpower AS, Nordmøre og Romsdal	Noodt & Reiding AS
Klepp sparebank	Marine installasjoner AS	Norac AS
Klæbu kommune	Mascot Electronics AS	Norconsult AS, Bodø
Kongsberg Automotive AS, Raufoss	Maskinentreprenør Herbjørn Nilsen AS	Nord Norsk dekkimport AS
Kongsberg Automotive ASA	MaxMat AS	NorDan AS
Kosbergs arkitektkontor AS	Melbu Systems AS	Nord-Aurdal kommune
KPMG AS	Melhus kommune	Nordea bank Norge ASA
KPMG AS, Trondheim	Melvær & Lien ide-entreprenør AS	Nordea bank Norge ASA, Bodø
Kraft Foods Norge AS	Meny, Sogndal	Nordea bank Norge ASA, Kristiansand
Kragerø kommune	Mercursenteret AS	Nordea bank Norge ASA, Ålesund
Kristiansand kommune	Mezina AS	Nordek AS
Kruse Smith AS	Midsund bruk AS	Nordic Comfort Products AS
Laerdal Medical AS	Mjosundet båt og hydraulikk AS	Nordic Paper AS
Landteknikk fabrikk AS	Modern design AS	Nordlaks AS
Langmorkje almenning	Moderne byggfornyelse AS	Nordox AS
Larvik kommune	Moelven Wood AS	Norgesmøllene AS, Buvika
Leif Gromstads auto AS	Moi rør AS	NorLense AS
Leiv Sand transport AS	Molde kommune	Norplasta AS
Leksvik kommune	Multi elektro AS	Norsk stål AS, Brumunddal
Lena maskin AS	Multiconsult AS	Norsk tipping AS
Leonhard Nilsen & Sønner AS	Multimaskin AS	Norske skogindustrier ASA
	Myklebust AS	Norske skogindustrier ASA, Skogn
		Norspace AS
		Nortrans Touring AS

Nortura BA, Trondheim	PS Data	SF kino Stavanger/Sandnes AS
Norwegian Air Shuttle ASA	Q-Free ASA	Siemens AS, Bergen
Notabene Søregaten	Quality Hotel Sogndal AS	Siemens AS, Building Technologies
Næringsforeningen i Trondheim	Radisson Blu Lillehammer Hotel	Siemens Oil & Gas Norway
Nøsted kjetting AS	Radisson Blu Scandinavia Hotel, Oslo	Simon Møkster Shipping AS
Oasen storsenter, Karmsund	Rambøl Unico AS	Sjøvik AS
Officelink AS	Rambøll Norge AS	Skagen brygge hotell AS
Offshore Simulator Centre AS	Rambøll Norge AS, Lillehammer	Skanem Moss AS
Oljedirektoratet	Rana plast AS	Skanska Norge AS
Optimera AS, region Sør	Rauma kommune	Skanska Norge AS, Indre Østland (Moelv)
Optimera AS, region Vest	Reber Schindler heis AS	Skanska Norge AS, region Midt-Norge
Opus AS	REC Wafer Norway AS	Skanska Norge AS, region Rogaland bygg
Oras AS	Refa Frøystad Group AS	Skanska Norge AS, Sør (Arendal)
Oras Trondheim AS	Remøy Shipping AS	Skanska Norge AS, Øst (Tønsberg)
Orica Mining Services	Renates dag spa AS	Skarvik AS
Orkdal installasjon AS	Renés barnevogner AS	Skeidar Ålesund AS
Oscar Sylte mineralvannsfabrikk AS	Renseriet Sandnes AS	Skeie AS
Oshaug metall AS	Rescon Mapei AS	Skibsplast AS
Oslo kommune	Rica Hotels AS	Skien kommune
Oswo AS	Rica Hotels Finnmark AS	Skodje byggvare AS
Ottadalen mølle AL	Rica Hotels Midt-Norge AS	Slatlem & Co AS
Otteren AS	Riibe mynthandel AS	Slipen mekaniske AS
Ottesen & Dreyer AS	Ringerike kommune	Sodexo Remote Sites Norway AS
Partner mote AS	Ringnes AS	Solstad offshore ASA
Paulsen eiendom AS	Risa AS	Sortland entreprenør AS
Peab AS	Rockwool AS	Sortland reisebyrå AS
Pedagogisk vikarsentral AS	Rogne bygg AS	Sparebank 1 SR-bank
Per Strand AS	Rosenborg malerteam AS	Sparebank 1 Vestfold
Per Aaland AS	Rød tråd AS	Sparebanken Nord-Norge
PipeLife Norge AS	Rørleggeren	Sparebanken Sogn og Fjordane
Plastsveis AS	Røstad entreprenør AS	Sparebanken Sør, Farsund
Pon Power	Raaen entreprenører AS	Sparebanken Øst
Porsgrunds porselænsfabrik AS	Saint Gobain Ceramic Materials AS	Spenncon AS
PricewaterhouseCoopers AS	Sandnes kommune	Sport & rekreasjon AS
PricewaterhouseCoopers AS, Sandnes	SandnesGarn AS	Sportshuset AS
Primahus AS	Sarpsborg kommune	Stange kommune
Privatmegleren AS	SB transport AS	Startour-stjernereiser AS
Proffice AS, Gjøvik	ScanPartner AS	Statens vegvesen
Prognosesenteret AS	Securitas AS, Trondheim	
Protech AS	Selvaag gruppen AS	

Stavanger universitetssykehus HF	Toten bygg og anlegg AS	Vågan kommune
Stillasservice AS	Toyota Nordvik AS	Vågå kommune
Stjørdal kommune	Toyota Norge AS	Våler bygg AS
Stokke gruppen AS	Toyota Sørvest AS	Washington Mills AS
Stordal kommune	Trehuseksperten AS	Wennbergs trykkeri AS
Stor-Elvdal kommune	Trelleborg Viking AS	Westre bakeri AS
Strand Sea Service AS	Triplex AS	XXL sport & villmark AS
Strandtorget kjøpesenter	Trondheim stål AS	YC rør AS
Studentsamskipnaden i Agder	Trondheim torg	YIT Building Systems AS, Bodø
STX Norway Offshore AS, Aukra	Trondheimsfjorden interkommunale havn IKS	YIT Building Systems AS, Kristiansund
Sulland auto AS, Hamar	TT anlegg AS	Ø M Fjeld AS
Sult AS	Tvedestrand kommune	Økonor Flisa AS
Surnadal kommune	Ulstein verft AS	Ølen betong AS
Sykehuset Telemark HF	Umoe Catering AS	Ørland transport AS
Sykehuset Telemark HF	Umoe Mandal AS	Østbø AS
Syljuåsen AS	Unex AS	Øster hus gruppen AS
Sylteosen holding AS	Unifab AS	Østereng & Benestad AS
Synnøve Finden ASA	Union Hotel Geiranger AS	Øystre Slidre kommune
Synsam Norge AS	Universitetssykehuset Nord-Norge HF	Ålesund storsenter AS
Sør-Trøndelag fylkeskommune	Vadsø kommune	Aarsland møbelfabrikk AS
Søstrene Karlsen AS	Valdres auto AS	Aasen bygg AS
T. Stangeland maskin AS	Valdres last AS	
Tannum AS	Valdres regnskap AS	
Taxi Sør AS	Valdresbygg AS	
Tele2 Norge AS	Vale Manganese Norway	
Tele-Connect Gjøvik AS	Valldal høvleri AS	
Tema eiendomsselskap AS	Valle sparebank	
Teneo data AS	Vann og varme AS	
Terra forsikring AS	Varner-gruppen AS	
Thon Hotel Arendal	Vefsn kommune	
Thon Hotel Bergen brygge	Verdal kommune	
TI Group Automotive Systems AS	Vestbase AS	
Time kommune	Vesteråls-revisjon AS	
Timpex AS	Vestre Viken HF	
Tine meieriet Øst BA	Veøy AS	
Tine meieriet Sør BA	VIBO entreprenør AS	
Tine meieriet Vest BA	Vikenco	
Tinn kommune	Vikomar AS	
Titania AS	Vital forsikring ASA	
TNS Gallup AS	Vokks installasjon AS	
To rom og kjøkken		
Top Temp bemanning AS		

## Monetary policy meetings with changes in the key policy rate

Date	Key policy rate <sup>1)</sup>	Change
23 June 2010		
5 May 2010		
<b>24 March 2010</b>	<b>1.75</b>	<b>0</b>
3 February 2010	1.75	0
16 December 2009	1.75	+0.25
28 October 2009	1.50	+0.25
23 September 2009	1.25	0
12 August 2009	1.25	0
17 June 2009	1.25	-0.25
6 May 2009	1.50	-0.50
25 March 2009	2.00	-0.50
4 February 2009	2.50	-0.50
17 December 2008	3.00	-1.75
29 October 2008	4.75	-0.50
15 October 2008	5.25	-0.50
24 September 2008	5.75	0
13 August 2008	5.75	0
25 June 2008	5.75	+0.25
28 May 2008	5.50	0
23 April 2008	5.50	+0.25
13 March 2008	5.25	0
23 January 2008	5.25	0
12 December 2007	5.25	+0.25
31 October 2007	5.00	0
26 September 2007	5.00	+0.25
15 August 2007	4.75	+0.25
27 June 2007	4.50	+0.25
30 May 2007	4.25	+0.25
25 April 2007	4.00	0
15 March 2007	4.00	+0.25
24 January 2007	3.75	+0.25
13 December 2006	3.50	+0.25
1 November 2006	3.25	+0.25

<sup>1)</sup> 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 from previous year/quarter	GDP	Mainland GDP	Private consumption	Public consumption	Mainland fixed investment	Petroleum investment <sup>1)</sup>	Mainland exports <sup>2)</sup>	Imports	
2006	2.3	4.9	4.8	1.9	11.9	4.3	8.5	8.4	
2007	2.7	5.6	5.4	3.0	15.7	6.3	8.8	8.6	
2008	1.8	2.2	1.3	4.1	1.0	3.7	4.1	2.2	
2009	-1.5	-1.5	0.0	5.2	-12.1	6.4	-5.8	-9.7	
2009 <sup>3)</sup>	Q1	-0.7	-0,9	-0.2	2.0	-8.8	13.5	-6.4	-7.4
	Q2	-1.2	0,1	1.0	1.5	1.1	-8.5	1.5	1.9
	Q3	0.5	0,3	1.2	1.2	-5.2	-7.2	4.0	0.9
	Q4	0.1	0,3	1.3	0.1	0.1	4.2	1.9	2.6
2009-level, in billions of NOK	2408	1854	1012	535	360	136	415	658	

<sup>1)</sup> Extraction and pipeline transport

<sup>2)</sup> Other goods, travel and other services

<sup>3)</sup> Seasonally adjusted quarterly figures

Source: Statistics Norway

## Table 2 Consumer prices

Annual rise/ Twelve-month rise. Per cent	CPI	CPI-ATE <sup>1)</sup>	CPIXE <sup>2)</sup>	CPI-AT <sup>3)</sup>	CPI-AE <sup>4)</sup>	HICP <sup>5)</sup>	
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	2.1	2.6	2.6	2.1	2.7	2.3	
2010	Jan	2.5	2.3	2.4	2.6	2.4	2.7
	Feb	3.0	1.9	2.1	3.0	1.8	3.1

<sup>1)</sup> CPI-ATE: CPI adjusted for tax changes and excluding energy products

<sup>2)</sup> CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo 7/2008* and *Staff Memo 3/2009* from Norges Bank for a description of the CPIXE

<sup>3)</sup> CPI-AT: CPI adjusted for tax changes

<sup>4)</sup> CPI-AE: CPI excluding energy products

<sup>5)</sup> HICP: Harmonised Index of Consumer Prices. The index is based on international criteria drawn up by Eurostat

Sources: Statistics Norway and Norges Bank

## Table 3 Projections for main economic aggregates

	In billions of NOK	Percentage change from previous year (unless otherwise stated)				
		2009	2009	Projections		
				2010	2011	2012
<b>Prices and wages</b>						
CPI		2.1	2½	1¾	2½	2½
CPI-ATE <sup>1)</sup>		2.6	1½	2	2½	2½
CPIXE <sup>2)</sup>		2.6	1¾	2	2½	2½
Annual wage growth <sup>3)</sup>		4.1	3¾	4¼	4¾	4¾
<b>Real economy</b>						
GDP	2408	-1.5	1¼	1½	2	1¼
GDP, mainland Norway	1854	-1.5	2¼	2¾	2½	2¼
Output gap, mainland Norway <sup>4)</sup>		-1	-¾	-¼	-¼	0
Employment		-0.4	0	¾	1	½
Labour force, LFS		0	¼	¾	¾	½
LFS unemployment (rate)		3.2	3¾	3¾	3½	3½
Registered unemployment		2.7	3	3	2¾	2¾
<b>Demand</b>						
Mainland demand <sup>5)</sup>	1907	-1.2	3	4¼	3¼	2¼
- Private consumption	1012	0	5	4¼	3	2½
- Public consumption	535	5.2	3	2¼	.	.
- Fixed investment, mainland Norway	360	-12.1	-2	8	.	.
Petroleum investment <sup>6)</sup>	136	6.4	-4½	-1½	6½	2¾
Mainland exports <sup>7)</sup>	415	-5.8	5¼	3	.	.
Imports	658	-9.7	5	6	.	.
<b>Interest rate and exchange rate</b>						
Key policy rate (level) <sup>8)</sup>		1.8	2	2¾	4	4½
Import-weighted exchange rate (I-44) <sup>9)</sup>		93.8	89	91	92	93

<sup>1)</sup> CPI-ATE: CPI adjusted for tax changes and excluding energy products

<sup>2)</sup> CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See *Staff Memo 7/2008* and *Staff Memo 3/2009* from Norges Bank for a description of the CPIXE

<sup>3)</sup> Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations

<sup>4)</sup> The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP

<sup>5)</sup> Private and public consumption and mainland gross fixed investment

<sup>6)</sup> Extraction and pipeline transport

<sup>7)</sup> Other goods, travel and other services

<sup>8)</sup> The key policy rate is the interest rate on banks' deposits in Norges Bank

<sup>9)</sup> 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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