NORGES BANK

Monetary Policy Report

2|12

June

Reports from the Central Bank of Norway No. 3-2012

Monetary Policy Report
2/2012

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Norges Bank

Oslo 2012

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Printing:	07 Gruppen AS

The text is set in 10½ pt Times New Roman / 9½ pt Univers

ISSN 1504-8489 (print)
ISSN 1504-8500 (online)

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 26 April 2011, the Executive Board discussed relevant themes for the *Report*. At the Executive Board meetings on 5 and 6 June 2012 the economic outlook and the monetary policy stance were 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 31 October 2012 at the meeting held on 20 June. The Executive Board's summary of the economic outlook and the monetary policy strategy are presented in "The Executive Board's assessment". The next monetary policy meeting of the Executive Board will be held on 29 August.

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This Monetary Policy Report is based on information in the period to 15 June 2012.
The monetary policy strategy was approved by the Executive Board on 20 June 2012.

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 monetary policy stance is presented to the Executive Board for discussion at a meeting about two weeks before the *Monetary Policy 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 beginning of 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 held six times a year. 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 published in a press release and announced at a press conference at 2 pm on the day of the meeting.

"The Executive Board's assessment" is published in the *Monetary Policy Report*. The assessment contains the main points of the *Report* and a summary of the main points to which the Executive Board gives weight in its discussion of monetary policy. The assessment concludes with the Executive Board's strategy for the period to the publication of the next *Report* and the key policy rate decision.

The press release, the *Monetary Policy Report*, the Executive Board's monetary policy decision – background and general assessment, and the press conference are available on www.norges-bank.no.

Reporting

Norges Bank reports on the conduct of monetary policy in the *Monetary Policy Report* and the *Annual Report*. The Bank's reporting obligation is set out in Section 75c of the Constitution, which stipulates that the Storting shall supervise Norway's monetary system, and in Section 3 of the Norges Bank Act. The *Annual Report* is submitted to the Ministry of Finance and communicated to the King in Council and to the Storting in the Government's Finansmarknadsmeldinga (Financial Market 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 Financial Market Report.

The Executive Board's assessment

At the time of the publication of the March 2012 *Monetary Policy Report*, the Executive Board decided that the key policy rate should be in the interval 1% – 2% in the following three-month period, unless the Norwegian economy was exposed to new major shocks. Inflation was low and the krone had appreciated considerably. There were prospects that weak growth abroad and the strong krone would act as a brake on both inflation and growth in some segments of Norwegian business and industry going forward, even though capacity utilisation in the economy was assessed as close to normal. The key policy rate was reduced by 0.25 percentage point to 1.5%. The analysis in the *Report* indicated that the key policy rate would remain unchanged for about a year and then gradually rise to around 3½% towards the end of 2015.

At its meeting on 26 April, the Executive Board discussed the economic situation and possible themes for the June *Report*, including the functioning of the money market, developments in the global economy and commodity prices and the impact of uncertainty on economic developments domestically and abroad.

In its discussion at the meeting on 10 May 2012, Norges Bank's Executive Board pointed out that developments among Norway's trading partners had been broadly in line with expectations, but that financial market turbulence had intensified. Yields on Spanish and Italian government bonds had risen and global equity indices had moved down, particularly in Europe. The Executive Board noted that there were signs of somewhat stronger developments in the Norwegian economy. The krone depreciated after the monetary policy meeting in March and had since remained at a fairly stable level. At the same time, the Executive Board gave weight to the low level of inflation and weak growth prospects in Europe. The Executive Board concluded that, on balance, the economic situation did not significantly change the outlook for the key policy rate and decided to keep the rate unchanged at 1.5%.

At its meetings on 5-6 June and 20 June, the Executive Board discussed the monetary policy stance and the outlook for the key policy rate.

The Executive Board has now placed emphasis on the following developments:

– The turbulence in international financial markets has increased further. Attention is particularly focused on Spain, with its weak economy, substantial budget deficits and problems in the banking sector. The Spanish authorities have requested financial assistance from the other euro area countries in order to recapitalise the banks. The unclear political situation in Greece has fuelled doubt as to the country's ability and willingness to honour its debt obligations. Interest rates on long-terms loans to debt-laden countries in Europe have moved up again, while yields on presumably safe government bonds have fallen to record-low levels.

– Uncertainty about prospects abroad has increased. The euro area may experience a decline in activity in 2012, and unemployment is high and rising in a number of countries. In the US, the moderate recovery continued in the first quarter, but unemployment remains high. Growth is slowing in several emerging market economies in Asia. Global equity prices and oil prices have dropped. Economic growth abroad is expected to be even lower than previously projected. At the same time, the risk of a worsening of the debt crisis in the euro area, with serious and long-term consequences for economic developments, appears to have increased.

– Central bank key rates are close to zero in many countries and are likely to be kept very low for longer than previously expected. Money market rates have fallen further from already low levels.

– The krone exchange rate weakened after Norges Bank's key policy rate was reduced in March and has since remained fairly stable. So far in the second quarter, the krone exchange rate measured by the I-44 has been somewhat weaker than projected in the March *Report*. The krone exchange rate is still strong, however.

- Money market premiums are high and have increased slightly recently. Credit premiums on covered bonds and senior bank bonds issued by Norwegian banks remain elevated, and recently premiums in the senior market in particular have increased. A number of Norwegian banks are now also signalling that long-term market funding is somewhat more difficult to obtain.

- So far in 2012, growth in the Norwegian economy has been slightly stronger than expected. Both employment and the labour supply are growing at a brisk pace. In May, contacts in Norges Bank's regional network reported somewhat higher production growth and increased capacity utilisation. Growth in oil-related industries is vigorous, while export-oriented manufacturing segments are feeling the adverse impact of low external demand and a strong krone. Unemployment is low and it appears that wage growth may be somewhat higher than previously projected. Capacity utilisation is now projected to be a little above normal.

- Inflation remains low. Underlying inflation has ranged between 1% and 1½% over the past year. Somewhat higher capacity utilisation and slightly higher cost growth may lead to an upward drift in inflation further out.

The point of departure for the Executive Board's deliberations is that the key policy rate is set with a view to stabilising inflation close to 2.5% over time. When setting interest rates, stabilising inflation is balanced against stabilising output and employment. Monetary policy also seeks to take into account the risk of a buildup of financial imbalances.

The Executive Board notes that the analyses in this *Report* imply a key policy rate at today's level in the period to the turn of the year. The forecast for the key policy rate in 2013 is slightly higher than the forecast in the March *Report*.

In its discussion, the Executive Board referred to the contrast between domestic developments and external developments. Growth in the Norwegian economy is slightly stronger than expected and household income growth is high. In spite of a low key policy rate, household saving has increased. Should consumption growth be more in line with income growth, private consumption may rise more than projected in this *Report*. The Executive Board also highlighted the reports from the enterprises in Norges Bank's regional network in April/May which indicated that market prospects had improved somewhat, while the turbulence has actually increased in recent weeks. Experience shows that both households and enterprises in Norway are affected by weakening confidence abroad. At the same time, oil prices have declined, but petroleum investment is still expected to show strong growth. The Executive Board pointed out that there is growing uncertainty as to the potential effects of the financial market turbulence and weak external growth on the Norwegian economy.

Furthermore, the Executive Board considered the consequences of the flexible labour supply on capacity utilisation in the Norwegian economy. Employment is rising rapidly, partly reflecting high labour immigration. The Executive Board pointed out that the rapid growth in the supply of labour is fuelling demand, but also that potential output is rising.

The Executive Board also looked at developments in money market premiums. Premiums in the Norwegian money market are influenced by a number of factors, such as the risk linked to European banks, liquidity in interbank markets and forward foreign exchange markets. The turbulence in Europe has kept premiums at a higher level for a longer period than previously assumed.

In its deliberations on the monetary policy situation, the Executive Board gave weight to the fact that the low rate of inflation suggests a low key policy rate in order to bring inflation up towards the inflation target. At the same time, the public is facing interest rates that are considerably higher than the key policy rate, owing to the high level of money market and credit premiums.

The Executive Board pointed out that developments in the Norwegian economy suggest an upward drift in inflation further ahead. This implies an upward shift in the key policy rate further out. The consideration given to mitigating the risk of a buildup of financial imbalances pushes in the same direction. Weak external growth prospects, financial market turbulence and expectations of low central bank key rates for a prolonged period nevertheless place limits on the timing and extent of an interest rate increase domestically. The reduction in the key policy rate in March helped counter an appreciation of the krone, but the krone is still strong. These conditions, in conjunction with weak external growth, are holding down inflation at a low level. If the key policy rate is raised too rapidly, the krone may appreciate further so that inflation remains low for a long period. The level of uncertainty surrounding developments in Europe is now higher than it has been for some time. This suggests that the key policy rate should be kept on hold.

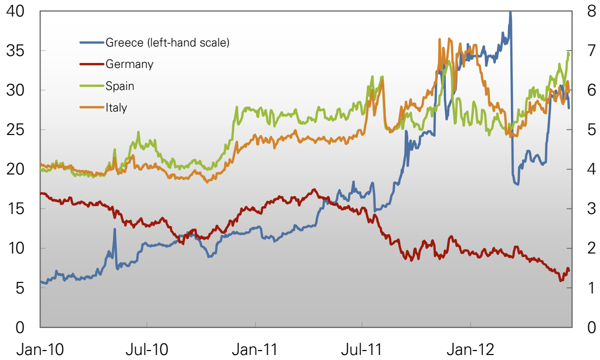
At its meeting on 20 June, the Executive Board decided to keep the key policy rate unchanged at 1.5%. At the same meeting, the Executive Board decided that the key policy rate should be in the interval 1% – 2% until the publication of the next *Report* on 31 October 2012, unless the Norwegian economy is exposed to new major shocks. Should the uncertainty abate and growth and inflation pick up, the key policy rate may be raised. If the international turbulence increases and domestic growth and inflation prospects weaken, the key policy rate may be reduced.

Øystein Olsen

20 June 2012

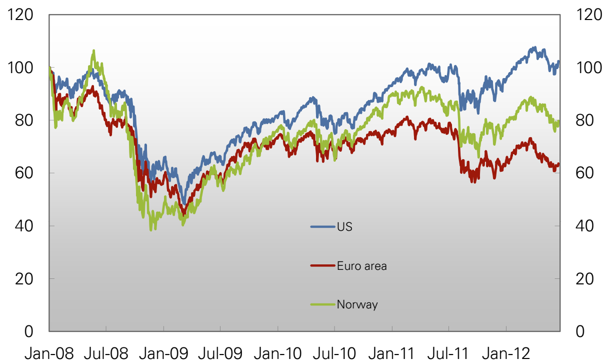
1 Monetary policy outlook

Chart 1.1 Yields on 10-year government bonds.
Percent. 1 January 2010 – 15 June 2012



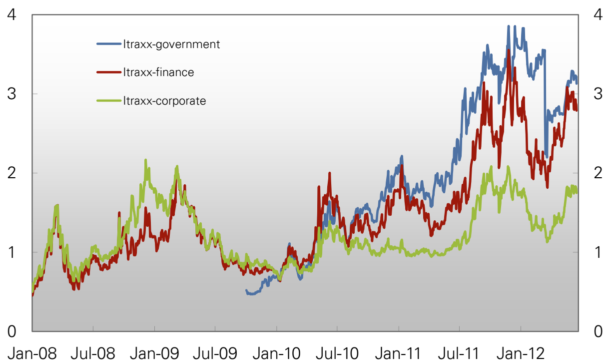
Source: Thomson Reuters

Chart 1.2 Developments in equity markets. Index.
1 January 2008 = 100. 1 January 2008 – 15 June 2012



Source: Thomson Reuters

Chart 1.3 CDS premiums in Europe.
Percent. 1 January 2008 – 15 June 2012



Source: Bloomberg

The economic situation

The turbulence in international financial markets has increased again. The uncertainty surrounding economic developments in Europe has intensified. The Spanish economy is in a downturn, with substantial budget deficits and problems in the banking sector. The Spanish authorities have asked the other euro area countries for financial assistance in order to recapitalise the banks. The unclear political situation in Greece has fuelled doubt as to the country's ability and willingness to honour their debt obligations. Yields on Spanish, Greek and Italian government bonds have moved up again, while yields on presumably safe government bonds have declined to historically low levels (see Chart 1.1). Global equity prices have declined (see Chart 1.2). CDS premiums have increased markedly recently (see Chart 1.3).

Economic developments are weak in most advanced economies (see Chart 1.4). Several economies in Europe are stagnating or contracting. Growth is being pushed down by extensive fiscal tightening, deleveraging in the private sector and tight credit standards. Unemployment is high and household confidence about the economic situation has weakened. In the US, the moderate recovery observed in the first quarter has continued, but unemployment remains high. Growth is slowing in several emerging economies in Asia. Inflation among Norway's trading partners has been higher than projected, but is expected to edge back ahead. Oil prices have dropped by about 20% since the March 2012 *Monetary Policy Report*, but are still high at close to USD 100 per barrel

Central bank key rates are still close to zero in many countries and the expected upward shift in interest rates has been deferred further into the future (see Chart 1.5). In the US, the Federal Reserve has reaffirmed that its key rate will be held low until the end of 2014, and in the euro area, market prices indicate that the short money market rate (EONIA) will be close to zero to end-2013.

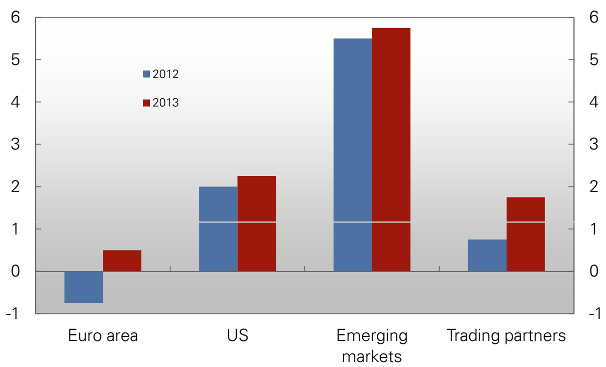
The krone exchange rate weakened after Norges Bank's key policy rate was reduced in March and has since remained fairly stable. So far in the second quarter, the krone exchange rate measured by the I-44 has on average been somewhat weaker than projected in the March *Report*. The krone exchange rate is still strong, however.

The key rate reduction has fed through to money market rates. This has given banks room to increase their lending margins. At the same time, banks have reported that they have tightened credit standards for households and businesses since last autumn.

Money market premiums are still high (see Chart 1.6), which means that market rates have remained markedly higher than the expected key policy rate. Credit premiums on covered bonds and senior bank bonds issued by Norwegian banks also remain at high levels, and in particular premiums in the senior market have increased recently (see Charts 1.7 and 1.8). Norwegian banks are now also reporting that long-term funding is somewhat more difficult to obtain.

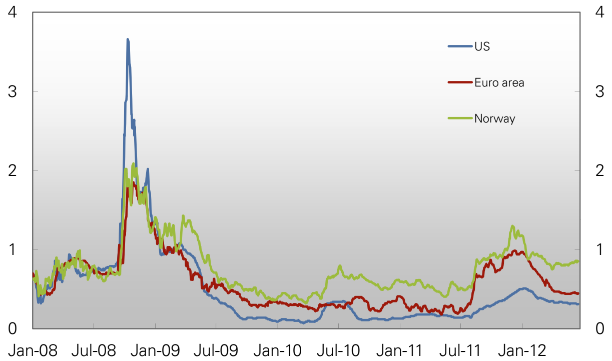
In recent months, growth in the Norwegian economy has been fairly solid, while developments in many advanced

Chart 1.4 Projections of GDP growth for 2012 and 2013.
Annual change. Percent



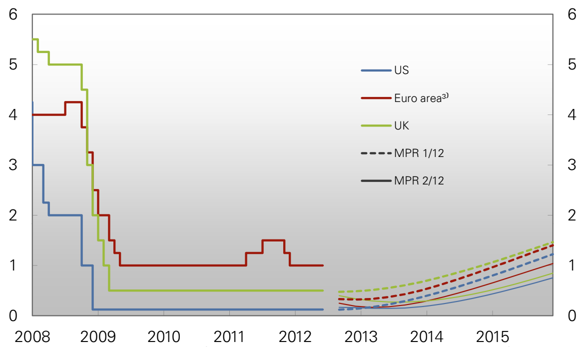
Sources: IMF, Thomson Reuters and Norges Bank

Chart 1.6 Difference between 3-month money market rate and expected key rates[1]. Percentage points. 5-day moving average.
1 January 2008 – 15 June 2012



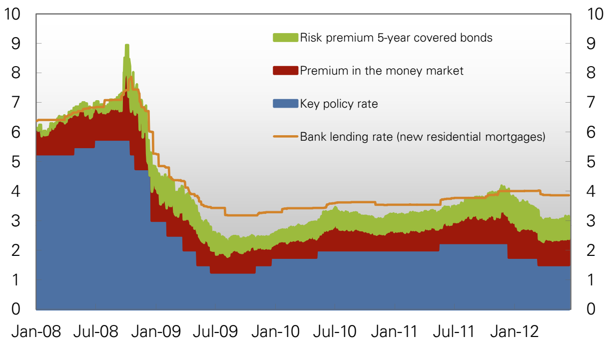
1) Expected key rates are derived from Overnight Index Swap (OIS) rates.
Norges Bank's projections for market key rate expectations are used for Norway
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 1.5 Key rates and estimated forward rates as at 9 March 2012 and 15 June 2012.[1] Percent. 1 January 2008 – 31 December 2015[2]



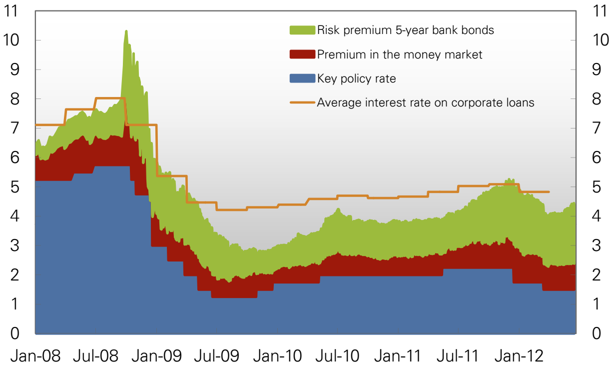
1) Broken lines show estimated forward rates as at 9 March 2012. Thin lines show forward rates as at 15 June 2012. Forward rates are based on Overnight Index Swap (OIS) rates
2) Daily figures from 1 January 2008 and quarterly figures from 2012 Q3
3) EONIA in euro area from 2012 Q3
Sources: Bloomberg and Norges Bank

Chart 1.7 Key policy rate, premium in the money market[1], risk premium 5-year covered bonds[2] and weighted average lending rate on new residential mortgages[3]. Percent. 1 January 2008 – 15 June 2012



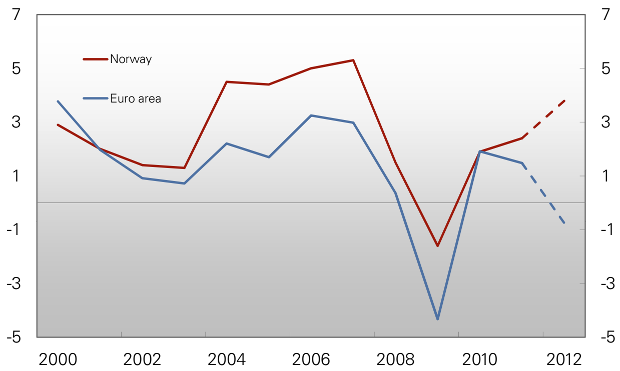
1) 3-month NIBOR (effective)
2) Indicative risk premium on 5-year covered bonds
3) Nominal interest rate on new residential mortgages of NOK 1m within 60% of purchase price with variable interest rate. Figures for the 20 largest banks, weighted according to market share
Sources: Norsk familieøkonomi AS, DnB Nor Markets, Statistics Norway and Norges Bank

Chart 1.8 Key policy rate, premium on the money market rate[1], risk premium on 5-year bank bonds[2] and average interest rate on corporate loans. Percent. 1 January 2008 – 15 June 2012



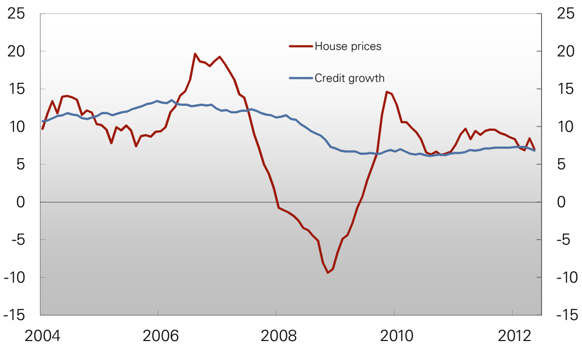
1) 3-month NIBOR (effective)
2) Indicative risk premium on 5-year bank bonds
Sources: DnB Nor Markets, Statistics Norway and Norges Bank

Chart 1.9 GDP growth for Norway and the euro area. Annual change. Percent. 2000 - 2012[1]



1) Projections for 2012
Sources: European Commission, Statistics Norway and Norges Bank

Chart 1.10 Credit growth[1] and house prices. 12-month change. Percent. January 2004 - May 2012[2]



1) From January 1 2012 the Norwegian standard for institutional sector grouping was changed. For credit growth this implies a break in the series from March 2012
2) House prices up to and including May, credit growth up to and including April. Sources: Statistics Norway, the real estate sector (NEF, EFF, Finn.no and ECON Pöyry) and Norges Bank

economies have been sluggish (see Chart 1.9). The Norwegian economy has expanded slightly faster than expected. Mainland GDP grew by 1.1% between 2011 Q4 and 2012 Q1, according to preliminary national accounts figures. Norges Bank's regional network[1] contacts have also reported somewhat higher growth in output. Employment growth is high and unemployment has been low and stable. Wage growth may turn out to be a little higher than previously assumed. Capacity utilisation is now estimated to be at a level slightly above normal and somewhat higher than projected in the March *Report* (see further discussion in Section 2).

Vigorous activity in the petroleum sector and construction industry is driving growth in the Norwegian economy. On the other hand, certain export-oriented manufacturing segments are feeling the impact of low external demand. Growth in exports from mainland Norway has been weak over the past year and growth in mainland business investment has been moderate. The uncertainty surrounding economic developments abroad may have fuelled caution among Norwegian households and firms in their spending and investment decisions. Despite low interest rates, household saving has increased in Norway. Household debt is still rising faster than income and house prices are moving up (see Chart 1.10).

Domestically, inflation remains low, approximately in line with that projected in the March *Report*. Underlying inflation is now estimated at between 1% and 1½%. The twelve-month rise in consumer prices (CPI) was 0.5% in May. In the same period, consumer prices adjusted for tax changes and excluding energy products (CPI-ATE) and consumer prices adjusted for tax change and excluding temporary changes in energy prices (CPI-XE) increased by 1.4% and 1.1%, respectively (see Chart 1.11).

1 For more information about the results from the regional network 2-2012 and the enterprises and entities surveyed, see: http://www.norges-bank.no/en/about/published/publications/regional-network-reports/

The outlook ahead

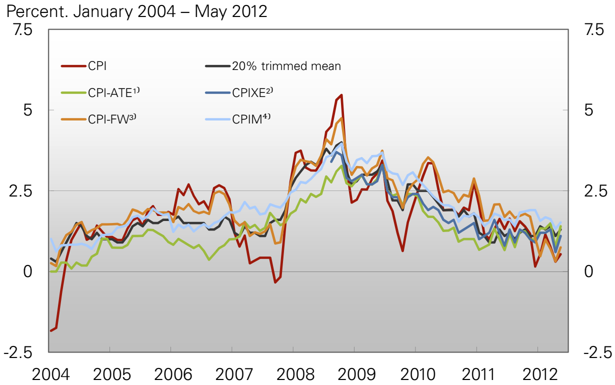
The operational target of monetary policy in Norway is low and stable inflation, with annual consumer price inflation of close to 2.5% over time. Over the past ten years, average inflation has been somewhat below but close to 2.5% (see Chart 1.12). Both long-term and short-term inflation expectations are close to the inflation target (see Chart 1.13).

Through summer and autumn of 2011, growth among Norway's main trading partners was considerably weaker than expected. The uncertainty surrounding developments heightened during autumn. The risk of a worsening of the debt crisis in the euro area, with serious and long-term consequences, increased. The debt crisis made it more difficult and expensive for European banks to obtain funding in the market. Norwegian banks were also influenced by this situation and money market rates were higher than expected. Weaker growth abroad and increased uncertainty affected the outlook for the Norwegian economy. In December, the key policy rate was therefore reduced by 0.5 percentage point to 1.75%. When the *Monetary Policy Report* was published in March 2012, the krone had appreciated markedly. Global growth prospects had weakened and the strong krone was expected to curb inflation and growth in the Norwegian economy. The key policy rate was lowered by 0.25 percentage point to 1.5%. The Bank's analyses indicated that the key policy rate would be at today's level until next spring and thereafter gradually rise to a more normal level.

Economic growth among main trading partners has been broadly in line in with projections. Looking ahead, growth is expected to be somewhat weaker than projected in March (see further discussion in Section 2). GDP for the euro area is projected to fall by ¾% in 2012 and GDP growth for trading partners as a whole is projected at ¾%. In 2013, external growth may pick up somewhat.

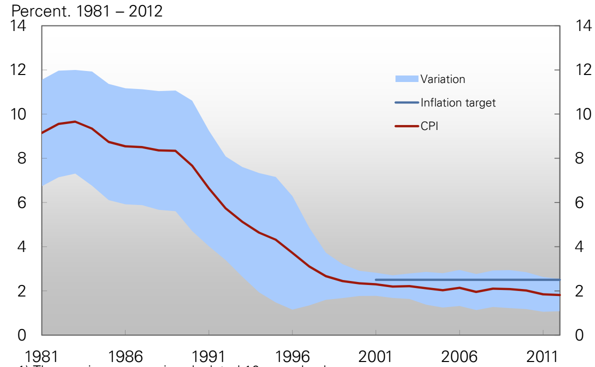
The spread between the money market rate and the expected key policy rate in Norway is expected to narrow gradually from today's level to a more normal level in the course of 2015 (see Chart 1.14). The projected level

Chart 1.11 Consumer prices. 12-month change. Percent. January 2004 – May 2012



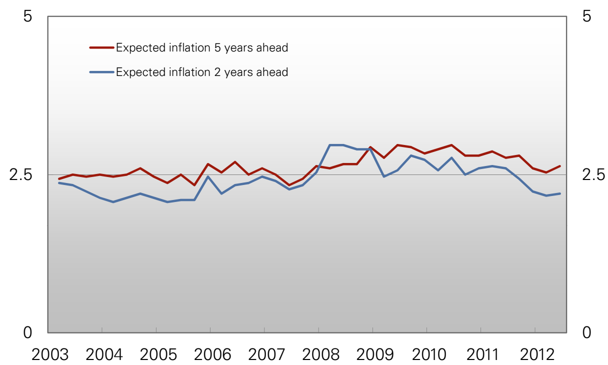
1) CPI adjusted for tax changes and excluding energy products
2) CPI adjusted for tax changes and excluding temporary changes in energy prices. Real time figures. See Norges Bank *Staff Memo* 7/2008 and 3/2009
3) CPI adjusted for frequency of price changes. See Norges Bank *Economic commentaries* 7/2009
4) Model-based indicator of underlying inflation. See Norges Bank *Economic commentaries* 5/2010
Sources: Statistics Norway and Norges Bank

Chart 1.12 Inflation. Moving 10-year average[1] and variation[2] in CPI[3]. Percent. 1981 – 2012



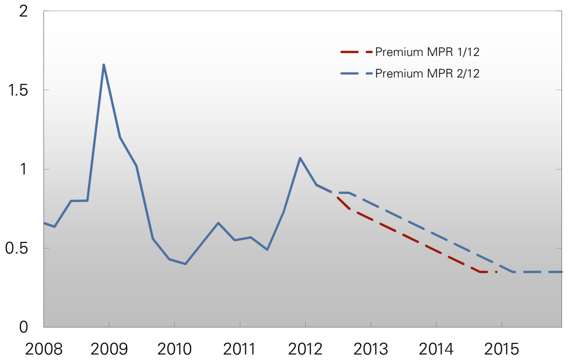
1) The moving average is calculated 10 years back
2) The band around the CPI is the variation in the CPI adjusted for tax changes and excluding energy products in the average period, measured by +/- one standard deviation
3) Estimate based on CPI projections in this *Report*
Sources: Statistics Norway and Norges Bank

Chart 1.13 Expected consumer price inflation 2 and 5 years ahead.[1] Percent. 2003 Q1 – 2012 Q2



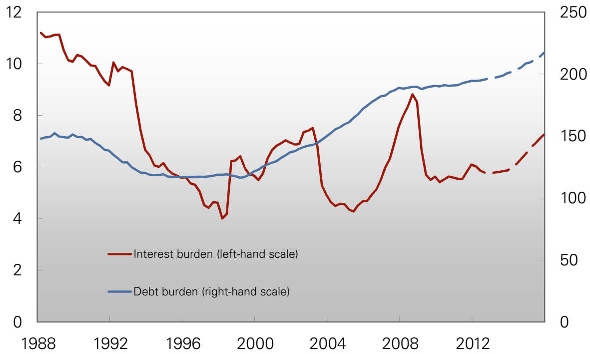
1) Average of expectations of employer/employee organisations and economists (financial industry experts and academia)
Sources: TNS Gallup and Perduco

Chart 1.14 Difference between 3-month money market rate and expected key rates.[1] Percentage points. 2008 Q1 – 2015 Q4



1) Norges Bank's projections from 2012 Q2
Sources: Thomson Reuters and Norges Bank

Chart 1.15 Household debt burden[1] and interest burden[2]. Percent. Quarterly figures. 1988 Q1 – 2015 Q4



1) Loan debt as a percentage of disposable income adjusted for estimated reinvested dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2015
2) Interest expenses after tax as a percentage of disposable income adjusted for estimated reinvested dividends for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2015 plus interest expenses
Sources: Statistics Norway and Norges Bank

towards the end of the projection period is in line with that implied by forward market prices for the premiums in the euro and US dollar a few years ahead. The premiums in Norwegian money market rates are influenced by a number of factors, such as the risk linked to European banks, liquidity in interbank markets and forward foreign exchange markets. The Bank's projections are based on a gradual easing of financial market turbulence and a situation where the sovereign debt crisis in Europe is perceived as manageable. The risk of a worsening of the debt crisis, with serious and long-term effects on economic developments, nevertheless seems to have increased.

Growth in the Norwegian economy has been slightly stronger than expected so far this year. Mainland GDP is projected to increase by 3¾% in 2012, ½ percentage point higher than projected earlier. Higher income growth than expected earlier is likely to lead to somewhat faster growth in private consumption. There is vigorous activity in the petroleum sector and construction industry. On the other hand, weak growth abroad is pulling down growth in traditional exports.

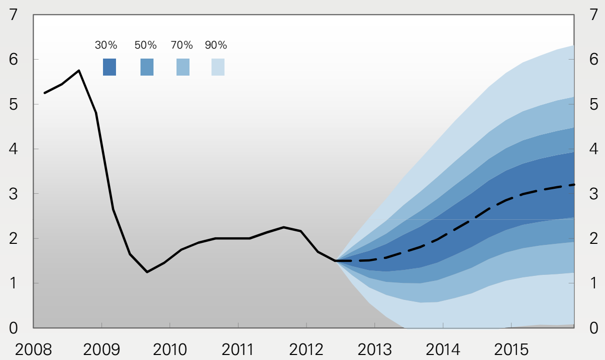
Capacity utilisation is now projected to be a little higher and pick up somewhat faster than projected in March. Combined with slightly higher wage growth, inflation may move up somewhat faster than previously assumed. Employment growth is high and is expected to increase at a slightly faster pace than the labour supply so that unemployment may be somewhat lower than previously projected.

The household debt burden is high (see Chart 1.15). This makes households vulnerable to high interest rates and loss of income. A prolonged period of low interest rates can amplify house price inflation and lending growth and induce households and enterprises to take excessive risks and accumulate excessive debt. Such imbalances may have spillover effects further ahead, with a considerable impact on output, employment and inflation.

Underlying inflation has ranged between 1% and 1½% in the past year. The low rate of inflation implies a key policy rate that is lower than normal in order to bring consumer price inflation up towards the target. However, money market and credit premiums are high so that the interest rates facing the public are considerably higher than the low key policy rate would normally imply. Average interest rates on new, presumably safe mortgage loans are slightly below 4% (see Chart 1.7). Many companies pay around 5% on bank loans (see Chart 1.8). In addition, international rates are very low.

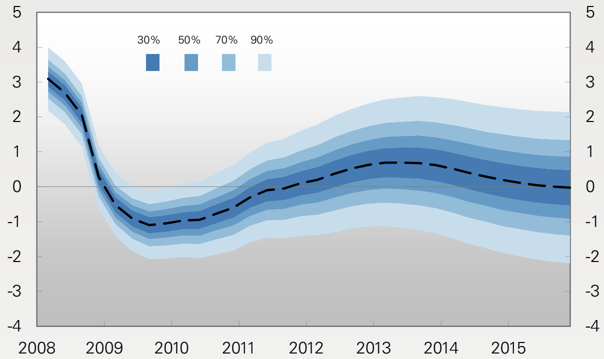
The path for output and employment and the consideration given to mitigating the risk of a buildup of financial imbalances suggest in isolation an increase in the key policy rate. On the other hand, developments abroad and the turbulence in international financial markets are pull-

Chart 1.16a Projected key policy rate in the baseline scenario with probability distribution. Percent. 2008 Q1– 2015 Q4



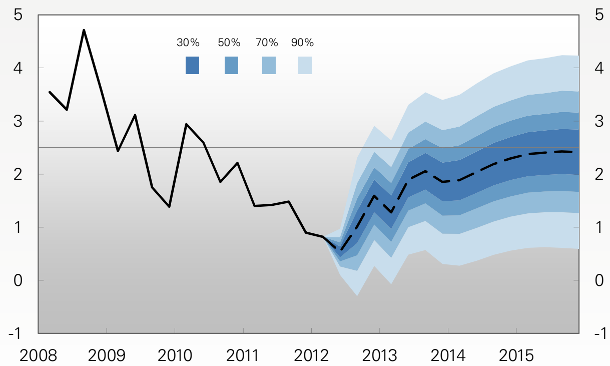
Source: Norges Bank

Chart 1.16b Projected output gap[1)] in the baseline scenario with probability distribution. Percent. 2008 Q1 – 2015 Q4



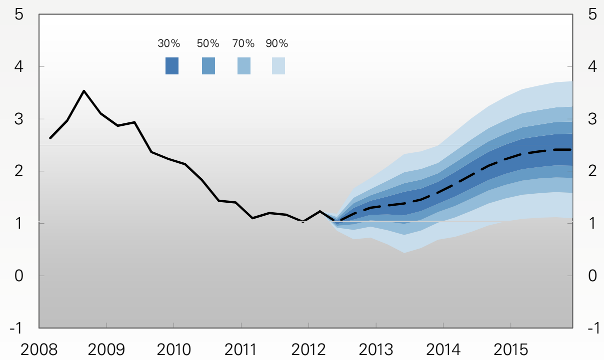
1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP
Source: Norges Bank

Chart 1.16c Projected CPI in the baseline scenario with probability distribution. Four-quarter change. Percent. 2008 Q1 – 2015 Q4



Sources: Statistics Norway and Norges Bank

Chart 1.16d Projected CPIXE[1)] in the baseline scenario with probability distribution. Four-quarter change. Percent. 2008 Q1 – 2015 Q4

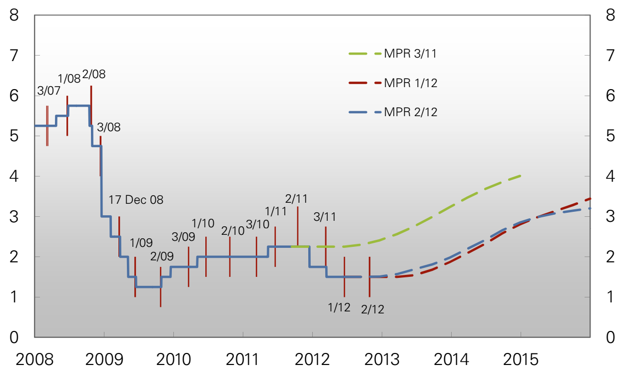


1) CPI adjusted for tax changes and excluding temporary changes in energy prices. As from August 2008, the CPIXE is a real-time series. See Norges Bank Staff Memo 7/2008 and 3/2009
Source: Norges Bank

ing down on the key policy rate. The krone is strong and inflation is low. If the key policy rate is set too high, the risk that the krone will appreciate so that inflation remains low for a long period will be amplified. The analyses in this *Report* point in the direction of a key policy rate at about today's level towards the end of 2012 and thereafter a gradual increase towards a more normal level (see Charts 1.16 a-d).

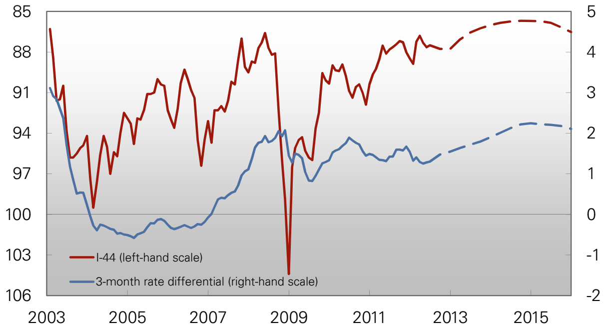
The forecast for the key policy rate suggests that the upward shift may occur slightly earlier than projected in the March *Report* (see Chart 1.17 and the box on pages 22 and 23). Money market rates are projected to be stable over the coming year and thereafter to rise somewhat less than the key policy rate. The interest rate differential

Chart 1.17 Interval for the key policy rate at the end of each strategy period, actual developments and projected key policy rate in the baseline scenario. Percent. January 2008 – December 2015



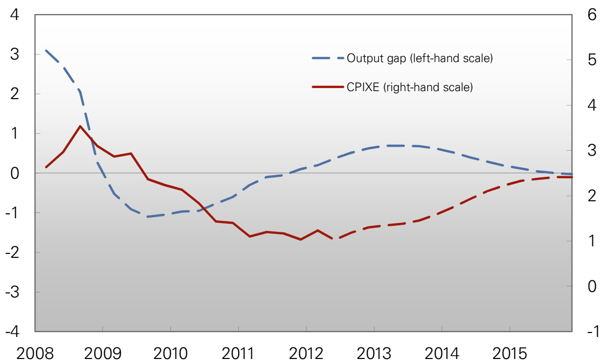
Source: Norges Bank

Chart 1.18 Three-month money market rate differential between Norway[1] and trading partners and the import-weighted exchange rate index (I-44)[2]. January 2003 – December 2015[3]



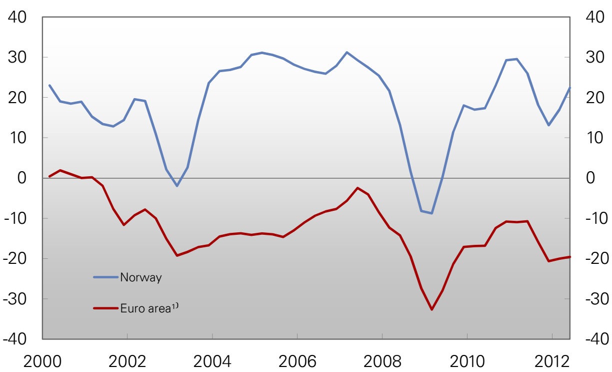
1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that announced interest rate changes are priced into the money market
2) A positive slope denotes a stronger krone exchange rate
3) Monthly figures from January 2003 and Norges Bank projections from 2012 Q2
Sources: Thomson Reuters and Norges Bank

Chart 1.19 Projected inflation[1] and output gap in the baseline scenario. Percent. 2008 Q1 – 2015 Q4



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

Chart 1.20 Consumer confidence. Seasonally adjusted net figures. 2000 Q1 - 2012 Q2



1) For the euro area 2012 Q2 is the average for April and May.
Sources: TNS Gallup and Thomson Reuters

against other countries is expected to widen somewhat further ahead. The krone is expected to remain stable to the end of the year and then to strengthen somewhat as a result of a wider interest rate differential (see Chart 1.18).

Inflation is projected to near 2½% towards the end of the projection period (see Chart 1.9) Capacity utilisation is projected to edge up in the coming period. As inflation moves up and the key policy rate shifts upwards, capacity utilisation may move down to a normal level.

House price inflation is projected to slow gradually to 4% towards the end of the projection period. It takes time for a fall in house price inflation to curb credit growth. Household debt accumulation is therefore expected to remain at around today's level in the years ahead. The debt burden is expected to edge up further in the coming period. The interest burden is expected to remain fairly stable owing to continued low interest rate prospects for some time ahead (see Chart 1.15).

Uncertainty surrounding the projections

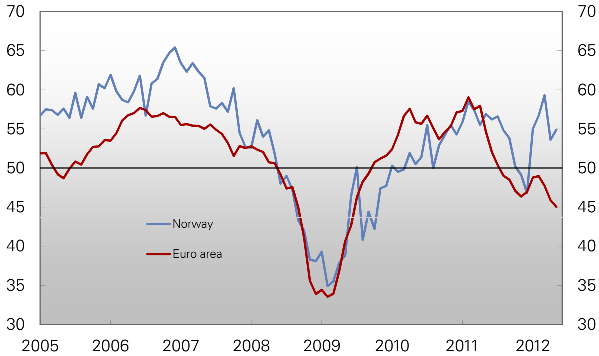
The projections for the key policy rate, inflation, output and other variables are based on Norges Bank's assessment of the economic situation and our perception of the functioning of the economy and monetary policy. If economic developments are broadly in line with projections, economic agents can expect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

The outlook for growth and inflation in Norway may be weaker than projected in this *Report* and may result in a lower interest rate path. The turbulence abroad may dampen growth in the Norwegian economy more than currently projected. So far, growth in Norwegian exports has remained fairly solid, in spite of a high cost level and weak demand growth abroad. Should oil prices fall further, activity in the petroleum sector could decline. In addition, experience has shown that turbulence in other countries affects behaviour and investment in Norway (see Charts 1.20 and 1.21). There is also a risk that the debt problems in the euro area will worsen, financial market turbulence will intensify and growth abroad will be even lower than currently projected. The cost of market funding for Norwegian banks may then increase and accessibility decline.

On the other hand, prospects for growth and inflation in Norway may pick up and contribute to a higher interest rate path. The projections in the baseline scenario are based on the assumption that high employment growth and relatively high wage growth will push up household real disposable income by about 5% in 2012. If saving remains unchanged, consumption will rise in pace with incomes, and more than currently projected. The uncertainty surrounding the debt situation in Europe and financial market turbulence may also recede more rapidly than assumed in this *Report*. This may reduce money and credit market premiums and improve the outlook for global growth.

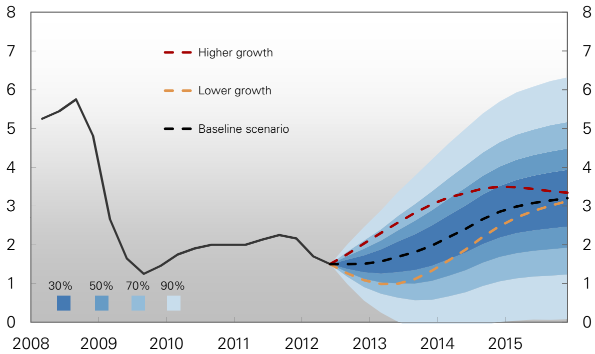
The uncertainty surrounding Norges Bank's projections is illustrated using a fan chart (see Charts 1.16 a-d and 1.22). The width of the fan reflects historical uncertainty. In order to emphasise the uncertainty and illustrate possible consequences for the interest rate path, two alternative paths based on stronger and weaker prospects for the Norwegian economy are shown in Chart 1.22.

Chart 1.21 Purchasing managers index (PMI) for manufacturing. Diffusion index around 50. Seasonally adjusted net figures. January 2005 - May 2012



Source: Thomson Reuters and Bloomberg

Chart 1.22 Key policy rate in the baseline scenario and in the alternative scenarios. Percent. 2008 Q1 – 2015 Q4



Source: Norges Bank

Response pattern in monetary policy and criteria for an appropriate interest rate path[1]

Over time, Norges Bank seeks to maintain inflation close to 2.5%. An appropriate interest rate path should meet the following criteria:

1. ***The inflation target is achieved:***
   The interest rate should be set with a view to stabilising inflation at target or bringing it back to target after a deviation has occurred.
2. ***The inflation targeting regime is flexible:***
   The interest rate path should provide a reasonable balance between the path for inflation and the path for overall capacity utilisation in the economy.
3. ***Monetary policy is robust:***
   The interest rate should be set so that monetary policy mitigates the risk of a buildup of financial imbalances, and so that acceptable developments in inflation and output are also the likely outcome under alternative assumptions about the functioning of the economy.

The various considerations taken into account in the criteria must be weighed against each other. The specific time horizon for stabilising inflation at target will depend on the type of disturbances to which the economy is exposed and their effect on the outlook for inflation and the real economy. Mathematically, these assessments can be represented in somewhat simplified terms by a loss function, where the parameters λ, τ and γ represent relative weights[2]:

$$L = \mathrlap{\underbrace{\phantom{\lambda(y_t-y_t^*)^2+\gamma(i_t-i_{t-1})^2+\tau(i_t-i_t^*)^2}}_{\text{Criterion 3}}}\overbrace{\overbrace{(\pi_t-\pi^*)^2}^{\text{Criterion 1}} + \lambda(y_t-y_t^*)^2}^{\text{Criterion 2}} + \gamma(i_t-i_{t-1})^2 + \tau(i_t-i_t^*)^2$$

Criterion 1, which states that the inflation target is reached, is covered by the first segment. The loss L_t will be greater, the more actual inflation π_t deviates from the target π^*.

Criterion 2, which states that the inflation targeting regime is flexible, is covered by the first and second segments. For given inflation developments, the loss L_t will increase with fluctuations in economic activity, measured as the deviation between actual output y_t and the normal output level y_t^*. Often, a reasonable balance will imply opposite signs for the projected inflation gap $(\pi_t - \pi^*)$ and output gap $(y_t - y_t^*)$ some time ahead.

Criterion 3, which states that monetary policy is robust, is covered by the second, third and fourth segments.[3] Experience shows that financial imbalances often build up in periods of high capacity utilisation. For that reason, a high weight λ for the output gap in the loss function may reduce the risk of a buildup of such imbalances. The third segment of the loss function expresses that it will normally be robust to change the interest rate gradually, so that the current interest rate, i_t, does not deviate excessively from the rate in the previous period, i_{t-1}. Substantial and sudden changes in the interest rate may lead to economic instability. Gradual changes in the interest rate enhance the robustness of monetary policy because the Bank can then regularly assess the effects of a change in the interest rate and other new information on economic developments.

The last segment states that the loss increases when the interest rate deviates substantially from a normal level i_t^*.[4] This consideration can help to mitigate the risk of a buildup of financial imbalances – even in periods when capacity utilisation is not particularly high.

The loss function must be regarded as a simplified representation of the more extensive assessments underlying interest rate decisions. Situations may arise where weight will be given to considerations other than those expressed in the loss function. In certain situations, for example, a more aggressive interest rate response than usual may be necessary to prevent particularly adverse outcomes. In other situations, the Bank may judge that greater caution in interest rate setting is warranted. Formalising the considerations that are given weight by means of a loss function will nonetheless contribute to consistency over time, and can clarify how Norges Bank normally balances various considerations.

As the Bank gains new insights and gathers further evidence, the Bank's assessments of economic relationships may change and its models may be further developed. New insight into the functioning of the economy and enhanced understanding of how to mitigate the risk of financial imbalances may influence the formulation of the loss function. Norges Bank will provide an account of any adjustments of the loss function such changes would imply.

1 See *Monetary Policy Report* 1/12, pp. 15-16

2 In the calculations for this *Report*, $\lambda = 0{,}75$, $\gamma = 0{,}25$ and $\tau = 0.05$. In general, the parameters will depend on the specifications of the model and how the model is solved (see further description in Alstadheim, Ragna, Ida Wolden Bache, Amund Holmsen, Junior Maih and Øistein Røisland (2010): "Monetary Policy Analysis in Practice", *Staff Memo* 11/2010, Norges Bank.

3 See Norges Bank *Staff Memo 11/2012* for a detailed discussion of the loss function.

4 Given well-anchored inflation expectations, the deviation in the nominal interest rate from a normal level may be expressed as a deviation of the real interest rate. Prospects for very low interest rates in the years ahead have pulled down Norges Bank's projections of a normal interest rate. The normal level of the key policy rate a few years further ahead is assumed to be around 4%.

The interest rate forecast

The interest rate forecast in this *Report* reflects Norges Bank's overall judgement and assessment based on the criteria for an appropriate interest rate path (see discussion of Norges Bank's response pattern in the box on pages 18 and 19). Under the criteria, the key policy rate should be set with a view to stabilising inflation at target or bringing inflation back to target after a deviation without giving rise to excessive fluctuations in output and employment. At the same time, interest rate setting should be robust and counteract the risk of a buildup of financial imbalances in the economy. The interest rate cannot fully satisfy all the criteria simultaneously and the interest rate path is chosen so as to provide a balance between considerations.

Charts 1.23 a-c show forecasts for the key policy rate, the output gap and inflation when the various criteria are taken into account.[2]

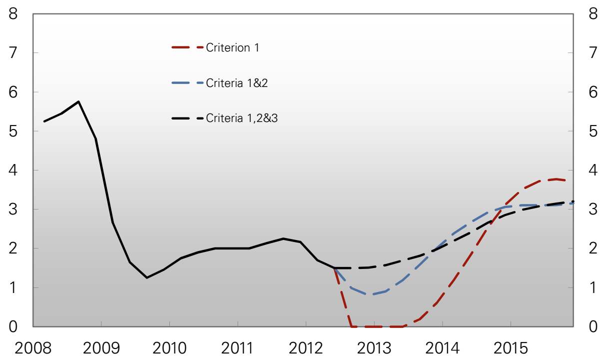
If monetary policy gave weight only to the current low level of inflation, the key policy rate would be lowered sharply and kept near zero for some time, as illustrated in Chart 1.23a. Inflation could then pick up more quickly, partly owing to a weaker krone, but fluctuations in output and employment might also increase.

When weight is also given to avoiding excessive fluctuations in output and employment, the key policy rate will be somewhat higher in the short term. Inflation will then take somewhat longer to rise towards 2.5%, but developments in output and employment will be more stable.

Furthermore, Norges Bank takes into account that the interest rate should not be low for too long (see further discussion in the box on Norges bank's response pattern). Normally, Norges Bank also takes a gradualist approach to interest rate setting to avoid abrupt shifts in the economy and to be able to assess the effects of a change in the key policy rate. Uncertainty about the economic outlook is considerable, and it goes both ways. Taken together, these considerations result in an interest rate forecast as presented in the baseline scenario in this *Report*.

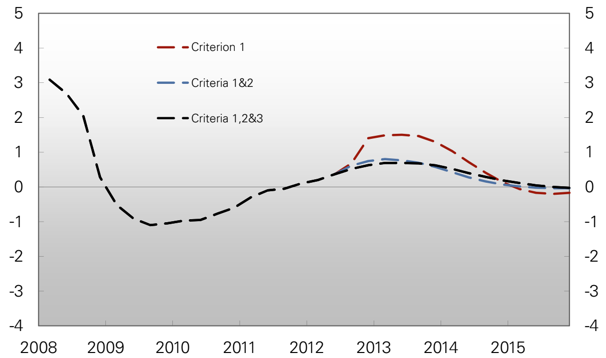
2 Illustrated using the macroeconomic model NEMO.

Chart 1.23a Key policy rate. Percent. 2008 Q1 – 2015 Q4



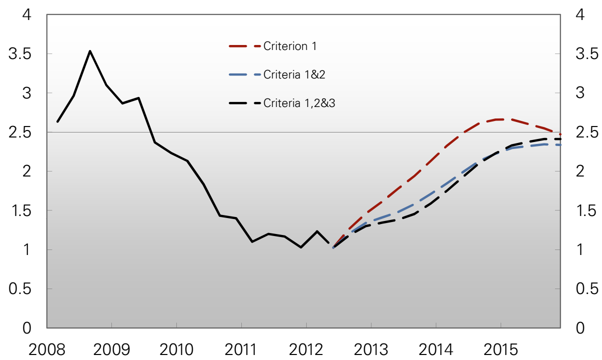
Source: Norges Bank

Chart 1.23b Output gap. Percent. 2008 Q1 – 2015 Q4



Source: Norges Bank

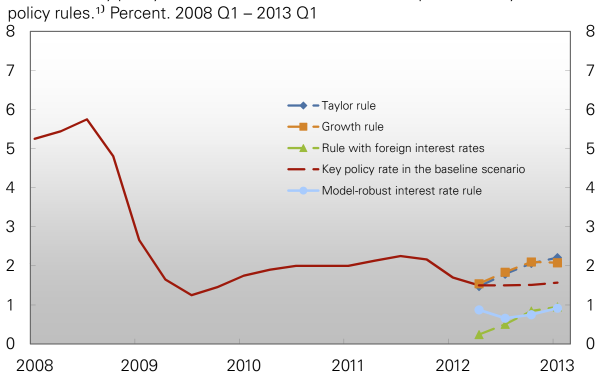
Chart 1.23c CPIXE[1)]. Four-quarter change. Percent. 2008 Q1 – 2015 Q4



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

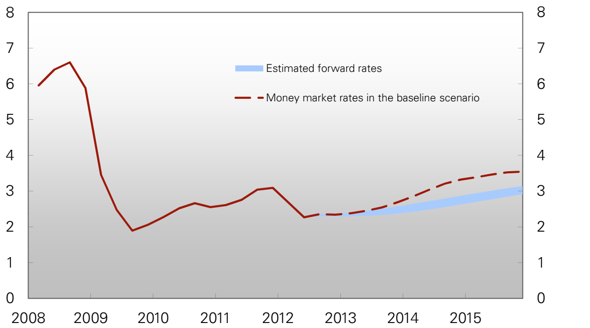
Source: Norges Bank

Chart 1.24 Key policy rate and calculations based on simple monetary policy rules.[1)] Percent. 2008 Q1 – 2013 Q1



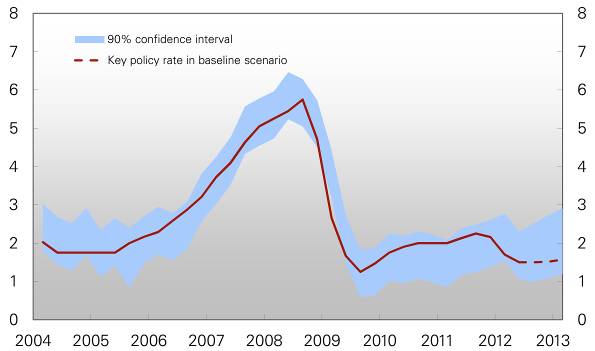
1) The calculations are based on Norges Bank's projections for the output gap, growth gap, consumer prices and 3-month money market rates among trading partners. To ensure comparability with the key policy rate, the simple rules are adjusted for risk premiums in 3-month money market rates
Source: Norges Bank

Chart 1.25 Three-month money market rates in the baseline scenario[1)] and estimated forward rates[2)]. Percent. 2008 Q1 – 2015 Q4



1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that announced interest rate changes are priced into the money market.
2) 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 4 June – 15 June 2012
Sources: Thomson Reuters and Norges Bank

Chart 1.26 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.[1)]
Percent. 2004 Q1 – 2013 Q1



1) Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and 3-month money market rates among trading partners. The equation is estimated over the period 1999 Q1 – 2012 Q1. See *Staff Memo* 3/2008 for further discussion
Source: Norges Bank

Cross-checks of the interest rate forecast

Simple interest rate rules can prescribe a monetary policy stance that is more robust to different assumptions about the functioning of the economy and are useful for providing cross-checks for the analysis (see Chart 1.24). The Taylor rule is based on projections for inflation, the output gap, money market premiums and the normal interest rate level. The Taylor rule calls for a key policy rate that is now at the same level as the interest rate forecast in this *Report*, but an interest rate that is somewhat higher ahead (see Chart 1.24). The growth rule, where the output gap is replaced by a growth gap, produces a nearly identical forecast (see orange line in the chart). The light blue line shows a model-robust monetary policy rule[3] based on calculations in various models for the Norwegian economy. Compared with the Taylor rule, this rule gives greater weight to both the output gap and inflation as well as the interest rate in the previous period. The model-robust rule calls for a key policy rate that is lower than the interest rate forecast. A simple monetary policy rule that gives considerable weight to changes in the interest rate differential against other countries also implies a lower interest rate than in the baseline scenario (see green line in the chart).

Forward money and bond market rates are another cross-check for the interest rate forecast. Estimated forward rates are somewhat lower than the interest rate forecast in this *Report* (see Chart 1.25).

Norges Bank's previous interest rate setting serves as another cross-check for the interest rate forecast. Chart 1.26 shows an estimated model that seeks to provide a simple explanation of historical developments in the key policy rate based on inflation, wage growth, mainland GDP and key rates among trading partners. The interest rate in the previous period is also important. The uncertainty in the model is expressed by the blue area. This *Report*'s projections for the four variables above are used as input variables in this estimated model. The chart shows that the interest rate forecast in the baseline scenario closely coincides with the projection from the estimated interest rate rule (see Chart 1.26).

3 For further analysis of this and other simple monetary policy rules, see *Staff Memo* 16/2012 and *Staff Memo* 17/2012.

Changes in the projections since *Monetary Policy Report* 1/12

The interest rate forecast in this *Monetary Policy Report* has been revised up slightly compared with the March 2012 *Report* (see Chart 1). The projections are based on the criteria for an appropriate interest rate path (see box on pages 18 and 19), an overall assessment of the situation in the Norwegian and global economy and our perception of the functioning of the economy.

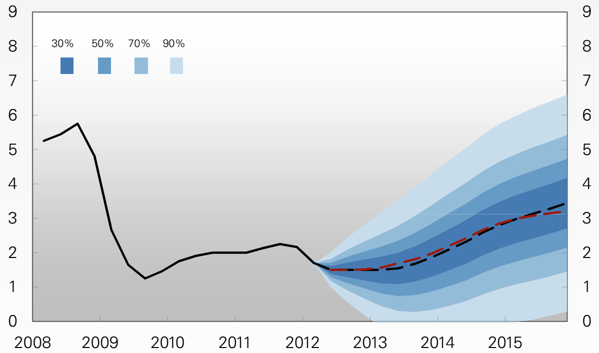
Chart 2 shows a technical illustration of how news and new assessments have affected the changes in the interest rate forecast through their impact on the outlook for inflation, output and employment.[1] The isolated contributions of the different factors are shown by the bars. The overall change in the interest rate forecast is shown by the black line.

Key rates are close to zero among many of Norway's trading partners and market key rate expectations have fallen since March. There are prospects that the global downturn will be prolonged and that interest rates could remain low for a long period. Lower interest rates abroad imply that the interest rate in Norway may also be kept low for a longer period to help prevent the krone from appreciating so that inflation does not become too low (dark blue bars).

The krone depreciated following the monetary policy meeting in March and has since remained stable. The krone exchange rate has been somewhat weaker than assumed in the March *Report*. This contributes in isolation to somewhat higher inflation. This suggests a somewhat higher key policy rate (light blue bars).

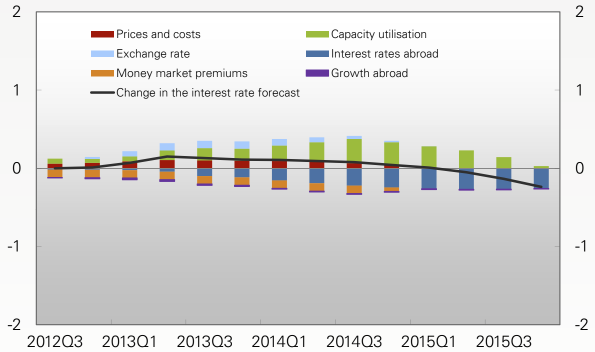
Money market premiums have remained high and have been approximately as projected in the March *Report*. Premiums are projected to be slightly higher than in March. In isolation, this would suggest a somewhat lower key policy rate, because higher premiums, all else being equal, imply higher money market rates (orange bars).

Chart 1 Key policy rate in the baseline scenario in MPR 1/12 with probability distribution and key policy rate in the baseline scenario in MPR 2/12 (red line). Percent. 2008 Q1 – 2015 Q4



Source: Norges Bank

Chart 2 Factors behind changes in the interest rate forecast since MPR 1/12. Accumulated contribution. Percentage points. 2012 Q3 – 2015 Q4



Source: Norges Bank

Developments in the Norwegian economy have been slightly stronger than expected. Capacity utilisation is estimated to be higher than projected in the March *Report*. Higher capacity utilisation in Norway suggests a higher key policy rate (green bars). At the same time, the projections for growth abroad have been revised down slightly. Weaker developments abroad will dampen growth in the traditional export sector, suggesting a lower key policy rate (purple bars).

Underlying inflation has moved broadly in line with expectations since the March *Report*. Wage growth appears to be slightly higher than previously assumed. In isolation, this will contribute to higher inflation ahead. This pushes up the interest rate path (red bars).

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

1 Illustrated using the macroeconomic model NEMO. Calculations are based on the operational loss function, which is described in the box on pages 18 and 19.

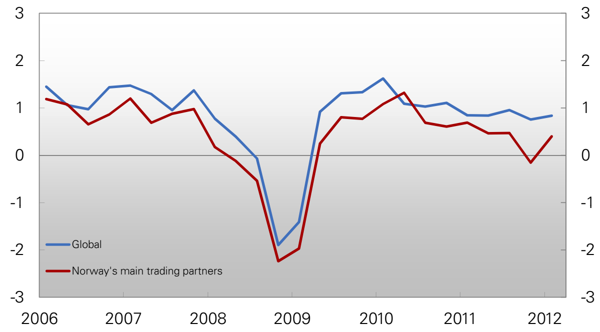
Table 1 Projections for macroeconomic aggregates in *Monetary Policy Report* 2/12. Percentage change from previous year (unless otherwise stated). Change from projections in *Monetary Policy Report* 1/12 in brackets.

	2012	2013	2014	2015
CPI	1 (0)	1¾ (0)	2 (0)	2½ (¼)
CPI-ATE[1)]	1½ (¼)	1¾ (¼)	2 (0)	2½ (¼)
CPIXE[2)]	1¼ (0)	1½ (0)	2 (0)	2½ (¼)
Annual wages[3)]	4 (¼)	4¼ (¼)	4½ (½)	4½ (¼)
Mainland demand[4)5)]	2¾ (-¼)	4 (½)	3¾ (¼)	3½ (¼)
GDP, mainland Norway	3¾ (½)	3¼ (¼)	2¾ (-¼)	2¾ (-¼)
Output gap, mainland Norway (level)[6)]	½ (¼)	¾ (¾)	¼ (¼)	0 (0)
Employment, persons, QNA	2 (½)	1½ (¼)	1 (-¼)	1 (-¼)
Registered unemployment (rate, level)	2½ (0)	2½ (0)	2½ (-¼)	2¾ (0)
Level				
Key policy rate[7)]	1½ (0)	1¾ (0)	2½ (0)	3 (-¼)
Import-weighted exchange rate (I-44)[8)]	87¾ (½)	86½ (-¾)	85¾ (-1½)	86 (-1½)
Foreign money market rates[9)]	1 (0)	¾ (-¼)	1 (-¼)	1¼ (-½)

1) CPI-ATE: CPI adjusted for tax changes and excluding energy products
2) CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See Norges Bank *Staff Memo* 7/2008 and *Staff Memo* 3/2009 for a description of the CPIXE
3) Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations
4) Private and public consumption and mainland gross fixed investment
5) The figures for mainland demand in the Norwegian economy were published in MPR 1/12 with an error
6) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP
7) The key policy rate is the interest rate on banks' deposits in Norges Bank
8) The weights are estimated on the basis of imports from 44 countries, which comprise 97% of total imports
9) Forward rates are based on money market rates and interest rate swaps

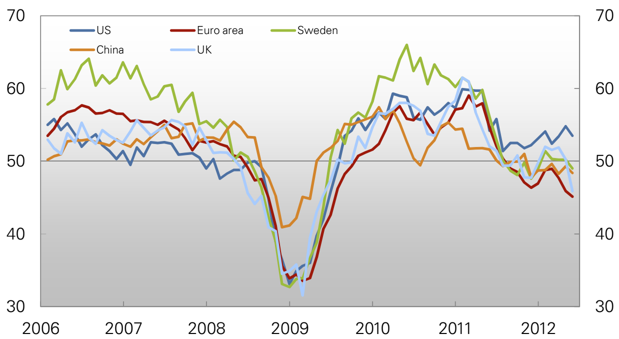
Source: Norges Bank

Chart 2.1 Quarterly GDP growth. Percent. 2006 Q1 – 2012 Q1



Sources: IMF, Thomson Reuters and Norges Bank

Chart 2.2 Manufacturing PMIs. Diffusion index centred around 50. January 2006 – May 2012



Source: Thomson Reuters

Table 2.1 Projections for GDP growth in other countries. Change from previous year. Percent. Change from projections in *Monetary Policy Report* 1/12 in brackets.

	Share of world GDP[1] (per cent)	2012	2013	2014 – 2015[2]
US	20	2 (0)	2¼ (-¼)	2¾ (0)
Euro area	15	-¾ (-¼)	½ (-¼)	2 (0)
UK	3	¼ (-½)	1¾ (0)	2½ (0)
Sweden	0.5	½ (-¼)	1½ (0)	2½ (-¼)
China	13	7½ (-½)	8 (0)	8 (-½)
Trading partners[3]	65	¾ (-¼)	1¾ (-¼)	2½ (-¼)
World (PPP)[4]	100	3¼ (0)	3¾ (-¼)	4½ (0)
World (market exchange rates)[4]	100	2½ (0)	3 (-¼)	3¾ (0)

1) Purchasing-power-parity (PPP) GDP in 2010
2) Average annual growth
3) Export weights, 26 main trading partners
4) GDP weights. Norges Bank's estimates for 26 trading partners, other estimates from IMF
Sources: IMF, Eurostat and Norges Bank

2 The projections

The global economy

Growth in the world economy edged up between 2011 Q4 and 2012 Q1 (see Chart 2.1), broadly in line with the assumptions in the March 2012 *Monetary Policy Report*. Since that time, however, the uncertainty associated with the sovereign debt crisis in Europe has heightened and political unrest and a fragile banking sector in Europe are increasingly reflected in the economic outlook. Moreover, the risk of a pronounced weakening in economic developments in emerging Asia seems to have increased. Short-term indicators for a number of countries are now pointing to slower growth already in 2012 Q2 (see Chart 2.2).

Central bank key rates across Norway's main trading partners are low and a normalisation of interest rate levels has been deferred further ahead in a number of countries. Many emerging economies have loosened monetary policy further.

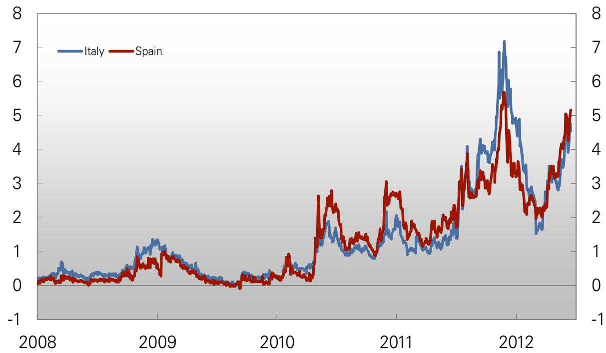
Euro area GDP expanded at a somewhat faster pace than expected in 2012 Q1. Against the background of sluggish developments in short-term indicators and growing uncertainty surrounding the outcome of the sovereign debt crisis in Europe, the Bank's projections for both 2012 and 2013 have been revised downward (see Table 2.1). Short-term funding costs for Italy and Spain fell markedly in the wake of the European Central Bank's (ECB) liquidity operations in December and February. Government borrowing rates have since increased again (see Chart 2.3), which reflects the concerns linked to weak competitiveness and high debt levels in several euro area countries. Concerns are focused in particular on the banking system in Spain and the Spanish authorities have requested financial assistance from the other euro area countries in order to recapitalise its banks. Euro area countries have agreed to provide up to EUR 100bn in loans. The political and economic situation in Greece has also added to the unrest. The Bank's projections are based on a gradual easing of financial market turbulence and a situation where the sovereign debt crisis in Europe is perceived as manageable. Even so, the risk of a worsening of the debt crisis, with pronounced and long-term economic effects, seems to have increased. Financial market concerns regarding the financial soundness of the European banking sector and the solutions euro area countries will choose are likely to persist for a while. The uncertainty is expected to curb economic growth as households and businesses postpone consumption and investment decisions and banks' capacity and willingness to extend new credit remains constrained (see Chart 2.4).

In Sweden, GDP growth was higher than expected in 2012 Q1. Looking ahead, sluggish developments in the euro area are again likely to weigh down on growth in the Swedish economy. The growth projection for 2012 has thus been lowered in relation to the March 2012 *Report*. In the UK, growth has been weaker than expected and GDP growth for 2012 has been revised down by ½ percentage point to ¼%.

The US economy has expanded in line with that projected in the March 2012 *Report*. Both in 2011 Q4 and 2012 Q1, the main growth driver was private consumption. Growth in consumer spending is partly due to lower saving, but growth was also boosted by improved labour market conditions and falling inflation. The US unemployment rate fell from a peak of 10% in October 2009 to almost 8% in May 2012 (see Chart 2.5). Up to mid-2011, a contraction in the labour force contributed to the fall, but since then employment growth has led to a fall in the unemployment rate despite an increase in the labour force. In recent months, labour market conditions have weakened somewhat. The unemployment level is still high. Combined with the problems in the housing market, weak growth prospects in Europe and the uncertainty surrounding fiscal policy, this will continue to act as a drag on growth in the US moving forward. The growth projections in 2013 for the US have been lowered by ¼ percentage point since the March *Report* (see Table 2.1).

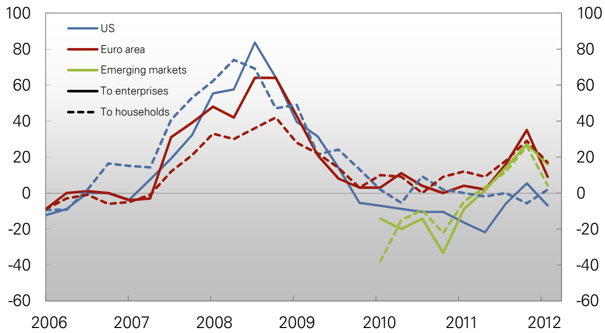
In emerging Asia, industrial production and exports grew at a relatively solid pace early in 2012. Growth received a boost when production chains destroyed by the flooding in Thailand last autumn were restored. Economic indicators suggest somewhat weaker underlying growth in industrial production and international goods trade than observed so far this year. The Chinese authorities have introduced measures to stimulate the economy following weak growth in housing investment and exports into the second quarter. The central bank has reduced banks' deposit and lending rates for the first time since 2008, and infrastructure investment is on the rise. The

Chart 2.3 Yield spreads against German 2-year government bonds. Percentage points. 1 January 2008 – 15 June 2012



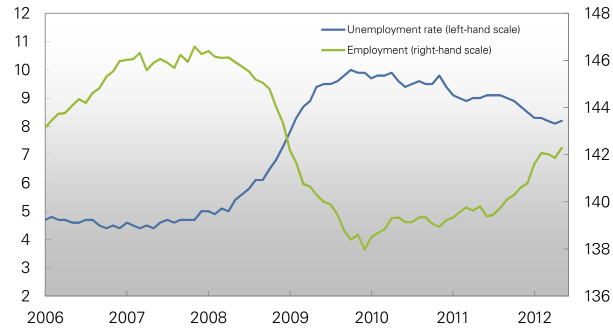
Source: Thomson Reuters

Chart 2.4 Bank lending conditions. Net balance[1]. 2006 Q1 – 2012 Q1



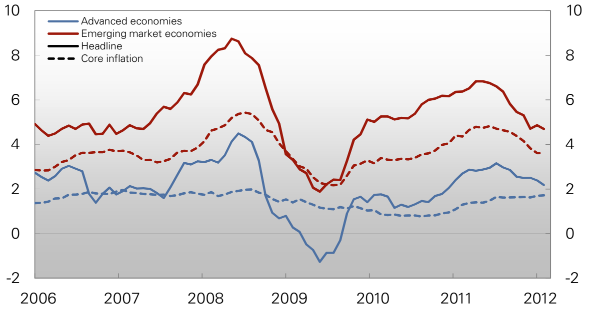
1) Values above 0 indicate tighter lending conditions
Sources: Thomson Reuters, Institute of International Finance and Norges Bank

Chart 2.5 US labour market. Unemployment as a percentage of labour force and employment in millions. Seasonally adjusted. January 2006 – May 2011



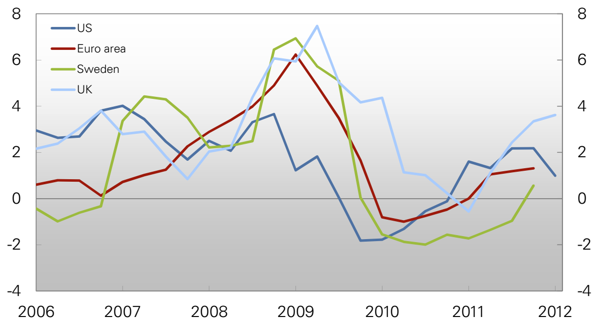
Source: Thomson Reuters

Chart 2.6 Consumer prices in advanced economies and emerging markets.[1)]
12-month change. Percent. January 2006 – April 2012



1) GDP-weighted (PPP). Advanced economies: Australia, Canada, euro area, Japan, UK and US. Emerging markets: Argentina, Brazil, India, Indonesia, China, Mexico, Russia, South Africa, South Korea and Turkey. Sources: CEIC, IMF, Thomson Reuters and Norges Bank

Chart 2.7 Unit labour costs. Total economy. Four-quarter change. Percent.
2006 Q1 – 2012 Q1



Source: OECD

Table 2.2. Projections for consumer prices in other countries (change from previous year, percent) and oil price. Change from projections in *Monetary Policy Report* 1/12 in brackets.

	2012	2013	2014–15[1)]
US	2 (0)	1¾ (0)	2 (0)
Euro area[2)]	2 (¼)	1½ (0)	1¾ (0)
UK	2¾ (¼)	1¾ (0)	2 (0)
Sweden	1¼ (-¼)	2 (¼)	2½ (¼)
China	3¼ (-¼)	3¼ (¼)	3 (½)
Trading partners[3)]	2 (¼)	2 (¼)	2 (0)
Oil price Brent Blend[4)]	106	96	93

1) Average annual rise
2) Weights from Eurostat (each country's share of euro area consumption)
3) Import weights, 26 main trading partners
4) Futures prices (average for the past five trading days). USD per barrel. For 2012, 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

measures taken by the authorities reflect the growing uncertainty surrounding domestic growth prospects and the outcome of the sovereign debt crisis in Europe. In India, growth has also been weaker than expected. Banks in emerging economies have reported that the ECB liquidity operations contributed to easing their international funding situation (see Chart 2.4) and have had a positive effect on lending conditions. In recent months, the unrest in Europe has led to greater caution among financial market participants, however, and has probably had a negative impact on funding access outside Europe too. Growth in China is projected at 7½% in 2012, ½ percentage point lower than in the March *Report*.

The rate of growth among Norway's main trading partners is expected to be lower through summer and autumn than in 2012 Q1, before picking up gradually towards the end of the year. Projected GDP growth for trading partners as a whole has been revised down by ¼ percentage point in both 2012 and 2013 to ¾% and 1¾%, respectively. The projection for global GDP growth remains unchanged at 3¼% in 2012 and has been revised down by ¼ percentage point to 3¾% in 2013.

Inflation among Norway's main trading partners has continued to drift down, but has overall been somewhat higher than projected in the March *Report*. While a lower rate of increase in food and energy prices has put a drag on overall price inflation, prices for other goods have risen rapidly in advanced economies (see Chart 2.6). Wage growth is moderate among Norway's main trading partners, but low productivity growth has pushed up growth in unit labour costs (see Chart 2.7). The effects of the financial crisis on production capacity among Norway's main trading partner are unclear. Since the financial crisis erupted in 2008, inflation has been surprisingly higher than expected on several occasions. This is partly because of a rapid rise in commodity prices, particularly oil prices, but may also be a sign that capacity utilisation is higher than assumed earlier. Inflation is projected to be somewhat higher ahead than projected earlier. For trading partners as a whole, the projection for annual consumer price inflation has been revised up by ¼ percentage point to 2% in 2012 and 2013 (see Table 2.2).

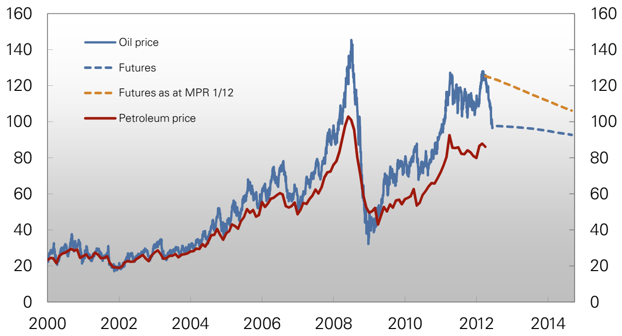
Commodity markets

Oil prices are below USD 100 per barrel, more than 20% lower than at the time of the March *Report*. The projections in this *Report* are based on the assumption that oil prices follow futures prices (see Table 2.2 and Chart 2.8), which imply a further fall to below USD 95 per barrel in 2014–2015. The fall in oil prices reflects a number of factors. Global demand for oil has been weak. At the same time, OPEC has increased production appreciably since summer 2011. Production is now at the highest level seen since summer 2008 when oil prices were close to USD 150 per barrel. OECD oil stocks are above the average for the past five years. Concerns relating to a reduction in Iranian oil exports as a result of US and EU sanctions as from 1 July have diminished as strategic oil stocks are expected to be used to counter a possible renewed rise in oil prices. Saudi Arabia, the OPEC country with the highest level of spare capacity, has signalled an oil price target of around USD 100 per barrel. If the world economy weakens further, oil prices may fall more than implied by futures prices. On the other hand, OPEC spare capacity is now less than 3% of global oil demand, the lowest level since 2008. If the tensions with Iran heighten or the global oil supply falls, oil prices may move up again.

Export prices for Norwegian gas remain high (see Chart 2.9), reflecting high oil prices through winter. A substantial share of Norwegian gas is sold on long-term contracts where the price in linked to oil prices with a lag. Since a portion of Norwegian gas is sold at spot prices, the relatively high gas spot prices in Europe have also pushed up Norwegian gas prices. These prices partly reflect record-high gas prices in Asia. With continued high futures prices for oil and British gas, Norwegian gas prices are likely to remain high. If oil prices show a marked fall, gas prices will be affected after a period. Export prices for Norwegian gas may also be impacted over time if the link to oil prices weakens and gas spot prices decline. In the US, gas prices are now at a record-low and higher gas exports from North America may in the longer term push down prices in Asia and Europe.

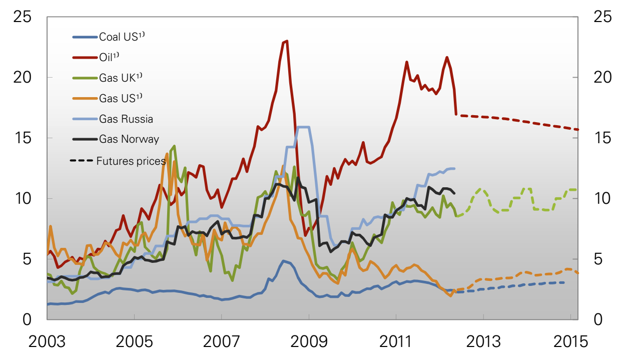
The Economist commodity-price index has declined since the March *Report*, largely reflecting rising uncertainty surrounding developments in the world economy with the fall attributable in particular to the risk of more pronounced effects on emerging economies. Futures prices for different commodities nevertheless indicate broadly unchanged price levels ahead (see Chart 2.10).

Chart 2.8 Oil price (Brent Blend) and prices for Norwegian petroleum exports[1]. USD/barrel. January 2000 – December 2015



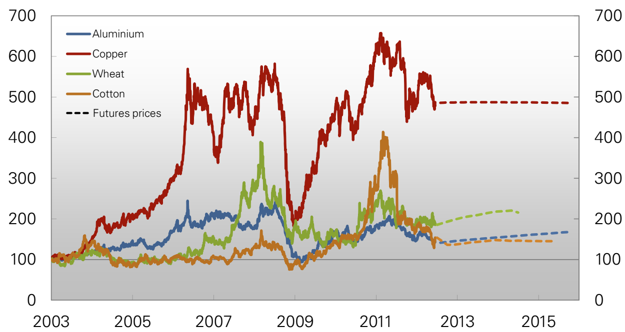
1) Weighted average of Norwegian crude oil and gas exports
Sources: Statistics Norway,Thomson Reuters and Norges Bank

Chart 2.9 Prices for coal, crude oil and natural gas. USD per MMBTU. January 2003 – April 2015



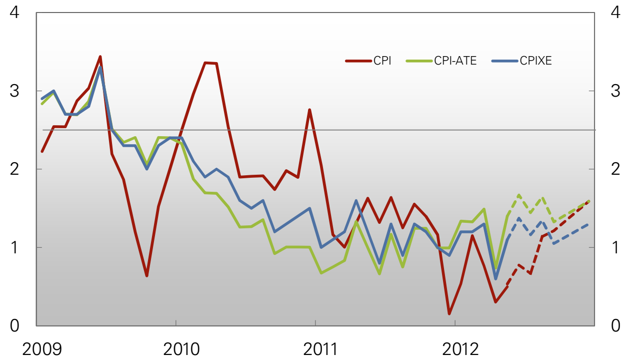
1) For June 2012, calculated as daily average
Sources: IMF, Thomson Reuters, Statistics Norway and Norges Bank

Chart 2.10 Commodity prices. USD. Index, January 2003 = 100. January 2003 – December 2015



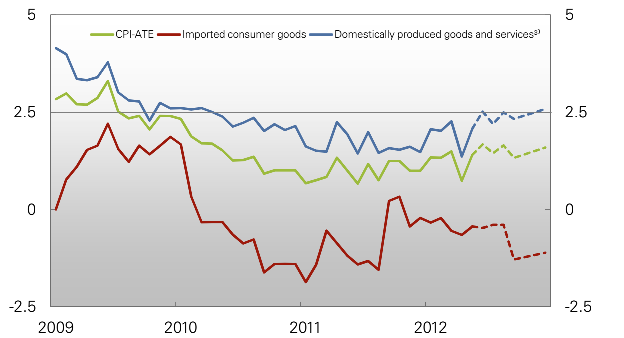
Sources: CME Group and Thomson Reuters

Chart 2.11 CPI, CPI-ATE[1)] and CPIXE[2)]. 12-month change. Percent. January 2009 – December 2012[3)]



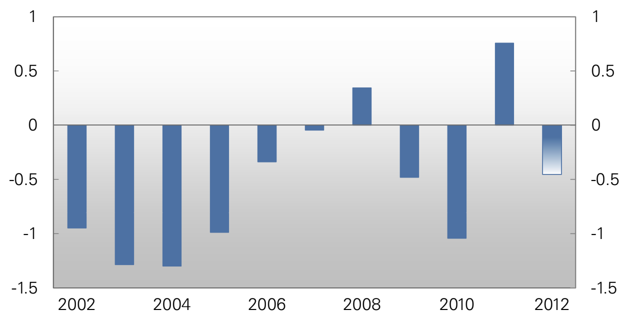
1) CPI adjusted for tax changes and excluding energy products
2) CPI adjusted for tax changes and excluding temporary changes in energy prices. Real-time figures. See Norges Bank *Staff Memo* 7/2008 and 3/2009
3) Projections for June 2012 – December 2012 (broken lines). Monthly figures to September 2012, then quarterly figures
Sources: Statistics Norway and Norges Bank

Chart 2.12 CPI-ATE[1)]. Total and by supplier sector. 12-month change. Percent. January 2009 – December 2012[2]



1) CPI adjusted for tax changes and excluding energy products
2) Projections for June 2012 – December 2012 (broken lines). Monthly figures to September 2012, then quarterly figures
3) Norges Bank's estimates
Sources: Statistics Norway and Norges Bank

Chart 2.13 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Percent. 2002 – 2012[1)]



1) Projections for 2012
Source: Norges Bank

The Norwegian economy in the year ahead

Prices

Inflation is low, but has been approximately as expected since the March 2012 *Monetary Policy Report*. Underlying inflation is estimated at 1% – 1½%. In May, annual consumer price inflation (CPI) was 0.5% (see Chart 2.11). Inflation adjusted for tax changes and excluding energy products (CPI-ATE) was 1.4%. Inflation adjusted for tax changes and excluding temporary changes in energy prices (CPIXE) was 1.1%.

The rise in prices for domestically produced goods and services in the CPI-ATE has moved up slightly since the previous year (see Chart 2.12). The increase reflects higher capacity utilisation and higher cost growth through 2011. Even though cost growth is projected to be fairly stable this year, there are prospects that inflation may rise slightly through the year. The rise in food prices is assumed to be more normal this year, following a decline in 2011. Higher growth in demand for goods and services may also make it easier for firms to increase margins. Overall, the rise in prices for domestically produced goods and services is projected to move up further to 2½% in 2012 Q4.

The rise in prices for imported consumer goods have slowed gradually over the past half year, and in May, the annual rate of increase was negative 0.4% (see Chart 2.12). There are prospects that prices for these goods will continue to drift down. External price impulses to domestic consumer prices are expected to be weaker than in 2011 (see Chart 2.13). At the same time, the past appreciation of the krone will likely continue to hold down prices for imported consumer goods in NOK. The rise in prices for imported consumer goods, as measured by the CPI-ATE, is projected to slow to negative 1¼% by the end of 2012.

CPI-ATE inflation is projected to increase moderately from 1¼% in 2012 Q2 to 1½% in 2012 Q4. The projections for inflation at the end of this year are slightly higher than in the March *Report*, as growth in wage costs and demand for goods and services is now expected to be somewhat higher than at the time of the March *Report*.

The projections for CPI-ATE inflation are in line with the projections derived from Norges Bank's System for Averaging short-term Models (SAM) (see Chart 2.14).

Futures prices for energy have fallen more than assumed in the March *Report*. Annual CPIXE inflation is expected to rise somewhat less than CPI-ATE inflation, to 1¼% in 2012 Q4. CPI inflation for 2012 is projected at 1%.

Output and demand

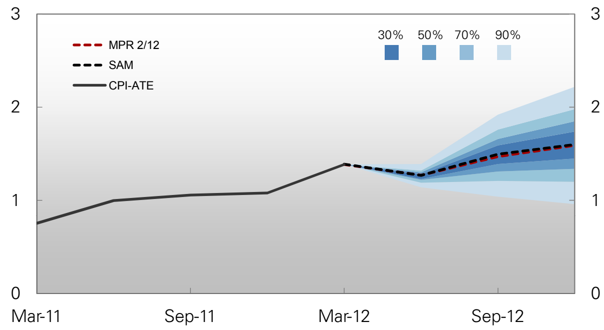
Growth in the Norwegian economy has picked up (see Chart 2.15). According to the national accounts, mainland GDP rose by 1.1% in 2012 Q1, somewhat higher than projected in the March *Report*. Over the past four quarters, quarterly growth averaged 1.0%. Increased activity in the petroleum industry, strong population growth, favourable terms of trade (see Chart 2.16) and low interest rates are contributing factors to growth. A weak external economic environment may hamper growth ahead. Through the remainder of the year, growth is projected to be approximately ¾% per quarter. Mainland GDP is projected to grow by 3¾% in 2012, approximately ½ percentage point higher than projected in the March *Report*. The upward adjustment primarily reflects expectations of somewhat stronger growth in private consumption ahead than envisaged earlier.

Contacts in Norges Bank's regional network expect growth in production in line with our projections (see Chart 2.15). Growth is expected to be high in the oil supplier and construction industries and low in traditional export and domestic market industries.

The projections for mainland GDP are in line with the projections derived from Norges Bank's System for Averaging short-term Models (SAM) (see Chart 2.17).

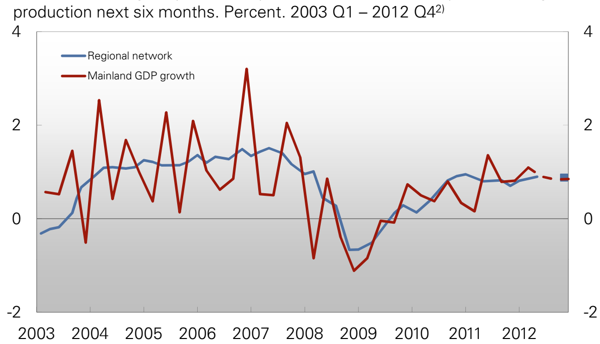
Capacity utilisation in the Norwegian economy has increased and is now projected at slightly above a normal level. Both the labour market and capacity constraints in the business sector now indicate that resource utilisation

Chart 2.14 CPI-ATE[1]. Actual figures, baseline scenario and projections from SAM[2] with fan chart. Four-quarter change. Percent. 2011 Q1 – 2012 Q4[3]



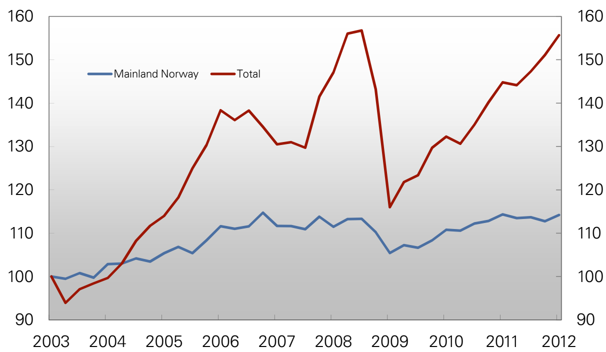
1) CPI adjusted for tax changes and excluding energy products
2) System for averaging models
3) Projections for 2012 Q2 – 2012 Q4 (broken lines)
Sources: Statistics Norway and Norges Bank

Chart 2.15 GDP mainland Norway[1] and Norges Bank's regional network's indicator of change in production past three months and expected change in production next six months. Percent. 2003 Q1 – 2012 Q4[2]



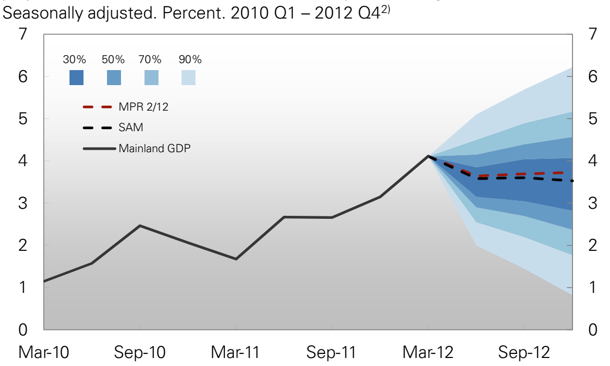
1) Seasonally adjusted quarterly change. Volume
2) Latest observation in the regional network is May 2012. Latest GDP observation is 2012 Q1, projections for 2012 Q2 – 2012 Q4 (broken line)
Sources: Statistics Norway and Norges Bank

Chart 2.16 Terms of trade. Index. 2003 Q1 = 100. 2003 Q1 – 2012 Q1



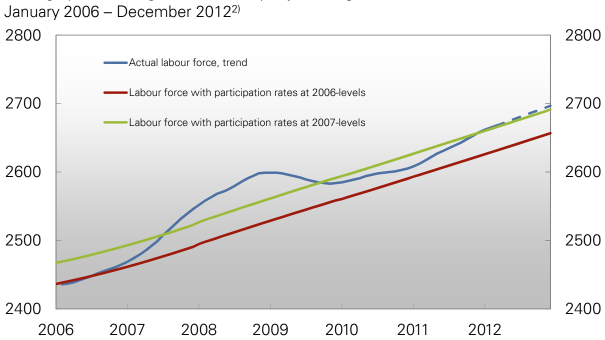
Sources: Statistics Norway and Norges Bank

Chart 2.17 GDP mainland Norway. Actual figures, baseline scenario and projections from SAM[1)] with fan chart. Four-quarter change. Volume. Seasonally adjusted. Percent. 2010 Q1 – 2012 Q4[2)]



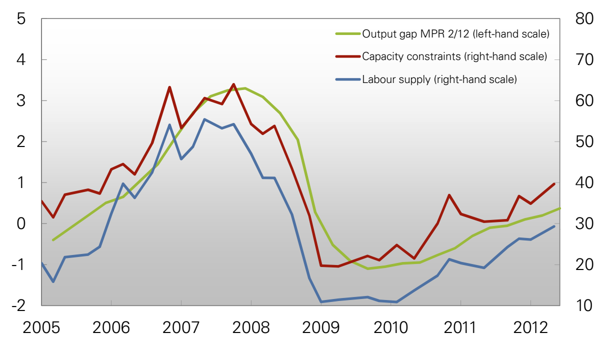
1) System for averaging models
2) Projections for 2012 Q2 – 2012 Q4 (broken lines)
Sources: Statistics Norway and Norges Bank

Chart 2.18 Actual labour force trend and the labour force following demographical changes[1)]. Seasonally adjusted figures. In 1000s. January 2006 – December 2012[2)]



1) The labour force based on constant participation rates at 2006/2007-levels
2) Latest observation is March 2012, projections for April 2012 – December 2012 (broken lines)
Sources: Statistics Norway and Norges Bank

Chart 2.19 Capacity constraints and labour supply[1)] reported by the regional network and estimated output gap. Percent. 2005 Q1 – 2012 Q2



1) Share of contacts that will have some or considerable problems accommodating an increase in demand and the share of contacts where production is constrained by labour supply
Source: Norges Bank

is somewhat above normal. Registered unemployment is somewhat lower than the average for the past 15 years. At the same time, the labour force is expanding faster than population growth would imply (see Chart 2.18). According to Norges Bank's regional network, the share of enterprises facing capacity constraints increased from January to May and is likely somewhat higher than a normal level (see Chart 2.19). Statistics Norway's business tendency survey indicates that capacity utilisation in manufacturing is close to its historical average.

Since the financial crisis, productivity growth has been low. Low productivity may be an indication of less than full utilisation of resources in enterprises. Enterprises may have maintained their workforces in anticipation of a marked pickup in demand. However, higher production growth in the past year has resulted in higher employment and does not indicate that enterprises' spare capacity has been high. Thus, the low growth in actual productivity may indicate that underlying growth in productivity is also low.

Through 2012, capacity utilisation is expected to edge up further, with GDP growth in the quarters ahead somewhat higher than projected growth in potential output. Underlying productivity growth is projected at about 1¾%, while population growth is expected to boost potential output by approximately 1¼%. Unemployment is expected to show a small decline in line with higher capacity utilisation.

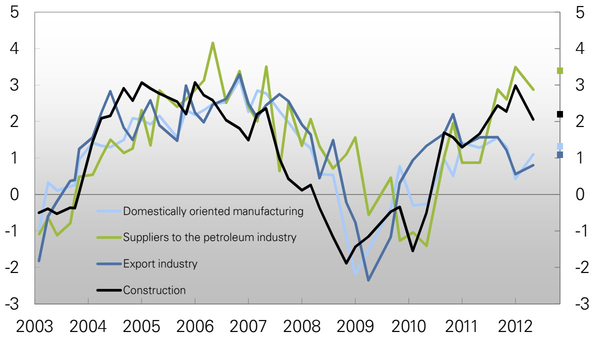
Traditional goods exports declined towards the end of 2011, but have recovered to some degree in recent months. Exports of fish, electricity and products from suppliers to the petroleum industry are expected to grow at a brisk pace between 2011 and 2012. However, other mainland exports are projected to fall as a result of moderate growth in the world economy, relatively high cost growth in Norway and closures in some manufacturing sectors. Norges Bank's regional network contacts expect moderate growth in production for export markets over the next half year (see Chart 2.20). Overall, the volume of traditional goods exports is projected to increase by 1¼% between 2011 and 2012.

The contribution from private consumption to GDP growth has been modest compared with the previous cyclical upturn. This may reflect the impact of high household indebtedness and uncertainty about the effect of economic weakness abroad on activity in Norway. However, growth in goods consumption has picked up this year (see Chart 2.21). Growth over the past month is ascribable, however, to electricity consumption, which varies widely. Income growth increased substantially as a result of the high growth in employment. Looking ahead, high income growth, low unemployment and low interest rates will sustain solid growth in consumption. Even so, projections indicate a further rise in the savings ratio to approximately 7% in 2012. The higher savings ratio reflects expectations of a continued rise in housing investment. At the same time, uncertainty surrounding external developments is expected to continue to curb consumption for some time ahead. Together with high household debt levels, this may help to hold up financial saving, despite low interest rates (see Chart 2.22). Real disposable income appears to be growing more this year than in 2011, owing to higher employment and wage growth. Consumption is projected to increase by 3½% this year (see Chart 2.23).

Following strong growth through 2011, housing investment contracted in 2012 Q1. Housing investment is projected to pick up through the year. Since the financial crisis, an average of 20 000 dwellings have been completed per year, which is lower than the increase in the number of households (see Chart 2.24). The enterprises in Norges Bank's regional network expect strong growth in building activity ahead. At the same time, further tightening of banks' lending standards may push down demand for housing to some extent. Housing investment is projected to increase by 5¾% in 2012 (see Chart 2.25).

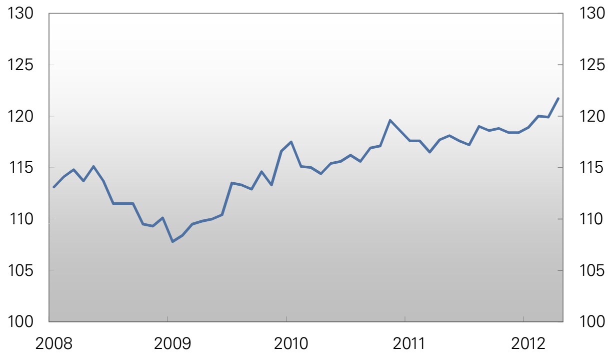
Mainland business investment has increased moderately over the past year. Investment is expected to edge up ahead, reflecting increased capacity utilisation and an improved outlook for some business sectors. The upswing is being restrained by the relatively weak and uncertain prospects for the global economy and the shortage of qualified labour in some sectors. The enterprises in

Chart 2.20 Change in production past three months and expected change in production next six months. Index[1]. February 2003 – November 2012[2]



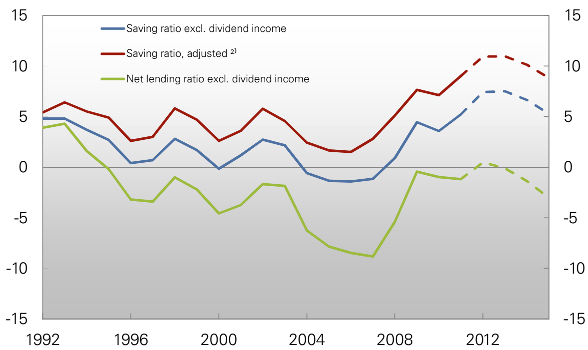
1) The scale runs from -5 to +5, where -5 denotes a sharp fall and +5 denotes strong growth. See article "Norges Bank's regional network: fresh and useful information" in *Economic Bulletin* 2/2009 for further information
2) Latest observation in the regional network is May 2012
Source: Norges Bank

Chart 2.21 Index of household consumption of goods. Seasonally adjusted volume index. 2005 = 100. January 2008 – April 2012



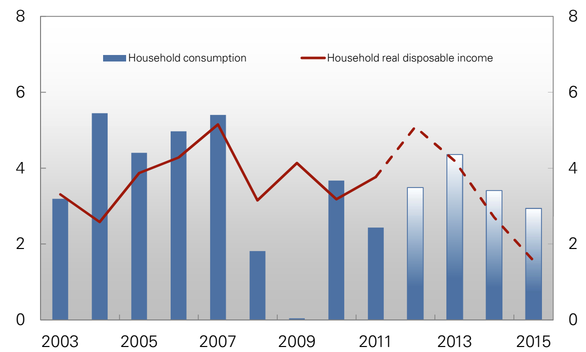
Source: Statistics Norway

Chart 2.22 Household saving and net lending as a share of disposable income. Percent. 1992 – 2015[1]



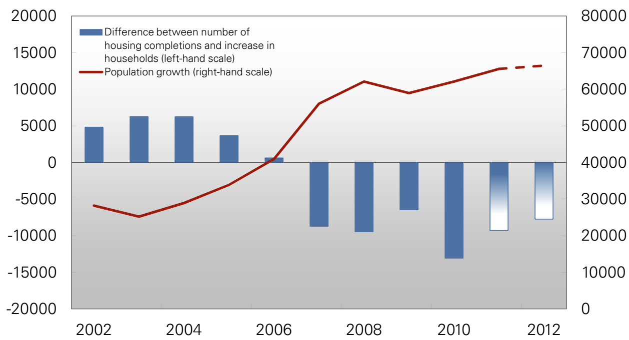
1) Projections for 2012 – 2015 (broken lines)
2) Adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2015
Sources: Statistics Norway and Norges Bank

Chart 2.23 Household consumption[1] and real disposable income[2]. Annual change. Percent. 2003 – 2015[3]



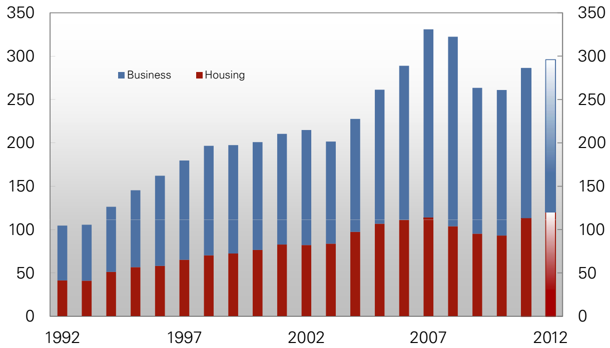
1) Includes consumption among non-profit organisations. Volume
2) Excluding dividend income. Including income in non-profit organisations
3) Projections for 2012 – 2015 (broken line)
Sources: Statistics Norway and Norges Bank

Chart 2.24 Difference between number of housing completions and increase in households, and population growth. 2002 – 2012[1]



1) Projections for 2011 and 2012
Sources: Statistics Norway and Norges Bank

Chart 2.25 Investment in mainland Norway excluding public sector. Constant 2009 prices. In billions of NOK. 1992 – 2012[1]



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

Norges Bank's regional network are planning to increase investment somewhat over the coming year. Mainland business investment is projected to grow by 2% between 2011 and 2012 (see Chart 2.25). Investment in the power sector and services outside of retail trade will be the main contributors to growth.

Labour market

Growth in employment and the labour force has picked up markedly in the past year. According to the national accounts, employment in 2012 Q1 was 2.3% higher than one year earlier. Unemployment has been stable and low. Seasonally adjusted registered unemployment stood at 2.5% of the labour force in May. According to the Labour Force Survey (LFS), the seasonally adjusted unemployment rate in March was 3.0%.

Employment growth is expected to remain relatively firm ahead. Solid output growth along with prospects of continued moderate productivity growth will sustain the demand for labour. Employment is projected to rise by 2% in 2012. The projection is in line with that expected by Norges Bank's regional network contacts (see Chart 2.26), with particularly strong demand for labour in the construction industry and services.

Labour immigration accounts for a large share of recent years' growth in the labour force. According to Statistics Norway's population statistics, net inward migration to Norway came to 47 000 over the four quarters to 2012 Q1. High demand for labour and a relatively high wage level make Norway an attractive country for foreign jobseekers. Inward migration is assumed to remain at a high level in the years ahead.

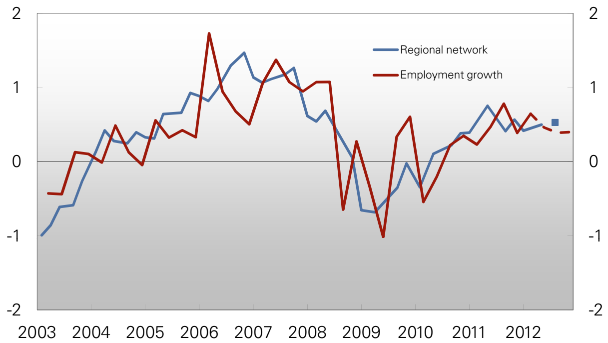
Increased demand for labour has led to a rise in labour force entrants and labour force participation. With the large post-war cohorts now approaching retirement age, labour force participation should in isolation decline somewhat. However, this now appears to be counteracted by solid growth in the Norwegian economy. Against the background of high labour inflows, strong demand for labour and solid wage growth, labour force participation rates are likely to remain high. The labour force is projected to grow in line with the working age population through 2012, with little change in labour force participation rates (see Table 2.3). Employment is expected to increase slightly more than the labour force, so that unemployment will show a small decrease ahead (see Chart 2.27).

Wages

Wage growth in 2012 may be slightly higher than projected in the March *Report*. The centrally negotiated pay increases in this year's wage settlement were slightly higher than the assumptions underlying the wage projections in the March *Report*. Lower unemployment, continued solid earnings and increasing shortages in some occupational groups may indicate that wage drift in the private sector will also be somewhat higher than previously envisaged. At the same time, developments abroad may restrain wage drift in a number of traditional export industries. Central and local government sector wage negotiations resulted in a general pay increase of approximately 4.1%. Overall annual wage growth in 2012 is projected at 4%. The projections imply real wage growth of 3%.

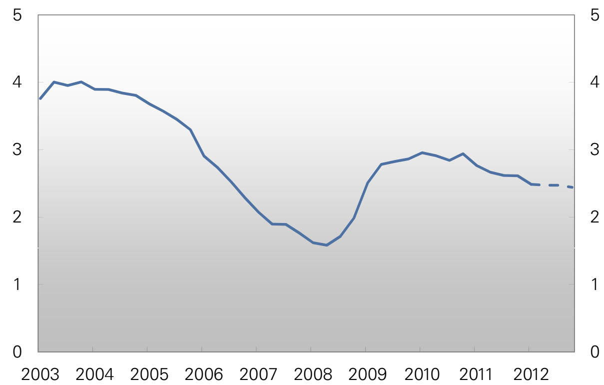
Enterprises in Norges Bank's regional network now expect wage growth of 4.0% in 2012 (see Chart 2.28), somewhat higher than in the previous round. According to Opinion Perduco's expectations survey in the second quarter, the social partners expect wage growth of 4.3% in 2012.

Chart 2.26 Employment[1] and Norges Bank's regional network's indicator of change in employment and expected change in employment next three months. Percent. 2003 Q1 – 2012 Q4[2]



1) Seasonally adjusted quarterly change in Quarterly National Accounts
2) Latest observation in the regional network is May 2012.
Latest observation in the Quarterly National Accounts is 2012 Q1, projections for 2012 Q2 – 2012 Q4 (broken line)
Sources: Statistics Norway and Norges Bank

Chart 2.27 Registered unemployment. Percentage of labour force. Seasonally adjusted. 2003 Q1 – 2012 Q4[1]



1) Projections for 2012 Q2 – 2012 Q4 (broken line)
Sources: Norwegian Labour and Welfare Service, Statistics Norway and Norges Bank

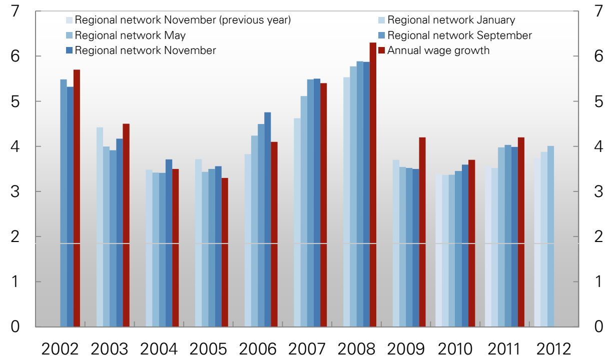
Table 2.3. Population and labour force growth. Change from previous year. Percent

	2011	2012
Population growth in the age group 15–74	1,7	1¾
Growth in labour force conditional on unchanged labour force participation[1]	1,3	1¼
Labour force growth	1,0	2

* Unchanged labour force participation in every age group since the 2007 level

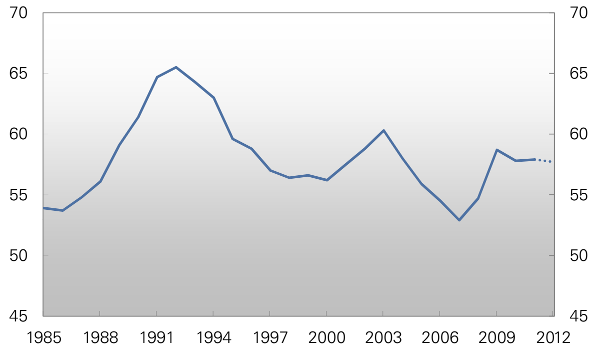
Sources: Statistics Norway and Norges Bank

Chart 2.28 Annual wage growth and estimated wage growth from Norges Bank's regional network. Percent. 2002 – 2012



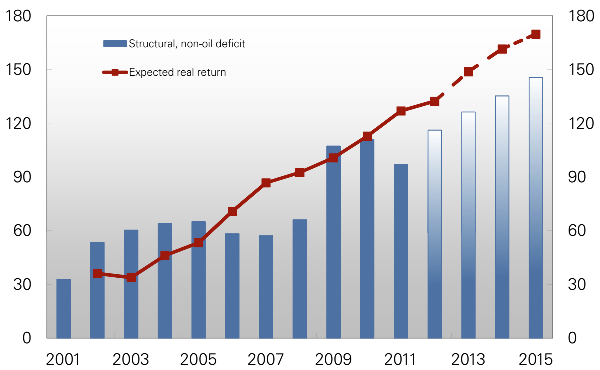
Sources: Norges Bank and the Norwegian Technical Calculation Committee for Wage Settlements (TBU)

Chart 2.29 General government expenditure as share of GDP mainland Norway. 1985 – 2012[1)]



1) Projection for 2012
Source: Ministry of Finance

Chart 2.30 Structural non-oil deficit and expected real return on the Government Pension Fund Global. Constant 2012 prices. In billions of NOK. 2001 – 2015[1)]



1) Projections for 2012 – 2015
Sources: Ministry of Finance and Norges Bank

Assumptions concerning fiscal policy and petroleum investment between 2012 and 2015

Fiscal policy

The fiscal policy assumptions in this *Report* are based on the Revised National Budget for 2012 where petroleum revenue spending in 2012, as measured by the structural, non-oil deficit, is projected at NOK 116bn, or 3.5% of the market value of the Government Pension Fund Global (GFPG) at the beginning of the year.

The structural deficit for 2012 is estimated at 5.2% of mainland trend GDP, an increase of 0.8 percentage point from 2011. The relatively strong growth in the deficit must be viewed against the backdrop of the less than assumed increase in spending in 2011. As a share of mainland GDP, general government spending has been fairly stable in recent years, after rising sharply between 2007 and 2009 (see Chart 2.29).

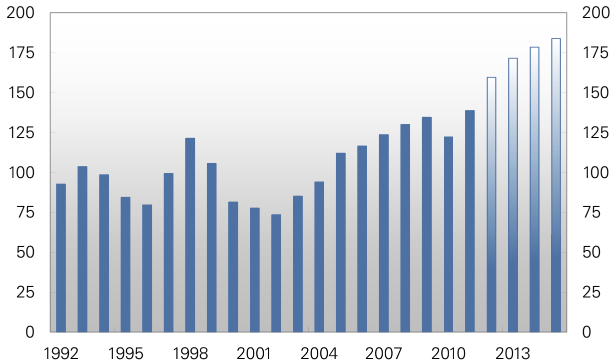
The projected structural deficit is NOK 16bn below the expected real return in 2012. At the same time, there are prospects for solid growth in the GPFG in the coming years. The guidelines for fiscal policy call for restraint in periods of high economic activity. Moreover, budget savings in the years ahead may ease fiscal adjustment as the expected rise in costs related to an ageing population picks up in earnest. Thus, the deficit is projected to remain below 4% of the GPFG through the projection period (see Chart 2.30).

The projections imply a faster rise in petroleum revenue spending than in economic activity. Even so, growth in public sector consumption and investment may be relatively moderate, as transfers are expected to show a considerable increase, primarily as a result of higher expenditure on old age pension benefits.

Petroleum investment

Prices for Norwegian oil and gas have increased markedly since summer 2009 and are expected to hold steady in the period ahead. This has contributed to a pickup in activity on the Norwegian continental shelf, which fell sharply in the wake of the financial crisis. Investment in extraction and pipeline transport grew by 13.4% between 2010 and 2011. A number of development projects relating to new and older fields will contribute to continued appreciable growth over the next few years, but growth will likely be restrained by the availability of drilling rigs and qualified labour. Investment is projected to grow by 15% in 2012, by an additional 7½% in 2013 and by 3 – 4% in the following two years (see Chart 2.31).

Chart 2.31 Petroleum investment. Constant 2009 prices. In billions of NOK. 1992 – 2015[1)]



1) Projections for 2012 – 2015
Sources: Statistics Norway and Norges Bank

Annex

Monetary policy meetings

Tables and detailed projections

Monetary policy meetings
with changes in the key policy rate

Date	Key policy rate[1)]	Change
31 October 2012		
29 August 2012		
20 June 2012	**1.50**	**0**
10 May 2012	1.50	0
14 March 2012	1.50	-0.25
14 December 2011	1.75	-0.50
19 October 2011	2.25	0
21 September 2011	2.25	0
10 August 2011	2.25	0
22 June 2011	2.25	0
12 May 2011	2.25	+0.25
16 March 2011	2.00	0
26 January 2011	2.00	0
15 December 2010	2.00	0
27 October 2010	2.00	0
22 September 2010	2.00	0
11 August 2010	2.00	0
23 June 2010	2.00	0
5 May 2010	2.00	+0.25
24 March 2010	1.75	0
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

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

Table 1 Main macroeconomic aggregates

Percentage change from previous year/ quarter		GDP	Mainland GDP	Private consumption	Public consumption	Mainland fixed investment	Petroleum investment[1]	Mainland exports[2]	Imports
2007		2.7	5.3	5.4	2.7	13.3	6.1	6.3	10.0
2008		0.0	1.5	1.8	2.7	-1.3	5.2	4.5	3.9
2009		-1.7	-1.6	0.0	4.3	-13.2	3.4	-8.4	-12.5
2010		0.7	1.9	3.7	1.7	-2.5	-9.0	7.7	9.9
2011		1.4	2.4	2.4	1.5	8.0	13.4	0.3	3.5
2011[3]	Q2	0.7	1.4	0.6	1.2	1.0	4.1	5.7	-5.9
	Q3	1.4	0.8	0.5	0.5	0.7	8.1	1.3	2.1
	Q4	0.6	0.8	0.6	0.4	1.8	0.7	-1.7	2.8
2012	Q1	1.4	1.1	1.3	-0.3	-2.7	6.1	-0.5	-2.1
2011-level, in billions of NOK		2 720	2 085	1 129	586	391	145	457	770

[1] Extraction and pipeline transport
[2] Traditional goods, travel and exports of other services from mainland Norway
[3] Seasonally adjusted quarterly figures

Sources: Statistics Norway and Norges Bank

Table 2 Consumer prices

Annual rise/ twelve-month rise. Per cent		CPI	CPI-ATE[1]	CPIXE[2]	CPI-AT[3]	CPI-AE[4]	HICP[5]
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		2.5	1.4	1.7	2.4	1.4	2.4
2011		1.2	0.9	1.1	1.1	1.1	1.2
2012	Jan	0.5	1.3	1.2	0.4	1.5	0.3
	Feb	1.2	1.3	1.2	1.0	1.5	1.0
	Mar	0.8	1.5	1.3	0.6	1.6	0.5
	Apr	0.3	0.7	0.6	0.2	1.0	-0.1
	May	0.5	1.4	1.1	0.4	1.5	0.2

[1] CPI-ATE: CPI adjusted for tax changes and excluding energy products
[2] CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices
See Norges Bank *Staff Memo* 7/2008 and *Staff Memo* 3/2009 for a description of the CPIXE
[3] CPI-AT: CPI adjusted for tax changes
[4] CPI-AE: CPI excluding energy products
[5] HICP: Harmonised Index of Consumer Prices. The index is based on international criteria drawn up by Eurostat

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)				
			Projections			
	2011	2011	2012	2013	2014	2015
Prices and wages						
CPI		1.2	1	1¾	2	2½
CPI-ATE[1)]		0.9	1½	1¾	2	2½
CPIXE[2)]		1.1	1¼	1½	2	2½
Annual wages[3)]		4.2	4	4¼	4½	4½
Real economy						
GDP	2 720	1.4	3½	2½	2¼	2¼
GDP, mainland Norway	2 085	2.4	3¾	3¼	2¾	2¾
Output gap, mainland Norway (level)[4)]		-0.1	½	¾	¼	0
Employment, persons, QNA		1.4	2	1½	1	1
Labour force, LFS		1.0	2	1½	1¼	1¼
LFS unemployment (rate, level)		3.3	3	3	3¼	3½
Registered unemployment (rate, level)		2.7	2½	2½	2½	2¾
Demand						
Mainland demand[5)]	2 105	3.2	2¾	4	3¾	3½
- Private consumption	1 129	2.4	3½	4¼	3½	3
- Public consumption	586	1.5	2	2½	·	·
- Fixed investment, mainland Norway	391	8.0	2½	6	·	·
Petroleum investment[6)]	145	13.4	15	7½	4	3
Mainland exports[7)]	457	0.3	¾	1¾	·	·
Imports	770	3.5	3	5½	·	·
Interest rate and exchange rate						
Key policy rate (level)[8)]		2.1	1½	1¾	2½	3
Import-weighted exchange rate (I-44)[9)]		88.1	87¾	86½	85¾	86

1) CPI-ATE: CPI adjusted for tax changes and excluding energy products
2) CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices. See Norges Bank *Staff Memo* 7/2008 and *Staff Memo* 3/2009 for a description of the CPIXE
3) Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations
4) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP
5) Private and public consumption and mainland gross fixed investment
6) Extraction and pipeline transport
7) Traditional goods, travel and exports of other services from mainland Norway
8) The key policy rate is the interest rate on banks' deposits in Norges Bank
9) Level. The weights are estimated on the basis of imports from 44 countries, which comprise 97% of total imports

· Not available

Sources: Statistics Norway, the Technical Reporting Committee on Income Settlements, Norwegian Labour and Welfare Admininstration and Norges Bank

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