NORGES BANK

1|14 MARCH

MONETARY POLICY REPORT

WITH FINANCIAL STABILITY ASSESSMENT

Norges Bank
Oslo 2014

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Editor: Øystein Olsen
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Printing: 07 Media AS
The text is set in 9.5 pkt Azo Sans Light

ISSN 1894-0242 (print)
ISSN 1894-0250 (online)

Monetary Policy Report
with financial stability assessment

The *Report* is published four times a year, in March, June, September and December. The *Report* assesses the interest rate outlook and forms the basis for Norges Bank's advice on the level of the countercyclical capital buffer. The *Report* includes projections of developments in the Norwegian economy.

At its meeting on 12 February 2014, the Executive Board discussed relevant themes for the *Report*. At the Executive Board meeting on 12 March 2012, the economic outlook, the monetary policy stance and the need for a countercyclical capital buffer for banks were discussed. On the basis of this discussion and a recommendation from Norges Bank's management, the Executive Board adopted at its meeting on 26 March 2014 a monetary policy strategy for the period to the publication of the next *Report* on 19 June 2014. The Executive Board also approved Norges Bank's advice to the Ministry of Finance on the level of the countercyclical capital buffer. The Executive Board's assessment of the economic outlook and monetary policy strategy is provided in "The Executive Board's assessment". The advice on the level of the countercyclical capital buffer is submitted to the Ministry of Finance in connection with the publication of the *Report*. The advice is made public when the Ministry of Finance has made its decision.

The *Report* is available on www.norges-bank.no.

CONTENTS

This *Monetary Policy Report* is based on information in the period to 20 March 2014.
The monetary policy strategy was approved by the Executive Board on 26 March 2014.

Monetary policy in Norway

OBJECTIVE

Norges Bank's operational implementation of monetary policy shall be oriented towards low and stable inflation. The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of close to 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. The final decision to adopt a monetary policy strategy is made on the day before 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. The Executive Board has six monetary policy meetings per year.

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 Article 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 Financial Markets 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 Markets Report.

Financial stability – countercyclical capital buffer

Norges Bank shall prepare a decision basis and provide advice to the Ministry of Finance regarding banks' countercyclical buffer requirement four times a year. The objective of the buffer is to bolster banks' resilience to an impending downturn and counter possible procyclical effects of banks' lending practice. In drawing up the basis, Norges Bank and Finanstilsynet (Financial Supervisory Authority of Norway) exchange relevant information and assessments. The Ministry of Finance sets the buffer rate.

Norges Bank will recommend that the buffer rate should be increased when financial imbalances are building up or have built up over a period. The buffer rate will be assessed in the light of other requirements applying to banks. The buffer rate may be reduced in the event of an economic downturn and large bank losses, with a view to mitigating the procyclical effects of tighter bank lending.

EXECUTIVE BOARD'S ASSESSMENT

At its meetings on 12 March and 26 March 2014, the Executive Board discussed the monetary policy strategy. The starting point for the discussion was the strategy that the Executive Board adopted at its meeting on 4 December 2013, which suggested that the key policy rate should be in the interval 1%–2% in the period to 27 March 2014, unless the Norwegian economy was exposed to new major shocks. The analysis in the *Monetary Policy Report* published on 5 December implied a key policy rate of 1.5% in the period to summer 2015, followed by a gradual rise. With this path for the key policy rate, there were prospects that inflation would move up to close to 2½% towards the end of the projection period and that capacity utilisation would remain close to a normal level.

At its meeting on 12 February 2014, the Executive Board discussed topics relevant to the March 2014 *Monetary Policy Report*, including factors that may explain developments in household saving.

In its discussion on 12 March and 26 March, the Executive Board placed emphasis on the following developments:

- Growth among our trading partners remains moderate. On the whole, global growth prospects are broadly in line with earlier projections.

- Policy rates are close to zero in many countries and market expectations concerning policy rates are slightly lower than at the time of the December *Report*. The Swedish central bank lowered its policy rate to 0.75% in December.

- The Norwegian krone depreciated until the beginning of February, but has since appreciated again. On average, the krone has been somewhat weaker than projected in the December *Report*.

- Bank interest rates on housing loans and loans to enterprises remained approximately unchanged in 2013 Q4.

- Growth in the Norwegian economy remains moderate and is in line with the projections in the December *Report*. In February, the enterprises in Norges Bank's regional network reported that output growth was broadly unchanged from October and that they expected that growth might pick up slightly in the period ahead. Growth in petroleum investment is expected to slow markedly as from 2014 and may turn out to be lower than previously assumed. Developments in housing investment may also turn out to be slightly weaker than previously projected. Unemployment has remained approximately unchanged.

- House prices have remained approximately unchanged in recent months and are now somewhat higher than projected in the December *Report*. Growth in household debt has edged down.

- Wage growth in 2013 was 3.9%, somewhat higher than projected in the *December* Report. Consumer price inflation has been marginally higher than projected. Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) was 2.4% in February.

In its discussion of the outlook for developments in the Norwegian and global economy, the Executive Board discussed the pronounced depreciation of the krone through 2013. The depreciation of the krone was considerably more pronounced than the decrease in the interest rate differential against Norway's trading partners would imply. Various factors were discussed that may have been behind these developments. Recently, the krone has appreciated somewhat again. In the discussion it was noted that developments in the krone ahead are uncertain and that foreign-exchange market themes shift rapidly.

Growth in the Norwegian economy slowed over the past year. It was pointed out that the Norwegian economy is now becoming more dependent on growth in sectors other than the petroleum industry. Mainland exports may gradually rise as growth abroad picks up, but the high domestic cost level makes it more challenging for Norwegian firms to fully benefit from the upturn among Norway's trading partners.

Growth in private consumption has been moderate and the saving ratio has risen to a high level. High debt burdens and uncertainty surrounding economic developments, tighter bank credit standards, demographic changes and the pension reform have probably contributed to the increase in household saving. Some of these factors may contribute to a further increase in the saving ratio and low growth in private consumption ahead. At the same time, the saving ratio is now historically high, which may imply that the saving ratio will gradually level off or edge down.

The Executive Board noted that inflation has risen and discussed to what extent the depreciation of the krone through 2013 is affecting consumer prices. At the same time, there is uncertainty surrounding wage growth ahead. Wage growth in 2013 was higher than expected, but a high cost level and an ample supply of labour may contribute to holding down wage growth ahead.

The point of departure for the Executive Board's assessment of monetary policy is that the key policy rate is set with a view to keeping inflation close to 2.5% over time. The objective of low and stable inflation is weighed against the objective of stable developments in output and employment. Monetary policy should also be robust. There is uncertainty surrounding economic driving forces and the functioning of the economy. This normally suggests a gradual approach in interest rate setting. Monetary policy also takes into account the risk of a build-up of financial imbalances.

Policy rates for many of our trading partners are close to zero. In Norway, the key policy rate has been 1.5% since March 2012. The interest rates facing households and enterprises are higher. Underlying inflation is now estimated at between 2% and 2½%. Capacity utilisation is likely close to a normal level.

The Executive Board noted that developments since the time of publication of the December *Report* have on the whole been in line with the projections in that *Report* and that the interest rate forecast remains broadly unchanged. The analyses continue to imply a key policy rate at today's level in the period to summer 2015, followed by a gradual rise. With this path for the key policy rate, the analysis in this *Report* implies that inflation will be somewhat below, but close to, 2½% throughout the projection period. Capacity utilisation may edge down in the coming year, but is expected to edge up again towards the end of the projection period to close to a normal level.

In its discussion of monetary policy in the coming period, the Executive Board gave weight to the moderate pace of growth in the Norwegian economy and prospects for somewhat lower capacity utilisation ahead. Inflation is now close to 2.5%, but the driving forces behind inflation further out remain moderate. Both the objective of keeping inflation close to 2.5% and the objective of sustaining capacity utilisation in the years ahead could in isolation imply a somewhat lower key policy rate. House price inflation has slowed in the past year, but household debt is still growing faster than income. A lower key policy rate may increase the risk of a renewed acceleration in house prices and debt and a further build-up of financial imbalances. This may increase the risk that financial imbalances further out will trigger or amplify an economic downturn. The Executive Board also gave weight to the uncertainty surrounding economic driving forces and the functioning of the economy, and was of the view that this implies proceeding with caution in interest rate setting. The Executive Board's overall assessment is that the key policy rate should remain at today's level in the coming period.

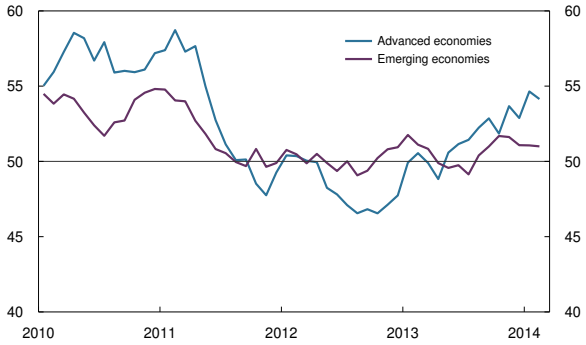
At its meeting on 26 March, the Executive Board decided to keep the key policy rate unchanged at 1.5%. At the same meeting, the Executive Board decided that the key policy rate should be in the interval 1%-2% in the period to the publication of the next *Report* on 19 June 2014, unless the Norwegian economy is exposed to new major shocks.

Øystein Olsen
26 March 2014

1 ECONOMIC SITUATION

The moderate economic upturn is continuing in advanced countries. There are prospects that growth will pick up further (see Chart 1.1) and growth is likely to be somewhat higher than projected earlier. Growth in the euro area has gained pace, but unemployment remains high. Macroeconomic indicators point to a continued pickup in growth, but weak income growth and continued deleveraging in the private and public sector will dampen activity also in the period ahead. In the US, private demand is growing solidly and the housing market has improved. Employment growth remains weak. The upturn is also continuing in the UK and Sweden. In the coming years, growth in most advanced economies is expected to gain further momentum, supported by improved credit conditions, reduced negative contribution from fiscal policy and continued expansionary monetary policy.

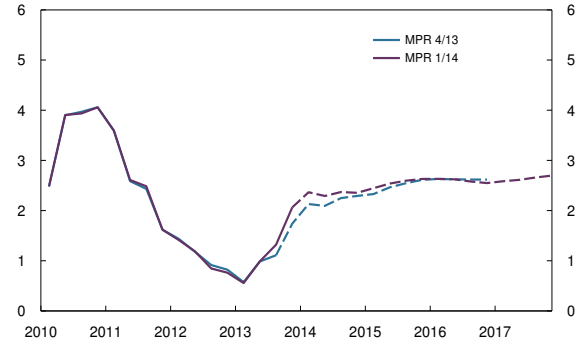
Chart 1.1 Purchasing Managers´ Index (PMI) for manufacturing for advanced and emerging economies in trading partner aggregate.[1)]
Diffusion index around 50. Seasonally adjusted. January 2010 – February 2014



1) Export weights.
Sources: Thomson Reuters and Norges Bank

Growth in emerging economies has slackened and is expected to be somewhat lower than projected earlier. At the beginning of 2014, many emerging countries experienced capital outflows and weaker exchange rates, particularly countries with large current account deficits. Looking ahead, activity growth is likely to be restrained by tighter credit standards and higher risk premiums in credit markets, in addition to economic policy tightening. In China, growth was slightly higher in 2013 than projected in the December 2013 *Monetary Policy Report*, but growth prospects remain virtually unchanged.

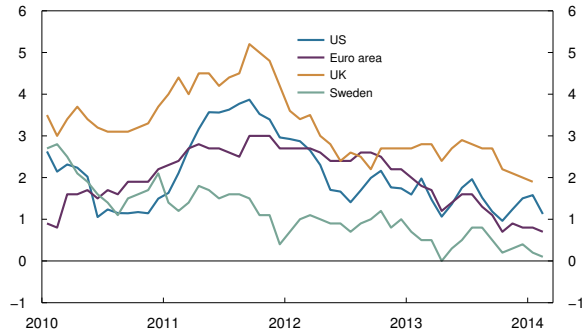
Chart 1.2 GDP for trading partners in MPR 4/13 and MPR 1/14. Volume.
Four–quarter change. Percent. 2010 Q1 – 2017 Q4[1)]



1) Projections from 2013 Q4 (broken lines).
Sources: Thomson Reuters and Norges Bank

Growth prospects for the world economy have shown little change since the December *Report* (see Chart 1.2 and Table 3 in Annex). Growth among trading partners as a whole is projected to pick up from 1¼% in 2013 to 2¼% in 2014. Further ahead in the projection period, the annual growth rate is expected to hover around 2½%. Growth in the world economy is projected at 3¼% in 2014, on a par with the average for the past 30 years. See box on page 36 for further discussion of developments in different regions and countries.

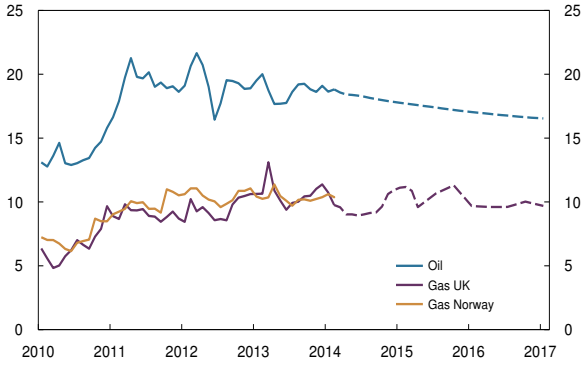
Chart 1.3 Consumer prices.
Twelve–month change. Percent. January 2010 – February 2014



Sources: Eurostat and Bureau of Labour Statistics

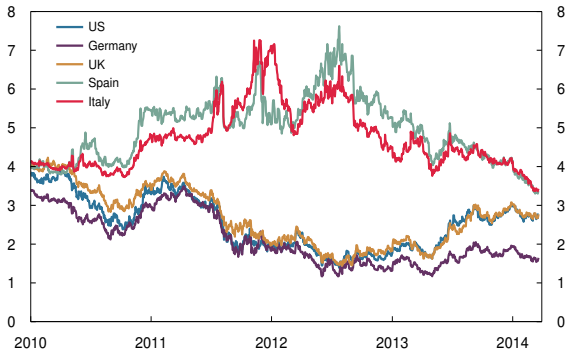
Consumer price inflation has declined in many advanced countries (see Chart 1.3). For most of Norway's trading partners, there are prospects that inflation will be lower in 2014 than projected in the December *Report* (see Table 4 in Annex). Inflation declined in the euro area through 2013 and is

Chart 1.4 Oil and gas prices.[1]
USD per MMBtu[2]. January 2010 – January 2017[3]



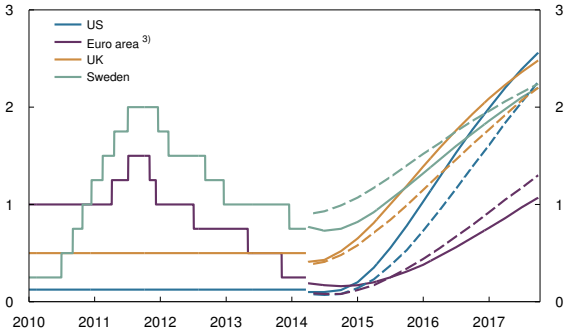
1) An average of daily observations is used for March 2014 for oil and UK gas prices.
2) Million British thermal unit.
3) Forward prices from 2014 Q2.
Sources: IMF, Thomson Reuters, Statistics Norway, regMinistry of Finance and Norges Bank

Chart 1.5 Yields on 10–year government bonds.
Percent. 1 January 2010 – 20 March 2014



Source: Bloomberg

Chart 1.6 Key rates and estimated forward rates at 29 November 2013 and 20 March 2014.[1]. Percent. 1 January 2010 – 1 October 2017[2]



1) Broken lines show estimated forward rates at 29 November 2013. Thin lines show forward rates at 20 March 2014. Forward rates are based on Overnight Index Swap (OIS) rates.
2) Daily data from 1 January 2010 and quarterly data from 2014 Q2.
3) EONIA for the euro area from 2014 Q2.
Sources: Bloomberg and Norges Bank

projected to hover slightly above 1% in the coming years (see box on page 39). In Sweden, inflation is even lower, but is expected to move up faster. Long-term inflation expectations seem to be firmly anchored in most advanced economies. Consumer price inflation among Norway's trading partners as a whole is projected to increase from 1¾% in 2014 to 2¼% further out in the projection period.

The price of oil is now a little higher than USD 105 per barrel, slightly lower than in December. The projections in this *Report* are based on the assumption that oil prices move in line with futures prices (see Chart 1.4). These prices indicate some fall in oil prices ahead. Export prices for Norwegian gas have remained broadly unchanged since the December *Report*. Food prices have increased, while metal prices have declined somewhat.

Government bond yields have varied to some extent across major economies, but, on the whole, have changed little since December (see Chart 1.5). In the heavily indebted euro area countries, long-term yields have continued to drift down. Market participants seem to be of the perception that the risk of sovereign default among these countries has diminished . The main stock indices in the US and Europe have edged up since the December *Report*. The situation in Ukraine has so far had little impact on world commodity prices and financial markets.

Policy rates are still close to zero in many countries. In the US, there are expectations that the first interest rate hike will occur somewhat earlier than expected in December. Market pricing now indicates that the first interest rate change will occur in the course of 2015 Q2 (see Chart 1.6). In the UK, there are signs that higher growth has led market participants to expect an increase in the policy rate in the first quarter of 2015. In the euro area, the first rate hike is now expected at a later date, likely reflecting lower inflation than that projected by the European Central Bank (ECB). The first rate change in the euro area is expected in 2016 Q1 at the earliest. In Sweden, the central bank lowered its policy rate from 1.0% to 0.75% in December and the first rate increase is expected in spring 2015. For trading partners as a whole, market expectations concerning policy rates are slightly lower than at the time of the December *Report*.

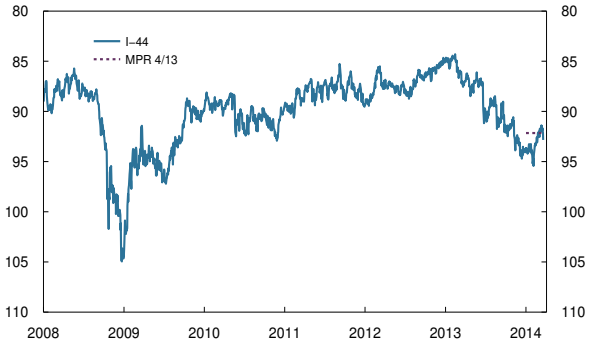
The krone exchange rate depreciated markedly through 2013 (see Chart 1.7). Prospects for the Norwegian economy weakened and the expected upward shift in Norges Bank's key policy rate was gradually moved ahead in time. The krone still weakened to a considerably greater extent than the change in the expected interest rate differential against other countries would imply. The risk premium for NOK increased, reflecting both developments in Norway and abroad (see box on the krone exchange rate on page 42).

The krone continued to depreciate into 2014, reaching its weakest level since 2009 in early February, as measured by the import-weighted krone exchange rate index (I-44). Recently, however, the krone has appreciated again as several of the factors behind the risk premium increase in 2013 have reversed somewhat. So far in Q1, the krone has on average been somewhat weaker than projected in the December *Report*, but the krone is now close to the level projected in the December *Report*.

Norwegian banks have ample access to market funding. The risk premium in three-month money market rates is expected to remain around ¼ percentage point in the period ahead. The risk premiums banks pay for new long-term market funding have fallen since the December *Report* and the average risk premium for outstanding bank bonds has levelled off (see Chart 1.8). Both banks' residential mortgage rates and corporate lending rates were approximately unchanged in Q4 (see Chart 1.9), in line with that projected in the December *Report*. The banks included in Norges Bank's lending survey reported an easing of credit standards for households.

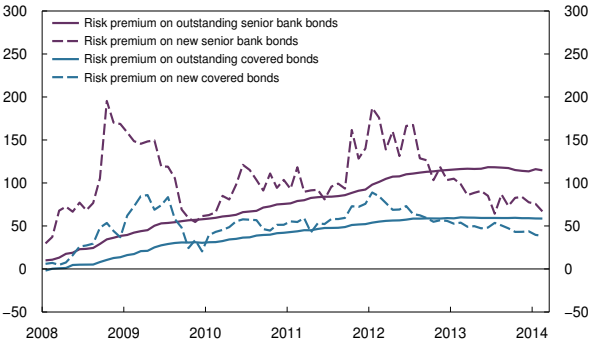
Growth in the Norwegian economy slowed through 2013. According to Norges Bank's regional network, the slowdown was broadly based (see Chart 1.10). In retail trade, growth was very low towards the end of 2013. Growth declined considerably in the construction sector and in oil-related activity, albeit from high levels. According to the national accounts, mainland GDP increased by 0.6% in Q4, or slightly more than projected in the December *Report*. At the same time, the enterprises in Norges Bank's regional network reported in February that output growth remained stable and somewhat weaker than the growth projections for mainland Norway in the December *Report*.

Chart 1.7 Import–weighted exchange rate index (I–44).[1)]
1 January 2008 – 20 March 2014



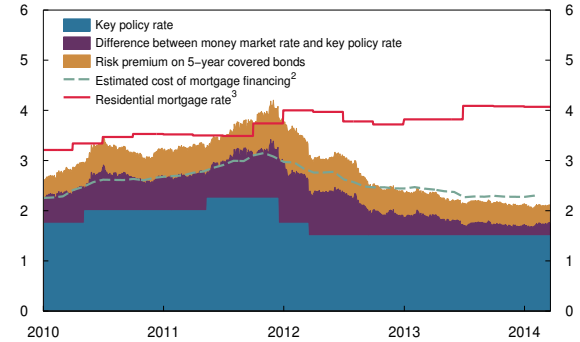
1) A positive slope denotes a stronger krone exchange rate.
Source: Norges Bank

Chart 1.8 Average risk premium[1)] on new and outstanding bond debt for Norwegian banking groups.[2)] Basis points. January 2008 – February 2014



1) Difference against 3-month NIBOR.
2) All banks and covered bond mortgage companies in Norway, excluding branches of foreign banks in Norway.
Sources: Bloomberg, Stamdata, DNB Markets and Norges Bank

Chart 1.9 Mortgage lending rates[1)] and funding costs.
Percent. 1 January 2010 – 20 March 2014



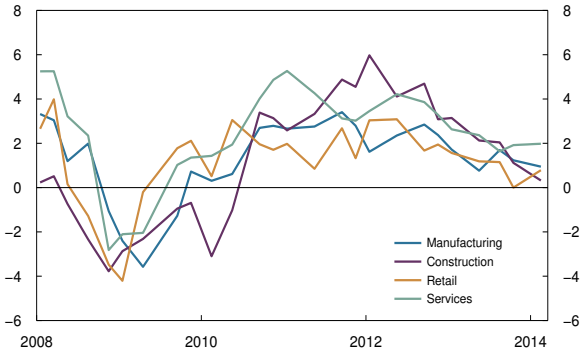
1) The interest rate on lines of credit secured on dwellings provided by all banks and mortgage companies in Norway.
2) Estimated using weighted interest rates on covered bonds outstanding and weighted deposit rates.
3) Credit lines.
Sources: DNB Markets, Statistics Norway and Norges Bank

Employment growth has remained solid over the past year, while productivity growth has been weak. Unemployment rose through 2013 but has been steady in recent months. In February, registered unemployment was 2.7% of the labour force (see Chart 1.11).

Household demand has been moderate and household saving has reached a high level. High debt ratios and uncertainty surrounding economic developments, the pension reform, demographic changes and tighter lending practices have probably induced households to increase saving. Since the December *Report*, private consumption has been somewhat weaker than expected and household confidence indictors have fallen. This may indicate that growth in consumer spending remains moderate and that the saving ratio will increase further in the period ahead. House prices edged down through autumn, but have shown little change in recent months (see Chart 1.12). House prices have been slightly higher than projected in the December *Report*. Growth in household debt has declined a little and was below 7% in January, somewhat lower than projected in the December *Report*.

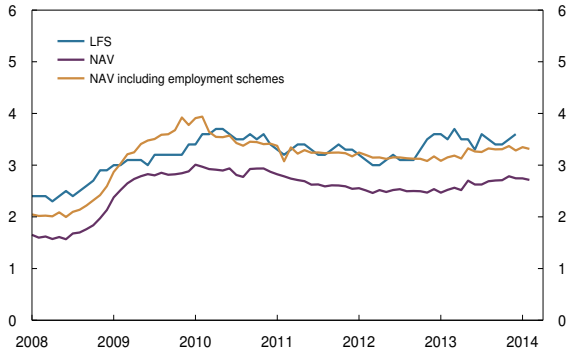
New home sales fell in autumn 2013 and are still at a low level. The enterprises in Norges Bank's regional network expect low growth in building activity ahead. Housing investment continued to rise through 2013, but a moderate decline is now expected in the coming period. Growth in petroleum investment, which has for a long time been high and provided strong growth

Chart 1.10 Norges Bank's regional network indicator for output growth past three months. Annualised. Percent. January 2008 – February 2014



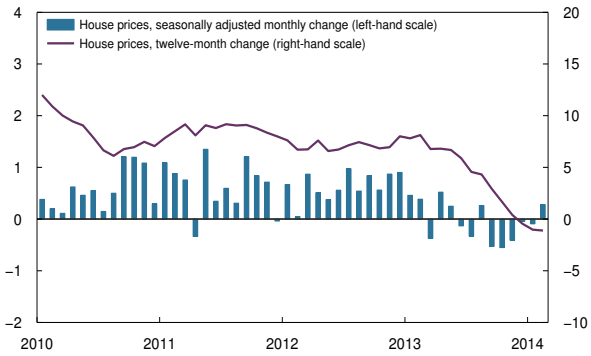
Source: Norges Bank

Chart 1.11 Unemployment rate. LFS[1] and NAV[2]
Seasonally adjusted. Percent. January 2008 – February 2014



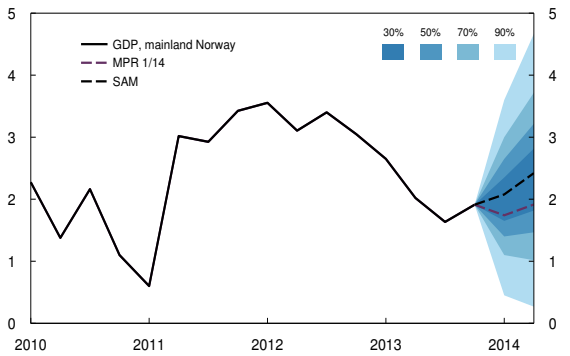
1) Labour Force Survey.
2) Norwegian Labour and Welfare Administraion (NAV).
Sources: Statistics Norway and NAV

Chart 1.12 House prices. Twelve-month change and seasonally adjusted monthly change. Percent. January 2010 – February 2014



Sources: Eiendomsmeglerforetakenes forening (EFF), Eiendomsverdi and Finn.no

Chart 1.13 GDP for mainland Norway. Actual figures, baseline scenario and projections from SAM[1] with fan chart.
Four–quarter change. Volume. Seasonally adjusted. Percent. 2010 Q1 – 2014 Q2[2]



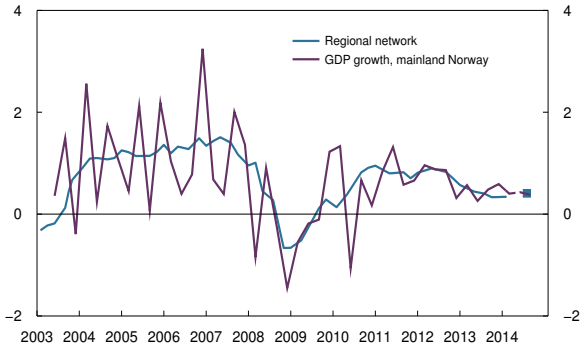
1) System for averaging short–term models.
2) Projections for 2014 Q1 – 2014 Q2 (broken lines).
Sources: Statistics Norway and Norges Bank

impulses to the Norwegian economy, is projected to decline markedly as from 2014. Exports are projected to expand somewhat faster, owing to a weaker krone and higher growth abroad. Moderate growth prospects for both Norway and the world economy, combined with a high domestic cost level, are likely to entail continued sluggish growth in business investment.

In the coming quarters, growth in the Norwegian economy is projected at a little less than ½%, about the same rate as projected in the December *Report*. The projections for mainland GDP are slightly lower than the projections from Norges Bank's System for Averaging short-term Models (SAM) (see Chart 1.13). Weight has been given to reported expectations of only a marginal pickup in growth based on the February survey of the enterprises in Norges Bank's regional network (see Chart 1.14).

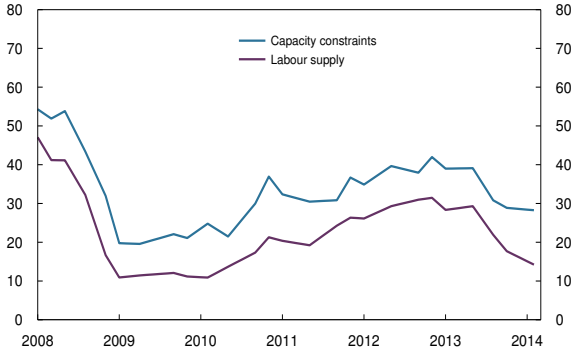
Capacity utilisation in the mainland economy is assessed to have declined slightly over the past year but is likely still close to a normal level. According to Norges Bank's regional network, the share of enterprises reporting capacity constraints has fallen (see Chart 1.15). The enterprises also report that the supply of labour has improved. Registered unemployment has been stable over the past three months and close to an average for the past 15 years. Overall capacity utilisation seems to have declined in line with the projections in the December *Report* and the projections for the coming quarters remain broadly unchanged.

Chart 1.14 GDP for mainland Norway[1] and Norges Bank's regional network's indicator of output growth past three months and expected output growth next six months. Percent. January 2003 – September 2014[2]



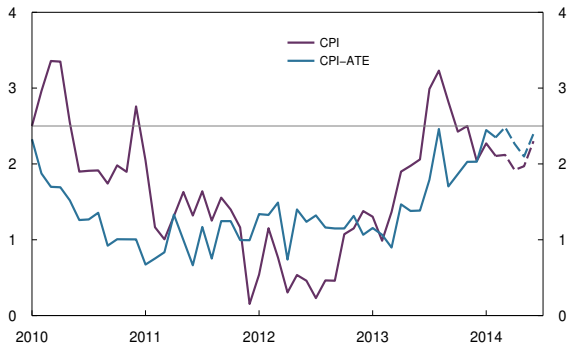
1) Seasonally adjusted quarterly change. Volume.
2) Latest observation in the regional network is February 2014. Latest GDP observation is 2013 Q4. Projections for 2014 Q1 – 2014 Q2 (broken line).
Sources: Statistics Norway and Norges Bank

Chart 1.15 Capacity constraints and labour supply[1] as reported by Norges Bank's regional network. Percent. January 2008 – February 2014



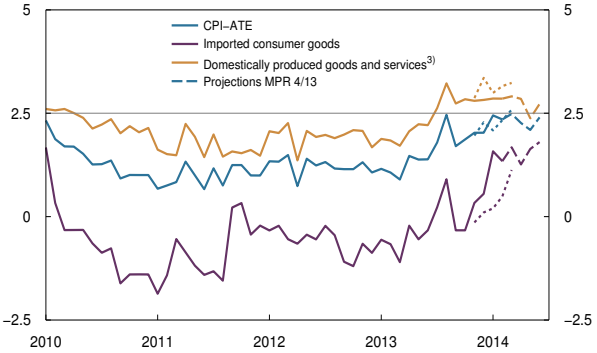
1) Share of contacts that will have some or considerable problems accommodating an increase in demand and the share of contacts where production is constrained by labour supply.
Source: Norges Bank

Chart 1.16 CPI and CPI–ATE.[1] 12–month change. Percent. January 2010 – June 2014[2]



1) CPI adjusted for tax changes and excluding energy products.
2) Projections for March 2014 – June 2014 (broken lines).
Sources: Statistics Norway and Norges Bank

Chart 1.17 CPI–ATE.[1] Total and by supplier sector. 12–month change. Percent. January 2010 – June 2014[2]



1) CPI adjusted for tax changes and excluding energy products.
2) Projections for March 2014 – June 2014 (broken lines).
3) Norges Bank estimates.
Sources: Statistics Norway and Norges Bank

In 2013, wage growth was somewhat higher than projected in the December *Report*. The Technical Reporting Committee on Income Settlements (TBU) estimates annual wage growth at 3.9% in 2013. The krone depreciation through 2013 has increased the pay capacity of many export companies. At the same time, a rising supply of labour, moderate domestic growth and continued low wage growth abroad will have a dampening impact on wage growth at home. The wage carryover into 2014 is estimated at ¾%, according to the TBU. The enterprises in Norges Bank's regional network estimate wage growth at 3½% in 2014.

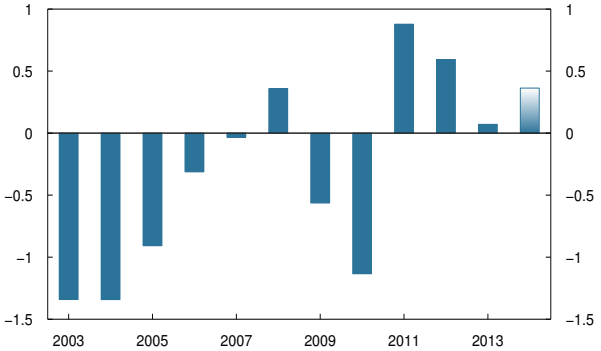
Inflation has been marginally higher than projected in the December *Report*. In February, the annual rise in consumer prices (CPI) was 2.1% (see Chart 1.16). Adjusted for tax changes and excluding energy products (CPI-ATE), inflation was 2.4%. Underlying inflation is estimated to be between 2% and 2½%.

The rise in prices for domestically produced goods and services in the CPI-ATE has been somewhat lower than 3% in recent months, which is somewhat lower than projected in the December *Report* (see Chart 1.17). House rents increased rapidly through 2013 but have edged down in recent months. Food prices are still rising at a brisk pace. The rapid rise in house rents and foods prices over the past year partly reflect revised methods for measuring price developments for these groups in the CPI. Over time, prices for domestically produced goods and services have increased in line with the costs of firms supplying goods and services to the household sector. The rise in unit labour costs for these firms has held steady at around 2½% in recent years. The rise in prices for domestically produced goods and services is projected to slow somewhat over the next months.

Prices for imported consumer goods have increased at a fast pace in recent months and faster than projected (see Chart 1.17). The year-on-year rise was 1.3% in February, with prices for clothing and cars showing the sharpest rise in recent months. The pass-through from the exchange rate to consumer prices may have occurred earlier than previously assumed. External price impulses to Norwegian consumer prices are expected to be stronger this year than in 2013 (see Chart 1.18). At the same time, the krone has been somewhat weaker than projected in the December *Report*. The rise in prices for imported consumer goods is projected to move up to around 1¾% in the period to summer.

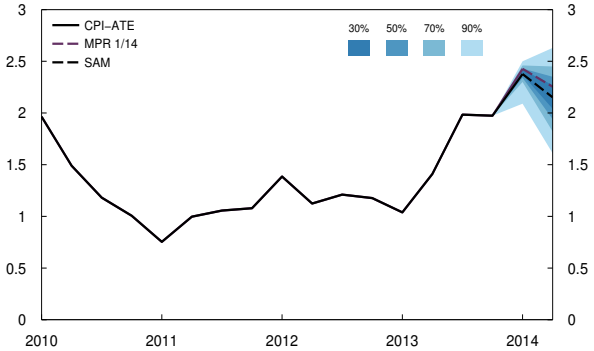
The year-on-year rise in the CPI-ATE is projected at close to 2¼% in the coming months. This is slightly higher than projected in the December *Report*, reflecting higher prices for imported consumer goods. The projections for CPI-ATE inflation are in line with the SAM-based projections (see Chart 1.19).

Chart 1.18 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Percent. 2003 – 2014[1)]



1) Projections for 2014.
Source: Norges Bank

Chart 1.19 CPI–ATE[1)]. Actual figures, baseline scenario and projections from SAM[2)] with fan chart. Four–quarter change. Percent. 2010 Q1 – 2014 Q2 [3)]



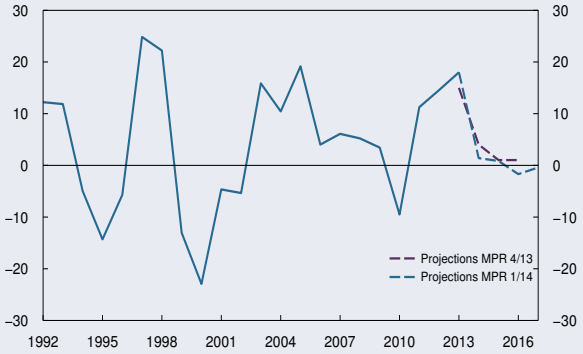
1) CPI adjusted for tax changes and excluding energy prices.
2) System for averaging short–term models.
3) Projections for 2014 Q1 – 2014 Q2 (broken).
Sources: Statistics Norway and Norges Bank

ASSUMPTIONS CONCERNING PETROLEUM INVESTMENT AND FISCAL POLICY

Petroleum investment has reached a high level, driven by high prices for oil and gas. The level of petroleum investment is expected to flatten out ahead (see Chart 1.20), which is partly attributable to the fact that the high investment level in itself limits the potential for further growth. At the same time, the high cost level in the Norwegian petroleum sector, combined with prospects for somewhat lower oil and gas prices, has led to postponements of some projects. The projections are somewhat lower than in the December *Report*.

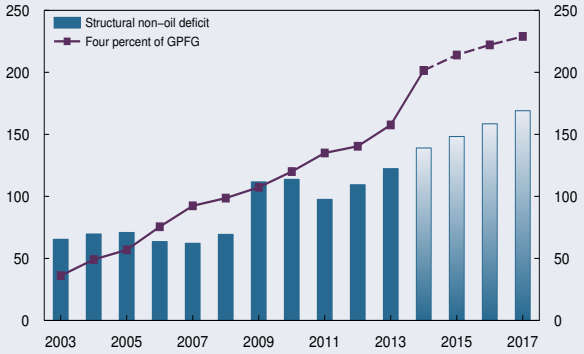
The fiscal policy assumptions are based on the approved budget for 2014. High returns on the Government Pension Fund Global (GPFG) through 2013 may entail lower petroleum revenue spending, as measured by the structural non-oil deficit, towards 2¾% of the value of the GPFG in 2014, despite the fact that petroleum revenue spending is expected to rise faster than activity in the wider economy. In the period ahead, petroleum revenue spending as a share of mainland GDP is assumed to grow at broadly the same pace as that recorded since the introduction of the fiscal rule in 2001. With the prospect of continued growth in the value of the GPFG, petroleum revenue spending may remain below 3% of the fond throughout the projection period (see Chart 1.21).

Chart 1.20 Petroleum investment. Constant 2011 prices.
Annual change. Percent. 1992 – 2017[1)]



1) Projections for 2014 – 2017.
Sources: Statistics Norway and Norges Bank

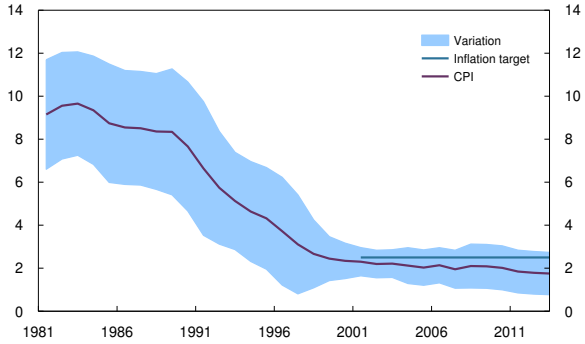
Chart 1.21 Structural non–oil deficit and four percent of the Government Pension Fund Global. Constant 2014 prices. In billions of NOK. 2003 – 2017[1)]



1) Projections for 2014 – 2017.
Sources: Ministry of Finance and Norges Bank

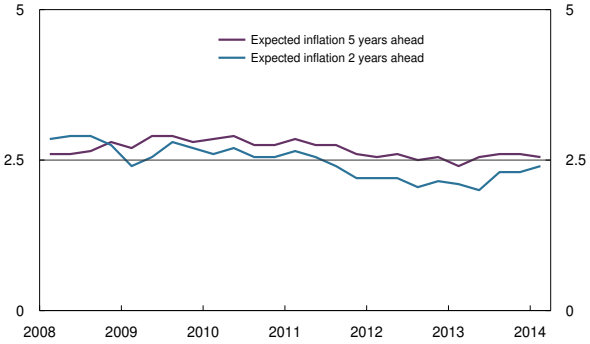
2 MONETARY POLICY OUTLOOK

Chart 2.1 10–year moving average[1] and variation[2] in CPI.
Annual change. Percent. 1981 – 2013



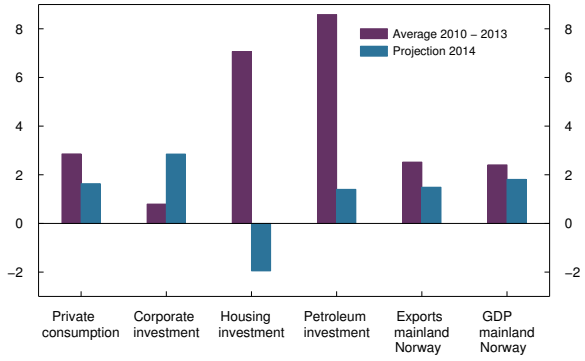
1) The moving average is calculated 10 years back.
2) The band around the CPI is the variation in the CPI in the average period, measured by +/– one standard deviation.
Sources: Statistics Norway and Norges Bank

Chart 2.2 Expected consumer price inflation 2 and 5 years ahead.[1]
Percent. 2008 Q1 – 2014 Q1



1) Average of expectations of employer/employee organisations and economists in the financial industry and academia.
Sources: TNS Gallup and Opinion

Chart 2.3 GDP growth and annual growth in selected demand components. Percent



Sources: Statistics Norway and Norges Bank

The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of close to 2.5% over time. Over the past 10 years, average inflation has been somewhat below, but close to, 2.5% (see Chart 2.1). Inflation expectations remain close to the inflation target (see Chart 2.2).

The key policy rate is set with a view to maintaining inflation of close to 2.5% over time without causing excessive fluctuations in output and employment. Monetary policy also seeks to be robust by, among other things, taking into account the uncertainty concerning economic driving forces and the functioning of the economy. A robust monetary policy also seeks to take into account the risk of a build-up of financial imbalances (see box on the criteria for an appropriate interest rate path on page 20).

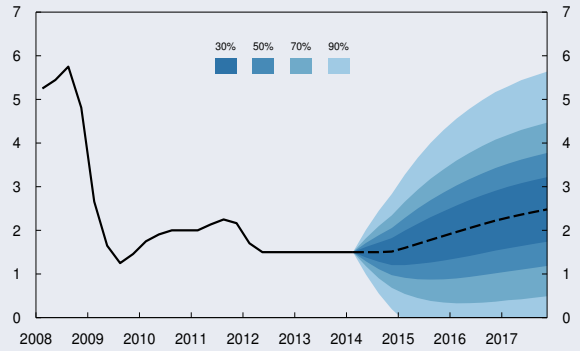
The key policy rate is 1.5% and is lower than what may be regarded as a normal level (see box on page 44). One reason the key policy rate is low is that interest rates abroad are very low. At the same time, there is a considerable spread between the key policy rate and the interest rates facing households and enterprises. Residential mortgage rates are around 4% for most households, while the interest rate on bank loans to enterprises is around 4½%.

In the December 2013 *Monetary Policy Report*, the key policy rate was projected to remain at the current level to summer 2015, rising gradually thereafter. With this interest rate forecast, there were prospects that inflation would rise towards 2½% towards the end of the projection period and that capacity utilisation would remain close to a normal level.

In recent months, inflation has been marginally higher than expected. The krone has been slightly weaker than envisaged but has recently appreciated. Wage growth in 2013 was higher than expected, but the driving forces behind inflation further out remain moderate. Wage growth in 2014 is still projected at 3½%. Underlying inflation is now estimated to be between 2% and 2½%. The outlook for inflation has been revised upward slightly since the December *Report*.

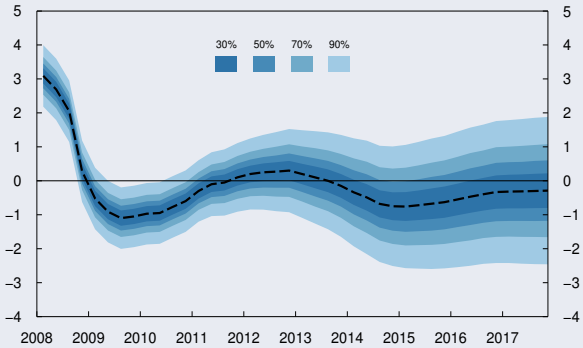
Growth in the Norwegian economy has slowed (see Chart 2.3). Since the December *Report*, growth has been broadly as projected, but driving forces in the

Chart 2.4a Projected key policy rate in the baseline scenario with fan chart. Percent. 2008 Q1 – 2017 Q4



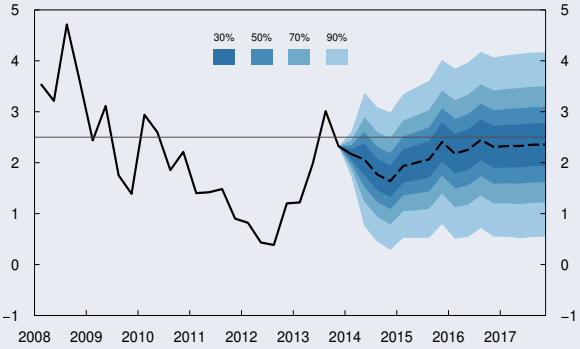
Source: Norges Bank

Chart 2.4b Projected output gap[1] in the baseline scenario with fan chart. Percent. 2008 Q1 – 2017 Q4



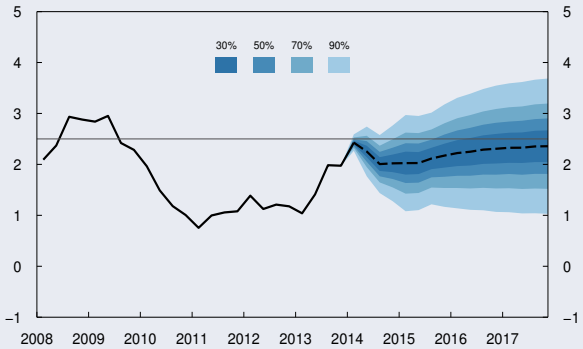
1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP.
Source: Norges Bank

Chart 2.4c Projected CPI in the baseline scenario with fan chart. Four–quarter change. Percent. 2008 Q1 – 2017 Q4



Sources: Statistics Norway and Norges Bank

Chart 2.4d Projected CPI–ATE[1] in the baseline scenario with fan chart. Four–quarter change. Percent. 2008 Q1 – 2017 Q4



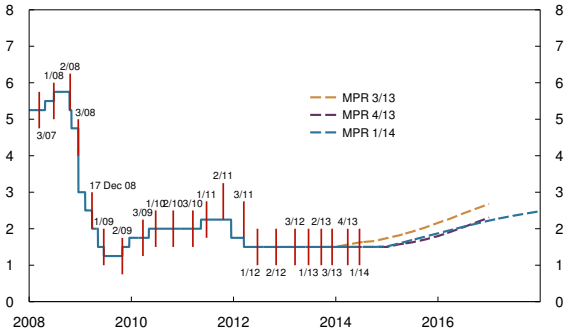
1) CPI adjusted for tax changes and excluding energy products.
Sources: Statistics Norway and Norges Bank

period ahead are nevertheless assessed as slightly weaker. Growth in petroleum investment and housing investment in Norway may turn out to be somewhat lower than previously projected. Growth prospects for Norway's trading partners are approximately as previously assumed, but the expected upward shift in interest rates abroad has been moved slightly further ahead.

House prices have been broadly unchanged in recent months and are now somewhat higher than projected in the December *Report*. At the same time, household debt growth has slowed and has been slightly lower than expected. Indicators of financial imbalances are at historically high levels, but recent developments suggest that imbalances have not built up further since the December *Report* (see Section 3 for further description).

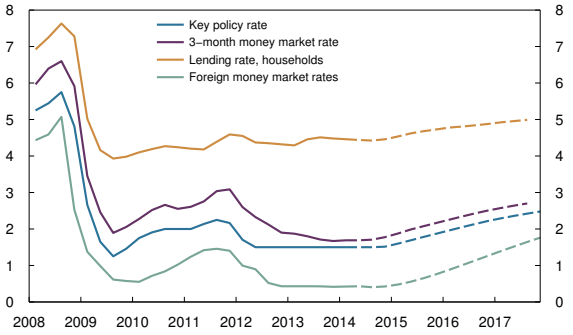
An overall assessment of new information since the December *Report* implies a key policy rate forecast approximately as projected in the December *Report* (see box on page 22). There are still prospects that the key policy rate will be held at the current level in the period to summer 2015 and raised gradually thereafter (see Charts 2.4 a-d and Chart 2.5). Bank lending rates are projected to track developments in the key policy rate in the period ahead, but may rise somewhat less further out in the projection period (see Chart 2.6).

Chart 2.5 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. 1 January 2008 – 31 December 2017



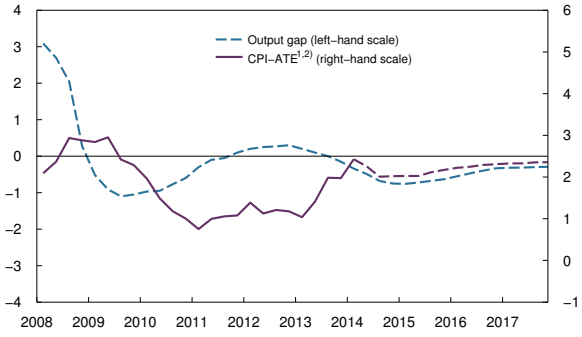
Source: Norges Bank

Chart 2.6 Key policy rate, 3–month money market rate[1], interest rate on loans to households[2] and foreign money market rates in the baseline scenario. Percent. 2008 Q1 – 2017 Q4 [3]



1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that the announced interest rate changes are priced into the money market.
2) Average interest rate on all loans to households from banks and mortgage companies.
3) Projections for 2014 Q1 – 2017 Q4 (broken lines).
Sources: Statistics Norway and Norges Bank

Chart 2.7 Inflation and output gap in the baseline scenario. Percent. 2008 Q1 – 2017 Q4



1) CPI adjusted for tax changes and excluding energy products.
2) Projections for 2014 Q1 – 2017 Q4.
Sources: Statistics Norway and Norges Bank

With this key policy rate forecast, there are prospects that inflation will be slightly below, but close to, 2½% throughout the projection period. Capacity utilisation may decline somewhat in 2014, but is expected to edge up again to a more normal level towards the end of the projection period (see Chart 2.7).

Both the objective of keeping consumer price inflation close to 2.5% and the objective of sustaining capacity utilisation in the years ahead could in isolation imply a somewhat lower key policy rate forecast (see box on page 20). On the other hand, a lower key policy rate may increase the risk of a further build-up of financial imbalances. This may increase the risk that financial imbalances further ahead will trigger or amplify an economic downturn. At the same time, uncertainty regarding economic driving forces and the functioning of the economy implies proceeding with caution in interest rate setting. By taking such robustness considerations into account, monetary policy may, in an uncertain world, result in better developments in inflation, output and employment over time.

Growth in the Norwegian economy is expected to pick up from just below 2% in 2014 to 2½% in 2015 and around 3% towards the end of the projection period. Mainland exports are expected to rise gradually owing to a pickup in growth abroad and the depreciation of the krone in the past year. At the same time, the household saving ratio is projected to edge down further out, but continue to remain high (see Chart 2.8). Growth in private consumption, which has been moderate for a long period, will thus be somewhat more in line with income growth (see Chart 2.9). Annual growth in private consumption is projected to pick up from 1¾% in 2014 to around 3% in the remainder of the projection period. Petroleum investment is projected to remain at approximately the current level in the coming year, falling slightly thereafter. Activity in oil-related industries is nevertheless expected to remain robust. Housing investment is expected to decrease somewhat in the period ahead, but gradually edge up again owing to continued house price inflation and high population growth.

House prices are projected to increase by 2%–3% annually in the years ahead. This implies that house price inflation will be lower than growth in household income in the years ahead. These developments must

be viewed in the context of the high level of house prices and the high volume of residential construction in recent years. Debt growth is expected to slow somewhat ahead (see Chart 2.10). At the same time, there are prospects that household debt ratios and interest burdens will drift up over the next years (see Chart 2.11).

Growth in potential output is projected to drift up through the period. It is assumed that labour immigration will remain high so that population growth also in the period ahead will make a relatively substantial contribution to potential output. Productivity growth is projected to rise to around 1½% towards the end of the projection period.

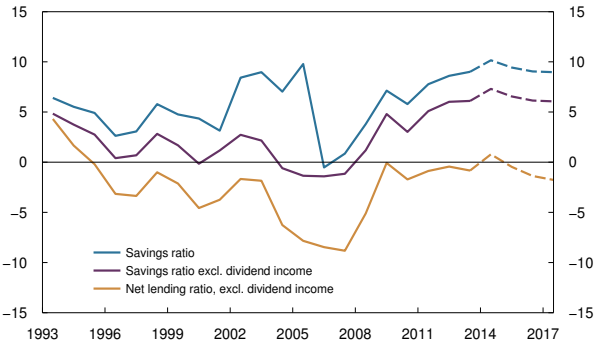
The interest rate differential against other countries is expected to be fairly stable. The projections are based on the assumption that the krone will appreciate somewhat in the period ahead (see Chart 2.12).

Inflation is expected to slow from 2¼% in 2014 to 2% in 2015. Thereafter, inflation will pick up somewhat through the projection period. Prices for domestically produced goods and services are expected to rise somewhat through the projection period. Wage growth is projected to increase from 3½% in 2014 to about 4% in the coming years. The krone depreciation in 2013 and somewhat higher productivity growth may result in somewhat higher pay capacity in the business sector. Even though unemployment may edge up, the unemployment rate ahead will likely be close to an average level for the past 15 years. On the other hand, continued low inflation abroad and a moderate appreciation of the krone will likely dampen the rise in prices for imported consumer goods from the end of 2014.

The projections for the key policy rate, inflation, capacity utilisation and other variables are based on Norges Bank's assessment of the economic situation and of the functioning of the economy and monetary policy. There is uncertainty surrounding the projections.

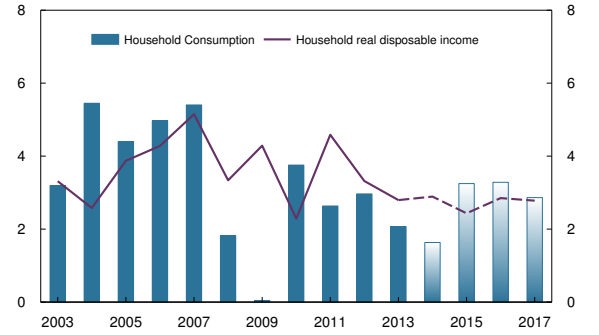
Despite high income growth and a fairly low interest rate level, growth in household consumption has been moderate and the saving ratio has increased considerably in recent years. Uncertainty about economic developments, tighter bank credit standards,

Chart 2.8 Household saving and net lending as a share of disposable income.
Percent. 1993 – 2017[1)]



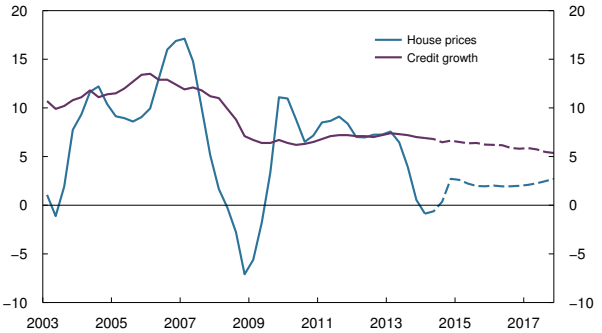
1) Projections for 2014 – 2017 (broken lines).
Sources: Statistics Norway and Norges Bank

Chart 2.9 Household consumption[1)] and real disposable income[2)]
Annual change. Percent. 2003 – 2017[3)]



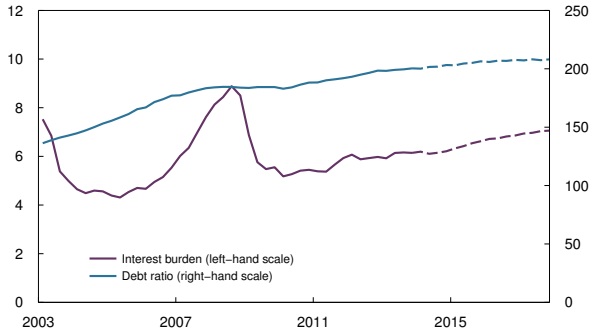
1) Includes consumption for non–profit organisations. Volume.
2) Excluding dividend income. Including income in non–profit organisations.
3) Projections for 2014 – 2017 (broken line).
Sources: Statistics Norway and Norges bank

Chart 2.10 Household credit[1)] and house prices.
Four–quarter change. Percent. 2003 Q1 – 2017 Q4[2)]



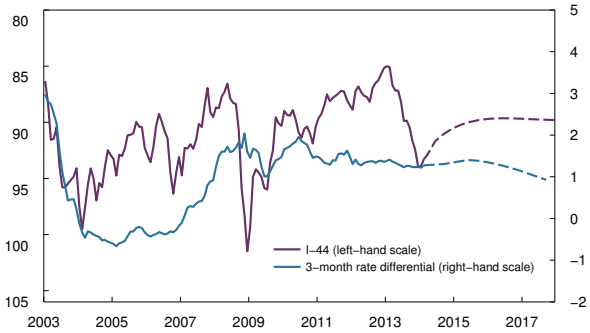
1) Inland credit to households.
2) Projections for 2014 Q1 – 2017 Q4 (broken lines).
Sources: Statistics Norway, Eiendomsmeglerforetakenes forening (EFF), Eiendomsverdi, Finn.no and Norges Bank

Chart 2.11 Household debt ratio[1] and interest burden[2].
Percent. 2003 Q1 – 2017 Q4[3]



1) Loan debt as a percentage of disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and redemption/reduction of equity capital for 2006 – 2012 Q3.
2) Interest expenses as a percentage of disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and redemption/reduction of equity capital for 2006 – 2012 Q3 plus interest expenses.
3) Projections for 2013 Q4 – 2017 Q4 (broken lines).
Sources: Statistics Norway and Norges Bank

Chart 2.12 Three–month money market rate differential between Norway[1] and trading partners and import–weighted exchange rate index (I–44)[2].
January 2003 – December 2017[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) Projections March 2014 – 2017 Q4 (broken lines).
Sources: Thomson Reuters and Norges Bank

demographic changes and the pension reform have probably contributed to the increase in household saving. The saving ratio is projected to level off and gradually edge down, but it cannot be ruled out that saving will continue to rise. At the same time, housing investment may decline to a further exent than projected. In that case, growth in the Norwegian economy may be lower than projected in this *Report*.

Exports of traditional goods are also projected to edge up in the years ahead in line with a pickup in growth abroad. Owing to the high cost level, Norwegian export firms may not fully benefit from the expected increase in market growth abroad and may result in low export growth. On the other hand, petroleum investment is projected to slow somewhat in the years ahead. Should oil prices remain at around the current level or increase, petroleum investment may turn out to be higher than projected in this *Report*.

The krone exchange rate has shown pronounced movements through the past year, and there is considerable uncertainty regarding movements ahead. The krone has appreciated recently, but the depreciation through 2013 was pronounced. The pass-through from the krone depreciation to prices may have been underestimated. Wage growth was higher than expected in 2013 and it cannot be ruled out that wage growth will remain high also in 2014.

An ample supply of labour may have contributed to dampening productivity growth in recent years, but the effects are highly uncertain. A possible effect of continued high growth in the supply of labour and low investment activity is that the expected pickup in productivity growth may fail to materialise. At the same time, continued high labour immigration, moderate developments in the Norwegian economy and a high cost level may result in lower wage growth than projected.

Monetary policy may respond to changes in the economic outlook and if the relationships between the interest rate, inflation and the real economy differ from those assumed. Hence, there is uncertainty about future interest rate developments. The uncertainty surrounding Norges Bank's projections is illustrated using fan charts (see Charts 2.4 a-d). The width of the fans reflects historical uncertainty.

CROSS-CHECKS OF THE INTEREST RATE FORECAST

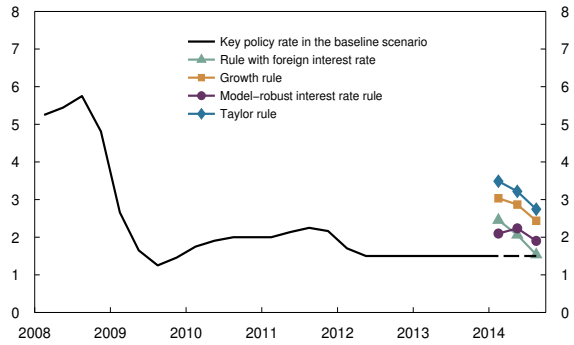
Simple monetary policy rules can describe an interest rate setting that is robust to different assumptions about the functioning of the economy. The Taylor rule is based on projections for inflation, the output gap, money market premiums and the normal interest rate level. In the growth rule, the output gap is replaced by a growth gap. Both these rules imply a key policy rate of around 3% (see Chart 2.13). The model-robust rule[1] is based on calculations using different models for the Norwegian economy. This rule gives greater weight to the output gap and inflation than the Taylor rule. In addition, it gives weight to the interest rate in the preceding period. This rule implies a key policy rate of around 2½%. These rules do not capture the very low level of external interest rates. The rule with external interest rates also takes into account that changes in the interest rate level among our trading partners may result in changes in the exchange rate and hence influence the inflation outlook. This rule implies a key policy rate of just above 2%. Thus, all the simple rules imply a key policy rate that is higher than our forecast in the coming period. The difference between the money market rate and bank lending rates is considerably wider than normal (see Chart 2.6). This factor is not captured by the simple rules.

Forward money and bond market rates are another cross-check for the interest rate forecast. Estimated forward rates are in line with the forecast for the money market rate in this *Report* for the entire projection period (see Chart 2.14).

A simple rule based on Norges Bank's previous interest rate setting can also serve as a cross-check for the interest rate in the baseline scenario. Chart 2.15 shows such a rule, where the key policy rate is determined by developments in inflation, wage growth, mainland GDP and external interest rates. The interest rate in the previous period is also important. The parameters in this model are estimated using historical relationships. The projections are based on the estimates for the underlying variables in this *Report*. The uncertainty in this model is expressed by the blue band. The chart shows that the interest rate in the baseline scenario is close to the middle of this band.

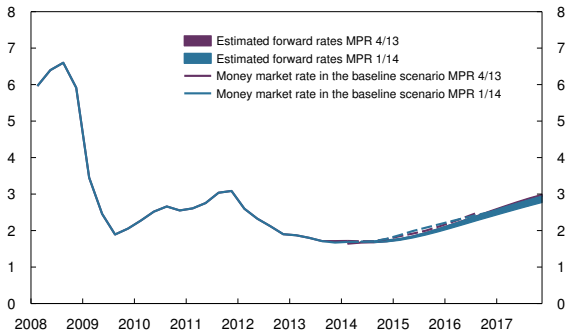
1 For a further analysis of this and other simple monetary policy rules, see Norges Bank *Staff Memo* 16/2012 and 17/2012.

Chart 2.13 Key policy rate and calculations based on simple monetary policy rules.[1)] Percent. 2008 Q1 – 2014 Q3



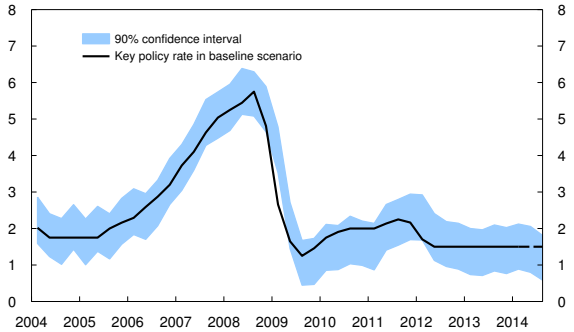
1) The calculations are based on Norges Bank's projections for the output gap, growth gap, consumer prices (CPI–ATE) and 3–month money market rates for trading partners. To ensure comparability with the key policy rate, the simple rules are adjusted for risk premiums in 3–month money market rates.
Source: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

Chart 2.14 Three–month money market rate in the baseline scenario[1)] and estimated forward rates[2)]. Percent. 2008 Q1 – 2017 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 purple and blue bands show the highest and lowest rates in the period 18 November – 29 November 2013 and 7 March – 20 March 2014.
Sources: Thomson Reuters and Norges Bank

Chart 2.15 Key policy rate and interest rate developments that follow from Norges Bank's average pattern for interest rate setting.[1)] Percent. 2004 Q1 – 2014 Q3



1) Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and 3–month money market rates among trading partners, as well as the interest rate in the previous period. The equation is estimated over the period 1999 Q1 – 2013 Q4. See Norges Bank *Staff Memo* 3/2008 for further discussion.
Source: Norges Bank

CRITERIA FOR AN APPROPRIATE INTEREST RATE PATH

Over time, Norges Bank seeks to maintain inflation close to 2.5%. In its conduct of monetary policy, Norges Bank operates a flexible inflation targeting regime so that weight is given to both variability in inflation and variability in output and employment when setting the key policy rate. This flexible inflation targeting regime builds a bridge between the long-term objective of monetary policy, which is to anchor expectations of low and stable inflation, and the more short-term consideration of stabilising the economy.

Moreover, Norges Bank emphasises the importance of a robust monetary policy. The functioning of the economy is not fully known, and there may be uncertainty regarding the economic situation. In addition, events will often occur that are difficult to foresee. Monetary policy also seeks to mitigate the risk of a build-up of financial imbalances. A prolonged rise in credit and asset prices increases the risk that financial imbalances may trigger or amplify an economic downturn.

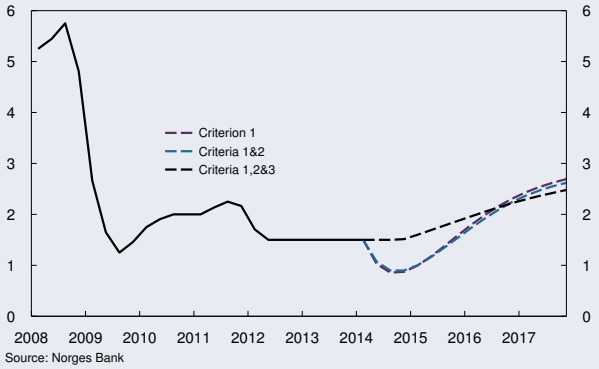
The following set of criteria can serve as a guideline for an appropriate interest rate path:

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.

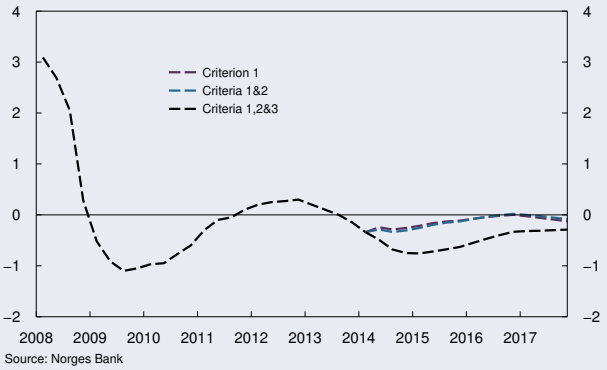
3. *Monetary policy is robust:*
   The interest rate should be set so that monetary policy mitigates the risk of a build-up of financial imbalances, and so that acceptable developments in inflation and output are also likely under alternative assumptions about the functioning of the economy.

Chart 2.16a Key policy rate. Percent. 2008 Q1 – 2017 Q4



Source: Norges Bank

Chart 2.16b Output gap. Percent. 2008 Q1 – 2017 Q4



Source: Norges Bank

The various considerations expressed in the criteria are weighed against each other. The first two criteria reflect the flexible inflation targeting regime. The consideration of robustness is not an objective in itself, but is included because in an uncertain world taking robustness into consideration may yield improved performance in terms of inflation, output and employment over time.

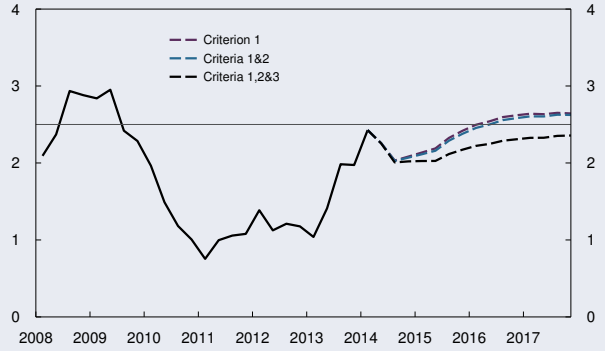
Charts 2.16 a-c illustrate the forecasts for the key policy rate, output gap and inflation when the various criteria are taken into account.

If the sole objective of monetary policy were to maintain inflation at target, the key policy rate would, according to a technical model-based analysis, quickly be lowered towards 1% (see purple line in the charts).[1] Inflation would then move up to 2.5% towards the end of 2015. According to the technical model-based analysis, the key policy rate will follow a fairly similar path when account is taken of the consideration that monetary policy should not lead to excessive fluctuations in output and employment (see blue line). This reflects that these considerations are now pulling in the same direction.

The robustness consideration pushes up the interest rate path. A reduction in the key policy rate at present may increase the risk of a renewed build-up of financial imbalances. A robust monetary policy also seeks to take into account that the functioning of the economy is not fully known. This normally suggests a gradualist approach in interest rate setting. In the baseline scenario (see black line), the key policy rate is therefore higher than implied by a technical model-based analysis that does not take robustness into consideration.

1 Norges Bank's macroeconomic model NEMO is used in this model analysis.

Chart 2.16c CPI–ATE.[1)] Four–quarter change. Percent. 2008 Q1 – 2017 Q4



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

CHANGES IN THE PROJECTIONS SINCE *MONETARY POLICY REPORT* 4/13

The interest rate forecast in this *Monetary Policy Report* is broadly unchanged in relation to the forecast in the December 2013 *Report* (see Chart 2.17). The projections are based on the criteria for an appropriate interest rate path (see box on page 20), an overall assessment of the situation in the Norwegian and global economy and Norges Bank's perception of the functioning of the economy.

Chart 2.18 illustrates how news and new assessments have affected the interest rate forecast through their impact on the outlook for inflation, output and employment.[1] Developments since the time of publication of the December *Report* have generally been in line with the projections in that *Report*, and the assessment of the various driving forces affecting the outlook for the key policy rate is broadly unchanged. The isolated contributions of the different factors shown by the bars in the chart are therefore marginal. The overall change in the interest rate forecast compared with the December *Report* is shown by the black line.

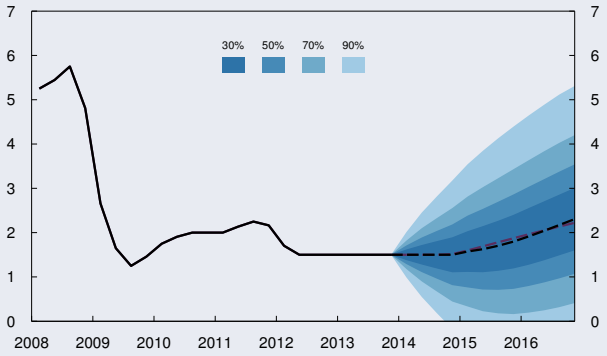
Policy rates are close to zero among many of Norway's trading partners, and market expectations concerning policy rates ahead are slightly lower than projected in the December *Report*. This suggests a lower key policy rate also in Norway (see purple bars).

The krone is now close to the level projected in the December *Report*, but has been slightly weaker on average than expected. A weaker krone contributes in isolation to both slightly higher inflation and slightly higher economic activity. This suggests a marginally higher key policy rate (see blue bars).

Growth in the Norwegian economy has been broadly in line with projections. Nevertheless, driving forces ahead are assessed to be slightly weaker than in the December *Report*. Developments in petroleum

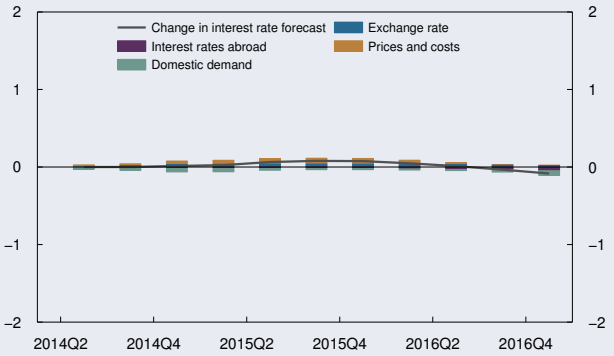
1 Illustrated using the macroeconomic model NEMO and based on the criteria for an appropriate interest rate path.

Chart 2.17 Key policy rate in the baseline scenario in MPR 4/13 with fan chart and key policy rate in the baseline scenario in MPR 1/14 (purple line). Percent. 2008 Q1 – 2016 Q4



Source: Norges Bank

Chart 2.18 Factors behind changes in the interest rate forecast since MPR 4/13. Cumulative contribution. Percentage points. 2014 Q2 – 2016 Q4



Source: Norges Bank

investment and housing investment in Norway may turn out to be slightly weaker than previously assumed. Slightly weaker prospects for domestic demand suggest a slightly lower key policy rate (see green bars).

Consumer price inflation has been marginally higher than projected since the December *Report*. Wage growth in 2013 was slightly higher than expected but is still projected at 3½% in 2014. The outlook for inflation in the coming period has been revised up slightly on the December *Report* and in isolation suggests a marginally higher interest rate path (yellow bars).

A summary of changes in the projections of other key variables is provided in Table 1.

TABLE 1 Projections for macroeconomic aggregates in Monetary Policy Report 1/14. Percentage change from previous year (unless otherwise stated). Change from projections in Monetary Policy Report 4/13 in brackets

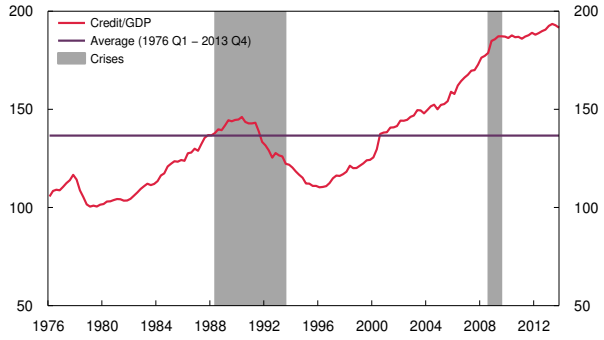
	2014	2015	2016	2017
CPI	2 (0)	2 (0)	2¼ (¼)	2¼
CPI-ATE[1]	2¼ (¼)	2 (0)	2¼ (¼)	2¼
Annual wages[2]	3½ (0)	3¾ (0)	4 (0)	4
Mainland demand[3]	1¾ (-¼)	3¼ (¼)	3 (0)	2¾
GDP, mainland Norway	1¾ (-¼)	2½ (0)	3 (0)	2¾
Output gap, mainland Norway (level)[4]	-½ (0)	-¾ (-¼)	-½ (-¼)	-¼
Employment, persons, QNA	1 (0)	¾ (-¼)	1 (0)	1
Registered unemployment (rate, level)	3 (0)	3 (0)	3 (0)	3
Level				
Key policy rate[5]	1½ (0)	1¾ (0)	2 (0)	2½
Import-weighted exchange rate (I-44)[6]	91½ (¼)	90 (¼)	89¾ (¼)	89¾
Money market rates, trading partners[7]	½ (0)	¾ (0)	1¼ (0)	1¾

1 CPI-ATE: CPI adjusted for tax changes and excluding energy products.
2 Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations.
3 Private and public consumption and mainland gross fixed investment.
4 The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP.
5 The key policy rate is the interest rate on banks' deposits in Norges Bank.
6 The weights are estimated on the basis of imports from 44 countries, which comprise 97% of total imports.
7 Market rates are based on money market rates and interest rate swaps.

Source: Norges Bank

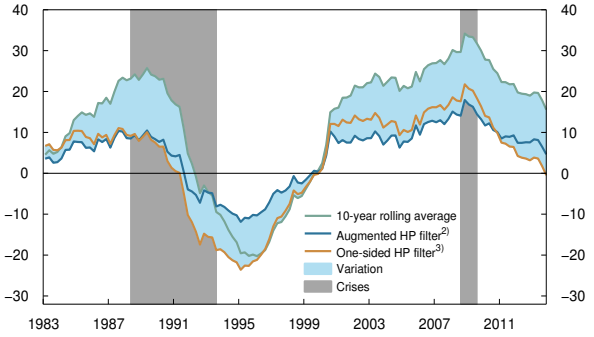
3 DECISION BASIS FOR THE COUNTERCYCLICAL CAPITAL BUFFER

Chart 3.1 Total credit[1)] mainland Norway as a percentage of mainland GDP. Percent. 1976 Q1 – 2013 Q4



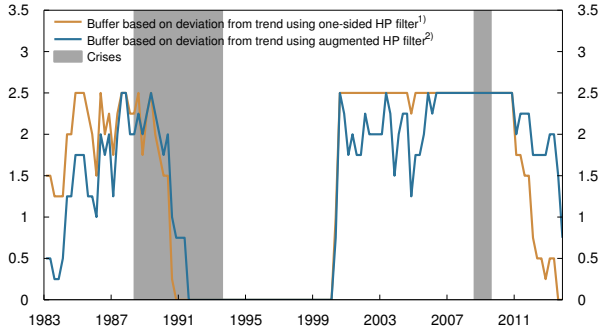
1) The sum of C3 non-financial enterprises in mainland Norway (total economy pre-1995) and C2 households adjusted for start-up of OBOSBanken AS 2013 Q4.
Sources: Statistics Norway, IMF and Norges Bank

Chart 3.2 Credit gap. Total credit[1)] mainland Norway as a percentage of mainland GDP. Deviation from estimated trends. Percentage points. 1983 Q1 – 2013 Q4



1) The sum of C3 non-financial enterprises in mainland Norway (total economy pre-1995) and C2 households adjusted for start-up of OBOSBanken AS 2013 Q4.
2) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
3) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Sources: Statistics Norway, IMF and Norges Bank

Chart 3.3 Reference rates for the countercyclical capital buffer under alternative trend estimates. Percent. 1983 Q1 – 2013 Q4



1) One-sided Hodrick-Prescott filter. Lambda = 400 000.
2) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
Sources: Statistics Norway, IMF and Norges Bank

The countercyclical capital buffer is one of several elements of the new capital adequacy regulation adopted by the Storting (Norwegian parliament) in June 2013. The Ministry of Finance will set the level of the buffer on a quarterly basis. The Government has assigned responsibility to Norges Bank for preparing a decision basis and providing advice to the Ministry regarding the level of the buffer. In a letter of 4 December 2013, the Bank recommended that the buffer rate should be set at 1% from 1 January 2015. The buffer rate was set at 1% from 30 June 2015 (see box on page 31).

Norges Bank has formulated three criteria for an appropriate countercyclical capital buffer (see box on page 32). Banks should build and hold a countercyclical capital buffer when financial imbalances are building up or have built up over a period. The buffer rate should be considered in the light of other requirements applying to banks, particularly when new requirements are introduced. In the event of an economic downturn and large bank losses, the buffer rate can be reduced to mitigate the procyclical effects of tighter bank lending.

Norges Bank's advice will also build on recommendations from the European Systemic Risk Board (ESRB). The ESRB issued preliminary recommendations for setting the buffer on 3 March 2014 (see box on page 34).

FINANCIAL IMBALANCES

Norges Bank has taken note of four indicators of financial imbalances: i) the ratio of total credit (C2 households and C3 enterprises mainland Norway) to mainland GDP, ii) the ratio of house prices to household disposable income, iii) commercial property prices, and iv) the wholesale funding ratio of Norwegian credit institutions.[1] In combination, the four indicators provide signals of vulnerabilities. Historically, they have risen ahead of periods of financial instability. Advice on the countercyclical capital buffer will be based on an assessment of the level of the indicators and a comparison of the current

1 As experience and insights are gained, the set of key indicators can be developed further.

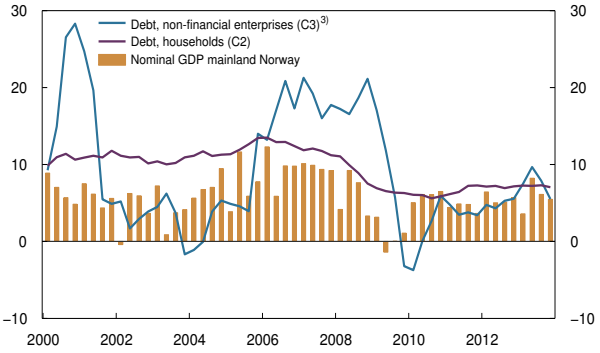
situation with historical trends[2]. When the indicators are above trend, it may signal that developments are not sustainable over time.

From the mid-1990s to 2008, total household and corporate debt in the mainland economy grew markedly faster than GDP (see Chart 3.1). Previous financial crises in Norway and other countries show that both banks and borrowers often take on considerable risk in periods of strong credit growth. Since the financial crisis, credit growth has slowed somewhat. The level of the credit indicator has shown little change since *Monetary Policy Report* 4/13. The ratio of total credit to mainland GDP is nonetheless at a historically high level. The indicator is also higher than two of the three estimated historical trends (see Chart 3.2), although the gaps between the indicator and the trends have narrowed in recent years.

There is considerable uncertainty regarding the long-term trends. The Basel Committee on Banking Supervision has proposed using a one-sided Hodrick-Prescott (HP) filter for estimating the trend in the credit indicator.[3] The methodology yields a trend that has continued to rise rapidly in recent years. If the pre-financial crisis growth rate is not sustainable, this methodology may underestimate the financial imbalances. Norges Bank attaches weight to an alternative method for trend estimation based on an augmented HP filter, which has been shown to provide a better leading indicator of crises.

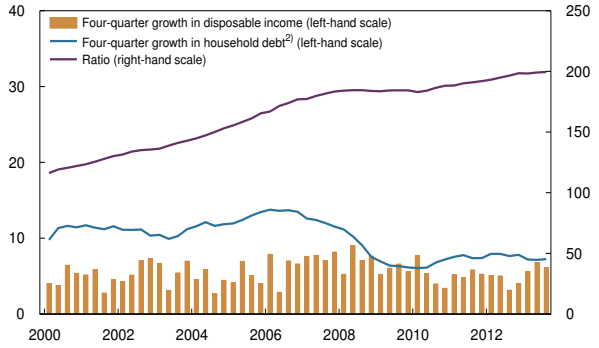
The Basel Committee has also proposed a simple rule for calculating a technical reference rate for the buffer on the basis of the credit-to-GDP ratio (see box on page 32). Applied to Norwegian data and using the Basel Committee's trend estimation, the output of the rule is a reference rate of 0% in 2013 Q4 (see Chart 3.3). The European Systemic Risk Board will allow countries to calculate more than one reference rate. Norges Bank's alternative trend estimation[4] yields a reference rate of ¾%.

Chart 3.4 Credit to households[1] and non-financial enterprises, and mainland GDP. Four-quarter growth.[2] Percent. 2000 Q1 – 2013 Q4



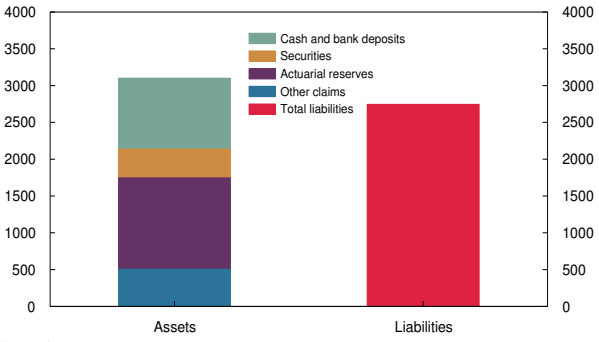
1) Adjusted for start-up of OBOSBanken AS 2013 Q4.
2) Change in stocks at the end of the quarter.
3) Sum of C2 non-financial enterprises and foreign debt in mainland Norway.
Sources: Statistics Norway and Norges Bank

Chart 3.5 Household debt to disposable income ratio.[1] Percent. 2000 Q1 – 2013 Q3



1) Loan debt as a percentage of disposable income, adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3.
2) Change in stocks at the end of the quarter.
Sources: Statistics Norway and Norges Bank

Chart 3.6 Households' financial assets and liabilities. In billions of NOK. 2013 Q3



Source: Statistics Norway

2 Norges Bank has so far used three methods to calculate the trends: a one-sided Hodrick-Prescott filter as applied by the Basel Committee, a Hodrick-Prescott filter augmented with a simple projection, and an estimated average. For further discussion, see box "Measuring financial imbalances" in *Monetary Policy Report* 2/13.

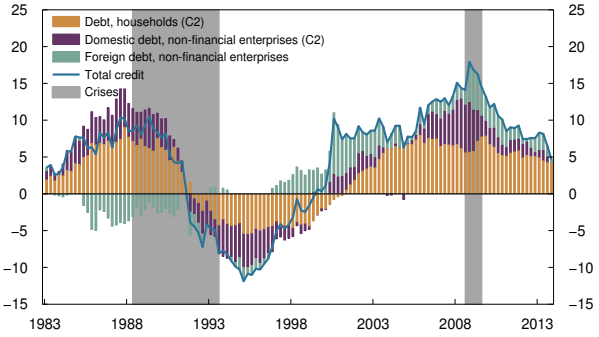
3 Basel Committee on Banking Supervision (2010): *Guidance for national authorities operating the countercyclical capital buffer,* Bank for International Settlements.

4 Norges Bank (2013): "Criteria for an appropriate countercyclical capital buffer", *Norges Bank Papers* 1/2013.

Growth in household debt slowed following the financial crisis and in recent years has been fairly stable (see Chart 3.4). Loan debt has continued to rise faster than household disposable income and household debt ratios rose further in 2013 Q3 (see Chart 3.5). It will take time for lower house price inflation to feed through into lower household debt growth. A high debt ratio can make a household vulnerable to a loss of income and higher interest rates. The household sector holds substantial financial assets (see Chart 3.6). Having assets that can be easily drawn on makes a household more robust. But assets and liabilities are not evenly distributed. A considerable share of debt is held by households with small financial buffers.

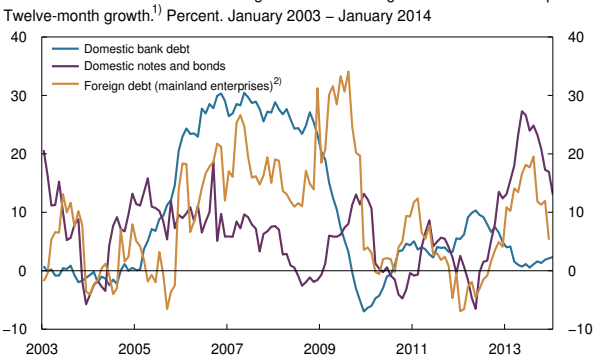
Growth in non-financial corporate debt in mainland Norway was very high in the years prior to the financial crisis, but slowed to a more moderate level following the crisis (see Chart 3.4). In 2013 Q4, corporate debt was 5.5% higher than the previous year. The contribution from corporate credit to the overall credit gap has declined in recent years (see Chart 3.7). Growth in domestic bond debt and debt from foreign sources picked up markedly from mid-2012, but has recently slowed (see Chart 3.8). Growth in debt from foreign sources has historically varied widely. A large portion of this debt is from foreign companies in the same corporate group. Credit from banks remains enterprises' most important source of funding. Growth in banks' lending to enterprises was weak in 2013, but picked up slightly towards year-end.

Chart 3.7 Decomposed credit gap. Total credit[1] mainland Norway as a percentage of mainland GDP. Deviation from estimated trend[2]. Percentage points. 1983 Q1 – 2013 Q4



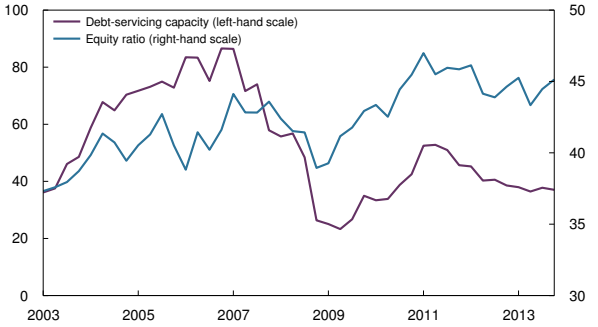
1) The sum of C3 non-financial enterprises in mainland Norway (total economy pre-1995) and C2 households adjusted for start-up of OBOSBanken AS 2013 Q4.
2) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
Sources: Statistics Norway, IMF and Norges Bank

Chart 3.8 Credit from selected funding sources to Norwegian non-financial enterprises. Twelve-month growth.[1] Percent. January 2003 – January 2014



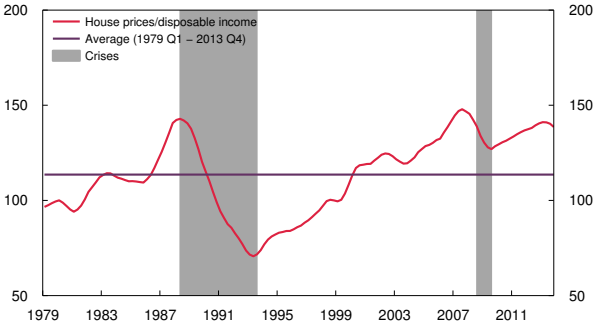
1) Change in stocks.
2) To December 2013.
Sources: Statistics Norway and Norges Bank

Chart 3.9 Debt-servicing capacity[1] and equity ratio[2] for listed companies. Percent. 2003 Q1 – 2013 Q4



1) Pre-tax profit plus depreciation and amortisation for the previous four quarters as a percentage of interest-bearing debt for non-financial companies included in the OBX index (excluding Statoil).
2) Equity as a percentage of assets for non-financial companies on Oslo Børs.
Sources: Bloomberg, Statistics Norway and Norges Bank

Chart 3.10 House prices[1] relative to disposable income[2]. Indexed. 1998 Q4 = 100. 1979 Q1 – 2013 Q4



1) Quarterly figures pre-1990 are calculated by linear interpolation of annual figures.
2) Adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3.
Sources: Statistics Norway, Norwegian Association of Real Estate Agents (NEF), Eiendomsmeglerforetakenes forening (EFF), Finn.no, Eiendomsverdi and Norges Bank

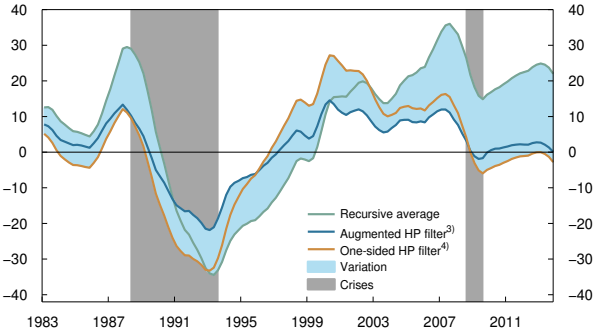
The debt-servicing capacity of Norwegian listed companies has fallen somewhat in recent years (see Chart 3.9). Decreased debt-servicing capacity has previously been followed by an increase in the share of banks' non-performing loans and loan losses. The equity ratio has also declined slightly in recent years, but was approximately at the same level at the end of 2013 Q4 as in the previous year.

Interaction between household credit and house prices can contribute to the build-up of imbalances and to amplifying an economic downturn. Except for the financial crisis years, house prices have generally risen faster than household disposable income over the past 20 years (see Chart 3.10). House price inflation has slowed and the house price indicator has declined slightly this past year. The gaps between the indicator and estimated trends have narrowed since the December *Report* (see Chart 3.11).

Continued low house price inflation may slow the growth of household debt and eventually reduce financial imbalances. A sharp fall in house prices may, however, trigger or amplify a downturn in the Norwegian economy and lead to higher losses for banks.

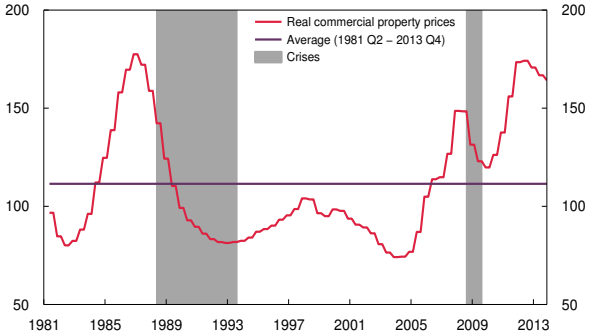
Norwegian banks' corporate loan exposure is highest in the commercial property market. Prices across different segments and regions vary widely. The key indicator for commercial property prices is based on estimated market prices for high-standard office

Chart 3.11 House price gap. House prices[1] as a percentage of disposable income[2]. Deviation from estimated trends. Percent. 1983 Q1 – 2013 Q4



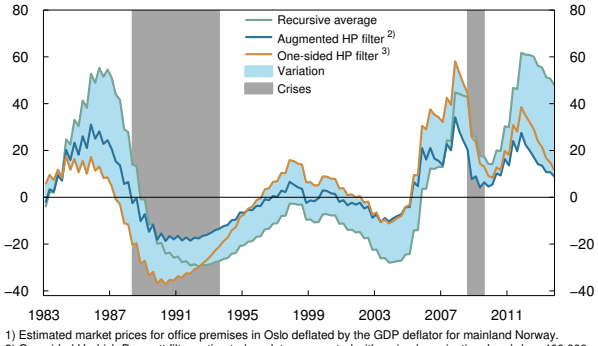
1) Quarterly pre-1990 figures are calculated by linear interpolation of annual figures.
2) Adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3.
3) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
4) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Sources: Statistics Norway, Norwegian Association of Real Estate Agents (NEF), Eiendomsmeglerforetakenes forening (EFF), Finn.no, Eiendomsverdi and Norges Bank

Chart 3.12 Real commercial property prices.[1] Indexed. 1998 = 100. 1981 Q2 – 2013 Q4



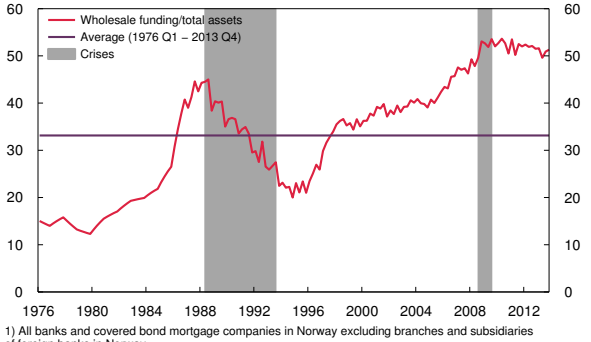
1) Estimated market prices for office premises in Oslo deflated by the GDP deflator for mainland Norway.
Sources: Dagens Næringsliv, OPAK, Statistics Norway and Norges Bank

Chart 3.13 Real commercial property price gap. Real commercial property prices[1] as deviation from estimated trends. Percent. 1983 Q1 – 2013 Q4



1) Estimated market prices for office premises in Oslo deflated by the GDP deflator for mainland Norway.
2) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
3) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Sources: Dagens Næringsliv, OPAK, Statistics Norway and Norges Bank

Chart 3.14 Banks'[1] wholesale funding as a percentage of total assets.[2] Percent. 1976 Q1 – 2013 Q4



1) All banks and covered bond mortgage companies in Norway excluding branches and subsidiaries of foreign banks in Norway.
2) Quarterly figures pre-1989 are calculated by linear interpolation of annual figures.
Source: Norges Bank

space in Oslo, a segment where the rise in prices has been high for several years. Since summer 2012, this indicator has fallen (see Chart 3.12), but the level is still considerably higher than the estimated historical trends (see Chart 3.13).

Norwegian banks and mortgage companies increasingly relied on money and credit markets to fund the sharp growth in lending between 2005 and 2008 (see Chart 3.14). With ample access to market funding, banking groups were able to grow and meet the high demand for credit from enterprises and households. In recent years, deposit growth, in combination with more moderate lending growth, has contributed to stabilising banks' levels of wholesale funding. The share of wholesale funding and the gap between the indicator and the estimated historical trends remained approximately unchanged between 2013 Q3 and 2013 Q4 (see Chart 3.15).

The four indicators of financial imbalances are at historically high levels. They are also higher than most of the estimated long-term trends. The analyses indicate that there has been a build-up of financial imbalances. The first criterion for an appropriate countercyclical capital buffer thus implies that banks should hold such a buffer. Recently, the indicators have stopped rising and the gaps have narrowed somewhat. Developments indicate that financial imbalances are not building up further. Banks' adjustments to stricter capital requirements may have been a contributing factor.

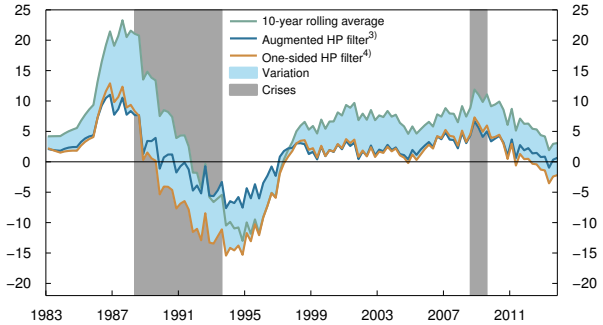
BANKS' ADJUSTMENT PROCESS

The second criterion for an appropriate countercyclical capital buffer is that the buffer rate should be considered in the light of other requirements applying to banks, particularly when new requirements are introduced. In the short term, increased capital requirements may curb growth in credit and overall GDP. When credit growth is strong, an increased buffer may restrain the build-up of financial imbalances. If capital requirements are raised too quickly, the result may be substantial credit tightening.

In December, the Ministry of Finance set the countercyclical capital buffer rate at 1% as from 30 June 2015. In the years ahead, banks' capital requirements will be increased irrespective of the level of the countercyclical buffer (see Chart 3.16). Another element of these higher requirements is the capital buffer for systemically important banks. In November, Finanstilsynet (Financial Supervisory Authority of Norway) recommended that DNB Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN, SpareBank 1 Nord-Norge, Sparebanken Sør and Sparebanken Pluss[5] should be designated as domestic systemically important banks. Finanstilsynet recommends that a systemically important bank buffer of 2% be imposed on all these banks. The rules for systemically important banks were circulated for comment, with a consultation closing date of 10 February.

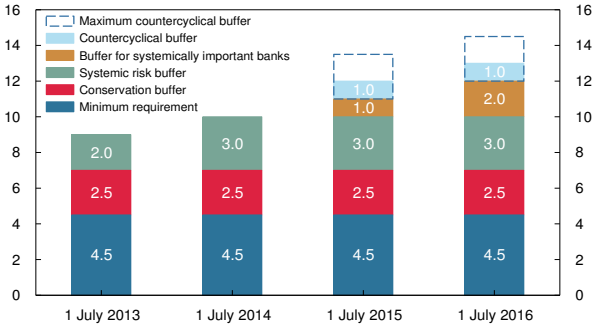
5 Sparebanken Sør and Sparebanken Pluss merged to become Sparebanken Sør on 1 January 2014.

Chart 3.15 Wholesale funding gap. Banks[1] wholesale funding as a percentage of total assets.[2] Deviation from estimated trends. Percentage points. 1983 Q1 – 2013 Q4



1) All banks and covered bond mortgage companies in Norway excluding branches and subsidiaries of foreign banks in Norway.
2) Quarterly figures pre-1989 are calculated by linear interpolation of annual figures.
3) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
4) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Source: Norges Bank

Chart 3.16 Common Equity Tier 1 capital requirements in the new regulatory framework. Percent. 1 July 2013 – 1 July 2016



Sources: Ministry of Finance and Norges Bank

The EU's new CRD IV package (Capital Requirements Directive/Capital Requirements Regulation) entered into force on 1 January 2014. The directive and regulation will eventually apply in Norway through the EEA Agreement. The capital and buffer requirements in CRD IV were incorporated into Norwegian law in summer 2013. Finanstilsynet has proposed rules to implement several of the remaining provisions of CRD IV until the entire package is incorporated into the EEA Agreement. The proposed changes to the regulation may entail some increase in banks' reported capital ratios. Clarification is expected after the consultation closes in May.[6]

From 1 January 2014, banks using the Internal Ratings-Based (IRB) approach must apply a minimum loss-given-default (LGD) ratio of 20% when calculating risk weights for residential mortgages. The result will be higher residential mortgage risk weights for all Norwegian IRB banks. Nevertheless, the rules have different implications for these institutions' capital ratios. Most banks will still be bound by the transitional rule[7]. For those banks, the increase in the risk weights for residential mortgages will not entail a change in capital ratios. For banks no longer bound by the transitional rule, risk-weighted assets will be higher as a result of the increase in the risk weights for residential mortgages. Capital ratios will then be reduced. The effects will be evident in banks' reported capital ratios for 2014 Q1. Finanstilsynet has also announced a number of additional requirements for the internal models IRB banks use to calculate residential mortgage risk weights, which may further raise the risk-weighted assets of some banks.

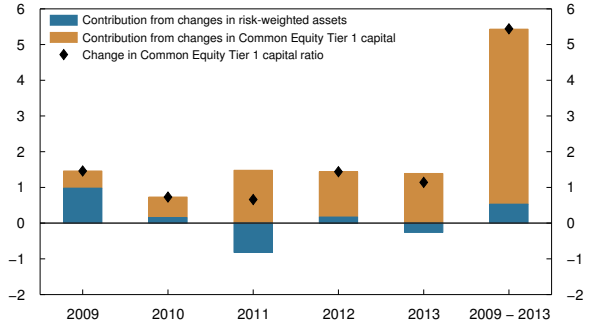
Banks' profits were solid in 2013. The return on equity for the largest banking groups[8] as a whole increased from 12.3% in 2012 to 13.0% in 2013. The improvement primarily reflects higher net interest income, but increased cost efficiency and low loan losses also contributed. At end-2013, all large Norwegian banking groups satisfied the Common Equity Tier 1 (CET1) requirement of 10% as from 1 July 2014 by a considerable margin. The CET1 ratio for the largest banking groups as a whole was 11.6% in 2013, up from 10.5% in 2012. In the past five years, the largest banking groups have raised their CET1 ratios primarily through profit retention and equity issuance. However, some of the increase is also attributable to reductions in risk-weighted assets (see Chart 3.17). This reflects the introduction of the Basel II framework in 2007, which led to the approval of the IRB models for calculating risk weights in these banks. In the years following the financial crisis, banks also shifted lending growth from

6 See the Ministry of Finance's consultation letter of 7 February 2014: "Forskrifter om kapitalkrav, godtgjørelsesordninger mv." [Regulations relating to capital requirements, remuneration policies etc.] with appurtenant documents.

7 Under the transitional rule, the sum of risk-weighted assets for IRB banks must make up to at least 80% of that which would have applied under Basel I. Under CRD IV, the transitional rule will continue to apply until 2017.

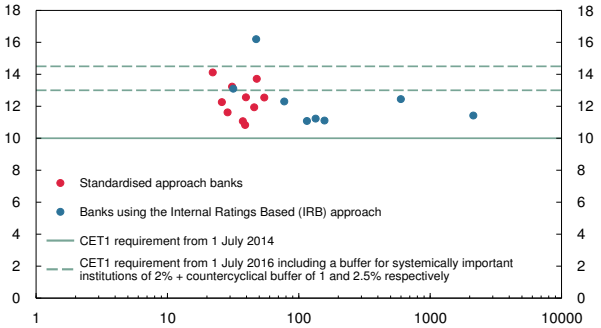
8 Here the largest banking groups refer to the six largest Norwegian banking groups at year-end 2013: DNB Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge.

Chart 3.17 Contribution to changes in banks'[1] Common Equity Tier 1 capital ratio. Percentage points. 2009 – 2013



1) Weighted average for the six largest Norwegian banking groups at end-2013: DNB Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN and SpareBank 1 Nord-Norge.
Sources: Banking groups' annual reports and Norges Bank

Chart 3.18 Banking groups'[1] Common Equity Tier 1 (CET1) capital ratios. Percent. Total assets[2]. In billions of NOK. At 31 December 2013



1) Banking groups with total assets in excess of NOK 20bn, excluding branches of foreign banks in Norway.
2) Logarithmic scale.
Sources: Banking groups' quarterly reports and Norges Bank

corporate loans to residential mortgages, which generally have lower risk weights.

Most banks must continue to increase capital ratios to meet capital requirements in the coming years (see Chart 3.18). The overall effect of tightened requirements for IRB models and the provisional implementation of EU capital adequacy rules in Norwegian regulations is uncertain and may affect the capital needs of some banks.

Developments over the past few years suggest that banks can raise their CET1 ratios by around 1 percentage point annually through their normal operations. Equity issuance makes it possible for banks to rapidly satisfy increased capital requirements without having to reduce lending capacity. Banks can also sell assets or restrict new lending in order to raise capital ratios more rapidly. If banks choose to restrict credit growth, they may have most to gain from reducing growth in lending to enterprises.

The growth in debt in the past year indicates that enterprises on the whole have ample access to credit. In the first-quarter NHO (Confederation of Norwegian Enterprise) survey among member companies, a quarter of the companies report that investment projects are being reconsidered or postponed to a large extent owing to the situation in banks and financial markets. This is a small rise compared with the same period in 2013. Nevertheless, reduced access to credit and funding is still ranked lowest of a number of obstacles to investment. However, access to credit may vary across different types of firms. Bond financing is primarily an alternative for larger companies. Tighter bank credit for enterprises could make obtaining loans more difficult for enterprises whose only source of funding is banks. Banks' lending to enterprises picked up slightly towards end-2013. Banks in Norges Bank's lending survey expected minor changes in credit standards to enterprises overall in 2014 Q1 and some easing of credit standards for firms in the commercial property sector.

NORGES BANK'S ADVICE AND THE MINISTRY OF FINANCE'S DECISION IN 2013 Q4

The Regulation on the Countercyclical Capital Buffer was laid down by the Government on 4 October 2013. The Ministry of Finance shall set the buffer rate each quarter. The rate shall ordinarily be between 0% and 2.5% of banks' risk-weighted assets. The buffer requirement will apply to all banks with activities in Norway, eventually including branches of foreign banks.[1] Norges Bank shall draw up a decision basis and give advice on the level to the Ministry of Finance. In drawing up the basis, Norges Bank exchanges information and assessments with Finanstilsynet (Financial Supervisory Authority of Norway). The advice and a summary of the background for the advice are submitted to the Ministry of Finance in connection with the publication of Norges Bank's *Monetary Policy Report*. The advice is published when the Ministry of Finance has made its decision.

In a letter to the Ministry of Finance of 4 December 2013, Norges Bank recommended that the countercyclical capital buffer should be activated and set at 1% as from 1 January 2015.[2]

1 For branches of foreign banks in Norway, the requirement will not apply with certainty until 2016, and then only gradually. It is up to the supervisory authorities in the branch's home state as to whether the requirement shall apply prior to 2016.

2 Norges Bank's advice: http://www.norges-bank.no/en/about/published/submissions/2013/submission-4-december-2013/.

Finanstilsynet concurred with Norges Bank's advice to set the countercyclical capital buffer rate at 1% as from 1 January 2015.

The decision of the Ministry of Finance on the level of the countercyclical capital buffer was laid down in the Regulation on the Level of the Countercyclical Capital Buffer of 12 December 2013:

"Section 1
Banks, financial undertakings and parent companies of a financial group that is not an insurance group shall as from 30 June 2015 have a countercyclical capital buffer comprising Common Equity Tier 1 capital amounting to one (1) percentage point.

Section 2
The countercyclical capital buffer shall be calculated using the same risk-weighted assets as for the minimum regulatory capital requirement.

Section 3
This regulation enters into force immediately."

CRITERIA FOR AN APPROPRIATE COUNTERCYCLICAL CAPITAL BUFFER[1]

The countercyclical capital buffer should satisfy the following criteria:

1. *Banks should become more resilient during an upturn*

2. *The size of the buffer should be viewed in the light of other requirements applying to banks*

3. *Stress in the financial system should be alleviated*

The countercyclical capital buffer should be increased when financial imbalances are building up or have built up over a period. This will strengthen the resilience of the banking sector to an impending downturn and strengthen the financial system. Moreover, a countercyclical capital buffer may curb high credit growth and mitigate the risk that financial imbalances trigger or amplify an economic downturn.

In an upturn, credit that rises faster than mainland GDP will signal a build-up of imbalances. Rising house and commercial property prices tend to go hand in hand with increasing debt growth. When banks grow rapidly and fund new loans directly in the financial market, systemic risk may increase.

Norges Bank's advice to increase the countercyclical capital buffer will primarily be based on four key indicators: i) the ratio of total credit (C2 households and C3 mainland enterprises) to mainland GDP, ii) the ratio of house prices to household disposable income, iii) commercial property prices[2] and iv) the wholesale funding ratio of Norwegian credit institutions. In combination, the four indicators provide early warning signals of vulnerabilities and financial imbalances.[3] Historically, they have risen ahead of periods of financial instability.

As part of the basis for advice on the countercyclical capital buffer, Norges Bank will analyse developments in the key indicators and compare the current situation with historical trends. When the indicators are above trend, this may be a signal that developments are not sustainable over time. At the same time, there is considerable uncertainty linked to trend calculations and hence to measures of financial imbalances. Statistical methods and economic theory may be of help but do not provide an unequivocal answer. Given this uncertainty, different methods for calculating trends are used.

1 See also *Norges Bank Papers* 1/2013: "Criteria for an appropriate countercyclical capital buffer".

2 The indicator is based on estimated market prices for office premises in Oslo calculated by OPAK using *Dagens Næringsliv*'s (Norwegian financial daily) commercial property price index.

3 As experience and insights are gained, the set of indicators can be developed further.

Under the EU Capital Requirements Directive (CRD IV), national authorities shall on a quarterly basis calculate a buffer guide as a reference in setting the countercyclical buffer rate.[4] The buffer guide shall be based on the "credit gap", i.e. the deviation of the ratio of credit to nominal GDP from an estimated long-term trend. In 2010, the Basel Committee on Banking Supervision proposed a methodology for calculating such a buffer guide.[5] According to this methodology, the buffer will be activated when the credit gap exceeds 2 percentage points. When the credit gap is between 2 and 10 percentage points, the reference rate will vary linearly between 0% and 2.5%. When the credit gap is 10 percentage points or more, the reference rate for the countercyclical capital buffer will be 2.5%.

Norges Bank's advice will also build on recommendations from the European Systemic Risk Board (ESRB). There will not be a mechanical relationship between changes in the indicators, the gaps or recommendations from the ESRB and advice on the countercyclical capital buffer. The advice will be based on the Bank's professional judgement, which will also take into account other factors. Other requirements applying to banks will be a part of the assessment, particularly when new requirements are introduced.

4 Article 136(2), CRD IV.

5 Basel Committee on Banking Supervision (2010): *Guidance for national authorities operating the countercyclical capital buffer*, Bank for International Settlements.

The countercyclical capital buffer is not an instrument for fine-tuning the economy. In the interest of robustness, the buffer rate should not be reduced automatically even if there are signs that financial imbalances are receding. In long periods of low losses and rising asset prices and credit growth, banks should normally hold a countercyclical buffer.

The buffer rate can be reduced in the event of an economic downturn and large bank losses. If the buffer functions as intended, banks will tighten lending to a lesser extent in a downturn than would otherwise be the case. This may mitigate the procyclical effects of tighter bank lending.

The key indicators are not well suited to signalling whether the buffer rate should be reduced. Other information, such as market turbulence and loss prospects for the banking sector, will then be more relevant. Advice to reduce the buffer rate will be based on an assessment of the risk of an abrupt tightening of banks' lending standards. The buffer rate will not be reduced to alleviate isolated problems in individual banks.

PRELIMINARY RECOMMENDATIONS FROM THE EUROPEAN SYSTEMIC RISK BOARD (ESRB)

Norges Bank's advice on the countercyclical capital buffer shall take into consideration recommendations from the ESRB. The ESRB was established in 2011 and is responsible for monitoring and assessing systemic risk in the European financial system as a whole. The EU Capital Requirements Directive (CRD IV) authorises the ESRB to give guidance to national authorities in the EU/EEA on setting countercyclical capital buffer rates, including

- Principles to guide judgment as to the appropriate countercyclical capital buffer rate
- General guidance on the calculation of the long-term trends of the credit-to-GDP ratio and the calculation of buffer guides
- Guidance on other variables indicating the build-up of systemic risk
- Guidance on variables that indicate that the buffer rate should be reduced

Guidance from the ESRB will be given in the form of an ESRB recommendation, likely in the second half of 2014. The ESRB will subsequently follow up to determine whether national authorities are in compliance. If the recommendation is not followed, the authority will be required to explain the reasons for non-compliance (the "comply or explain" rule). The countercyclical capital buffer will be introduced gradually in the EU from 2016, with full implementation in 2019. This means that follow-up by the ESRB of national authorities will not likely be relevant before 2016.

On 3 March, the ESRB published a macroprudential policy handbook.[1] By issuing the handbook, the ESRB seeks to ensure a more holistic approach to macroprudential regulation across European countries. The handbook contains results and preliminary analysis from the ESRB Expert Group on guidance on setting countercyclical buffer rates. Norges Bank was a participant in this expert group.

The expert group compared various indicators of the build-up of systemic risk and assessed the power of these indicators to signal future crises in EU countries. There was a particular focus on the credit-to-GDP ratio. The expert group finds evidence that the Basel Committee's methodology for calculating the trend[2] in this ratio yields a leading indicator for crises in the EU overall, but that it does not work as well for each EU country. The group therefore would permit countries to use alternative methodologies for calculating the trend. Empirical studies also show that indicators relating to developments in the commercial and residential real estate market may provide signals of future financial instability and thus be useful for identifying whether systemic risk is building up.

The expert group finds it more difficult to find indicators that give robust signals of when a crisis is about to occur and hence be useful in an assessment of the timing of the release of the capital buffer. Indicators relating to developments in money and credit markets, such as CDS premiums, covered bond spreads and money market spreads are mentioned as possible candidates. The handbook points out the need for judgement to play a particularly important role in identifying the appropriate timing for releasing the capital buffer.

1 See the European Systemic Risk Board (2014): *The ESRB Handbook on Operationalising Macro-prudential Policy in the Banking Sector*, 3 March 2014.

2 One-sided Hodrick-Prescott filter, lambda = 400 000.

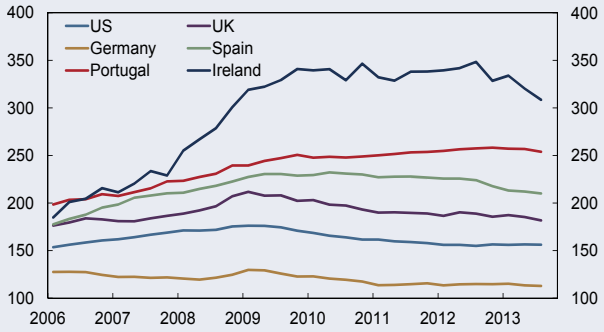
BOXES

INTERNATIONAL ECONOMY – DEVELOPMENTS IN DIFFERENT REGIONS AND COUNTRIES

In the US, the pace of growth picked up in the latter half of 2013. Growth was higher than projected in the December 2013 *Monetary Policy Report*, fuelled in particular by growth in private consumption and exports, although corporate investment also made a positive contribution. However, growth has slowed in recent months, with a decline in manufacturing output, weak developments in retail trade and a marked fall in a number of economic indicators. The decline can largely be attributed to the extreme weather in the US this winter. Underlying growth conditions still appear to be favourable, and the pace of growth is expected to increase in the years ahead. The US budget agreement negotiated by Congress in January implies that fiscal policy will continue to be tight, but that the negative contribution to growth will diminish year by year ahead. The agreement has also reduced uncertainty and raised optimism among both households and enterprises. Combined with a continued expansionary monetary policy and favourable funding conditions, this is expected to support both consumption and investment ahead. Households' financial position has also strengthened after recent years' deleveraging (see Chart 1) and higher asset prices. Growth in private consumption is therefore expected to pick up through the projection period. Corporate investment has shown moderate growth since 2010 and is now at approximately the same level as in 2008. Somewhat stronger growth in investment is expected ahead.

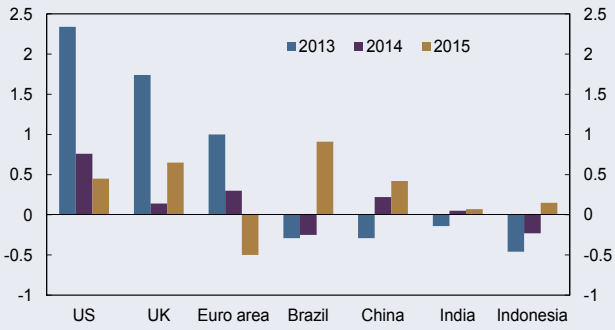
Developments in the euro area have been approximately in line with the expectations in the December *Report*. GDP rose for the third consecutive quarter in 2013 Q4, resulting in the first positive four-quarter change in GDP since the end of 2011. Activity indicators to end-February suggest that the pace of growth at the beginning of 2014 was somewhat higher than previously expected. The European Central Bank (ECB) bank lending survey indicates that bank lending conditions for enterprises and households have stabilised, and that the decline in corporate credit demand has slowed somewhat. Norges Bank expects output to pick up slowly. Domestic demand is being supported by an expansionary monetary policy, improved funding conditions and less contractionary fiscal policy (see Chart 2). Relatively low inflation will make a positive contribution to consumer purchasing power for several years ahead. At the same time, the need for deleveraging in the private and public sector

Chart 1 Non-financial sector gross debt. Percent of GDP. 2006 Q1 – 2013 Q3



Sources: BIS and Thomson Reuters

Chart 2 Change in general government cyclically adjusted budget balance as a share of potential GDP. Projections. Percentage points. 2013 – 2015



Sources: IMF and European Commission

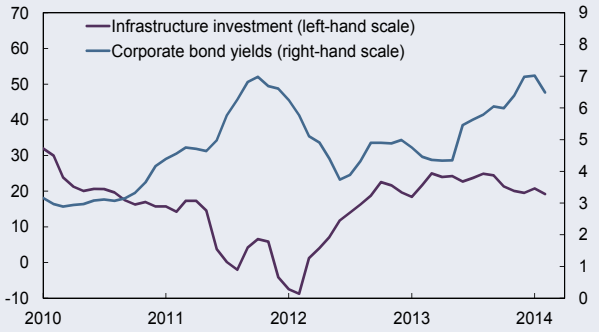
will dampen the pace of growth and contribute to persistently high unemployment. Imports are expected to pick up in pace with domestic demand, but with improved competitiveness and higher global growth, net exports will nonetheless make a positive contribution to the end of the projection period.

The process of establishing a European banking union is continuing. The ECB will act as European supervisory authority as from November 2014 and will conduct a quality assessment of the banks for which it will assume supervisory responsibility. A credible and thorough review of banks' balance sheets is expected to strengthen market confidence in European banks. The process of establishing other institutions in the banking union is still underway. The European Parliament and the European Council have agreed on a proposal for a single resolution mechanism. The proposal will be voted on by the European Parliament in April.

GDP growth in the UK was high in the latter half of 2013, and annual growth was at its strongest since before the financial crisis. In Q4, investment and net exports made the largest contributions to growth. Growth in net exports primarily reflected a marked fall in imports following modest growth in private consumption. The decline in household demand seems to some extent to have continued into the 2014 Q1, combined with some moderation in the manufacturing sector. Some of the decline is probably the result of temporary effects related to recent months' extensive flooding. Growth is expected to remain at about the 2013-level ahead. Expansionary monetary policy, solid improvements in the labour market, a markedly lower inflation path and improved funding conditions are expected to contribute to solid growth in both private consumption and investment. Further ahead in the period, exports are also expected to pick up as activity in the euro area increases and the implementation of new financial sector regulation is completed.

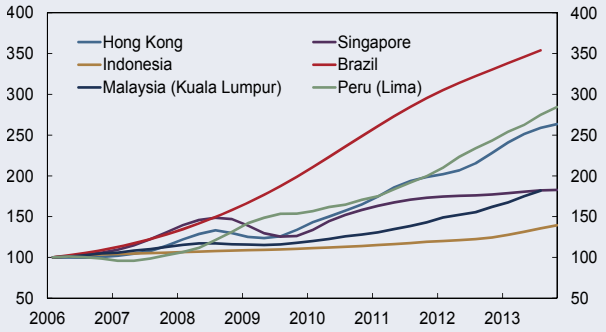
In Sweden, growth towards the end of 2013 was stronger than expected in the December *Report*. The pace of growth in Q1 and Q3 has also been revised up considerably. Current indicators suggest that growth in domestic demand continued in 2014 Q1, and private sector confidence is considerably higher than its historical average. Quarterly GDP growth is

Chart 3 China: Corporate bond yields. 1-year (AA). Infrastructure investment. Three-month moving average. 12-month change. Percent. January 2010 – February 2014



Source: CEIC

Chart 4 Residential property prices. Urban areas. Index. 2006 Q1 = 100. 2006 Q1 – 2013 Q4



Sources: BIS and Norges Bank

projected to be around ¾% in the period ahead. In spite of relatively weak GDP growth in 2013 as a whole, employment rose through the year and, combined with a high saving ratio, income tax reductions and a low interest rate level, solid growth in private consumption can be expected ahead. As in the euro area, low inflation is making a positive contribution to consumer purchasing power. Both exports and imports are expected to pick up substantially after falling in 2013, and the growth contribution from net exports is expected to remain close to zero. As capacity utilisation picks up, investment will be an important source of growth.

Growth in China has been stable at around 7¾% over the past two years. The pace of growth slowed in Q4 as a result of lower growth in infrastructure investment. The housing market also declined somewhat towards the end of 2013. Credit growth in China ran at more than 20% in 2013. Bonds and financing products in the grey market accounted for more than 40% of new loans, which is twice the 2009-share. China's central bank reduced liquidity supply in the course of 2013. Lower liquidity and higher risk premiums have led to a deterioration in funding conditions, which is expected to contribute to a further moderation in growth ahead (see Chart 3). In line with the December *Report*, growth is expected to slow to 7¼% in 2014.

Debt accumulation has also been high in other emerging economies in recent years, with annual bank lending growth at more than 25% in countries such as Brazil, Turkey, Singapore and Thailand. Credit growth has slowed recently, partly as a result of tighter regulation to restrain rapidly rising house prices (see Chart 4). In addition, prospects for a normalisation of monetary policy in western economies have led to a reversal of portfolio investment flows, resulting in weaker exchange rates, increased market volatility and higher interest rates. Enterprises and households that raised loans when funding conditions were favourable are now encountering problems as interest rate levels increase while the pace of growth in these economies slackens. Bank lending surveys show higher default rates, tighter lending conditions and falling credit demand across emerging economies in Asia.

Credit market developments have led to a considerable deterioration in growth prospects for emerging economies over the past year. The room for manoeuvre in economic policy is limited. The sharp currency depreciation since last spring has increased the cost of servicing debt in foreign currency and has pushed up consumer price inflation through higher import prices. As a result, the central banks of countries such as Turkey, Brazil, South Africa and India have tightened monetary policy. There are also prospects for tighter fiscal policy in many emerging economies following recent years' increased public expenditure to sustain the level of domestic demand (see Chart 2). In Russia, the pace of growth has declined considerably over the past year as a result of lower investment, particularly in the commodity sector. Continued high capacity utilisation and increased uncertainty related to the political situation in Crimea suggest that the willingness to invest will remain low ahead.

LOW INFLATION IN THE EURO AREA

Euro area inflation has declined to a low level. In February, the 12-month change in the HICP was 0.7%, down from 1.8% a year earlier (see Chart 1). This primarily reflects falling energy prices and a lower rise in food prices, but indicators of underlying inflation have also fallen (see Table 1).

The fall in inflation has been surprisingly pronounced. In September 2013, an average of forecasters expected the HICP for the euro area to increase by 1.5% in 2014. In March 2014, expectations were revised down to 0.9%.[1]

The low rate of inflation has given rise to concerns about deflation in the euro area. The abrupt decline in underlying inflation in recent months has fuelled fears of deflation. In January, there was considerable focus on the fact that the rise in core prices had moved down to the lowest level since the start of Monetary Union.

1 Consensus Economics.

Several conditions suggest, however, that the deflation fears for the euro area as a whole are exaggerated.

- A large portion of the recent decline in inflation is attributable to tax reforms. Many euro area countries have increased indirect taxes to reduce public deficits. An increase in indirect taxes will push up the 12-month change in the HICP from the same month the increase is introduced through the year ahead. Chart 2 shows that tax reforms have resulted in an increase in core inflation since autumn 2010. This effect is now unwinding. Adjusted for the change in indirect taxes, the 12-month rise in core prices has been broadly unchanged since April 2013.

- Another counterweight to deflation fears for the euro area as a whole is that lower inflation primarily reflects developments in periphery countries, i.e. Italy, Spain, Greece, Portugal, Ireland and Cyprus (see Table 1 and Chart 3). Inflation has remained

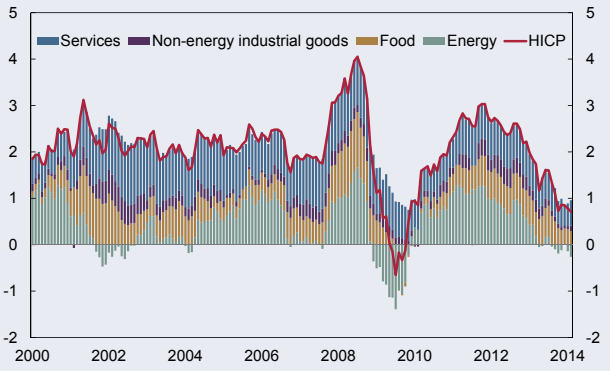
TABLE 1 Indicators of underlying inflation.
Percentage change from same period previous year

	Core HICP[1]	GDP-deflator[2]	Wages[3]
Euro area	0.8	1.2	1.5
Core countries	1.1	1.4	2.0
Periphery countries	0.3	0.5	0.0
- Italy	0.6	1.1	2.0
- Spain	0.2	0.2	-0.3
- Greece	-1.4	-2.8	-8.3
- Ireland	0.2	0.6	1.3
- Portugal	0.0	2.1	-5.4

1 HICP excluding food and energy. Average over December 2013 – February 2014
2 Figures for 2013 Q4 (Q3 for Ireland and Portugal)
3 Private sector. Figures for 2013 Q4 (Q2 for Greece)

Sources: Thomson Reuters and Norges Bank

Chart 1 HICP. Contribution to 12-month change. Percent.
January 2000 – February 2014



Sources: Thomson Reuters and Norges Bank

higher in core countries, i.e. Germany, France, the Netherlands, Belgium, Austria and Finland. As regards inflation expectations, the average is pushed down by periphery countries.

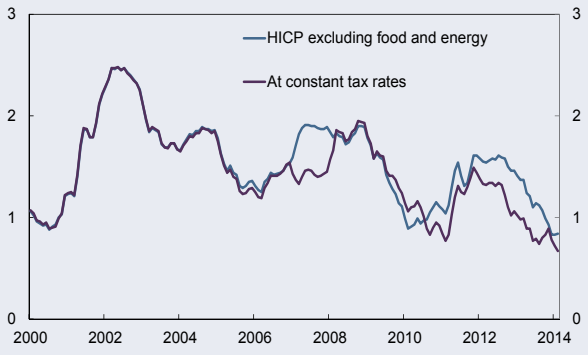
- For some periphery countries, negative or very low price growth is needed to improve competitiveness. Many periphery countries accumulated sizeable external debt in the period prior to the financial crisis. For these countries to rekindle export-led growth and strengthen their current account balance, they need a protracted price and cost reduction relative to trading partners. With low euro area inflation, this will entail very low or negative price growth in the periphery countries.

- Low inflation owing to high productivity growth is "good deflation". The economy's growth potential rises and wages can increase. In Spain and Portugal, unit labour costs have been reduced through high productivity growth. As portions of productivity growth stem from a reduction in person-hours worked, there is however also the risk that weak demand may curb price pressures in the economy to a further extent.

- Positive price growth in the rest of the euro area will ensure competitive gains for countries with low inflation. As price differences widen, demand from neighbouring countries with higher inflation will pick up. It is therefore unlikely that the periphery countries will enter a deflationary spiral, where expectations of falling prices become self-reinforcing through a downward dynamic in economic activity.

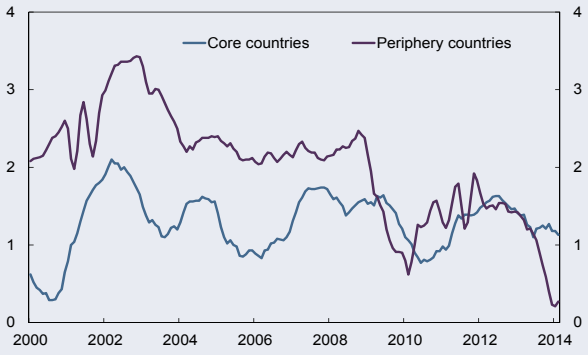
For the euro area as a whole, we expect inflation to remain low to the end of the year and to move up gradually thereafter. Capacity utilisation is low, but is expected to pick up. Increased capacity utilisation suggests an increase in wage growth and increased pricing power for firms. Market-based indicators also suggest expectations of positive price growth for the euro area as a whole. In line with this, the share

Chart 2 HICP excluding food and energy. Twelve-month change at constant and changing tax rates. Percent. Three-month average. January 2000 – February 2014



Sources: Thomson Reuters and Norges Bank

Chart 3 HICP excluding food and energy. Percent. Three-month average. January 2000 – February 2014



Sources: Thomson Reuters and Norges Bank

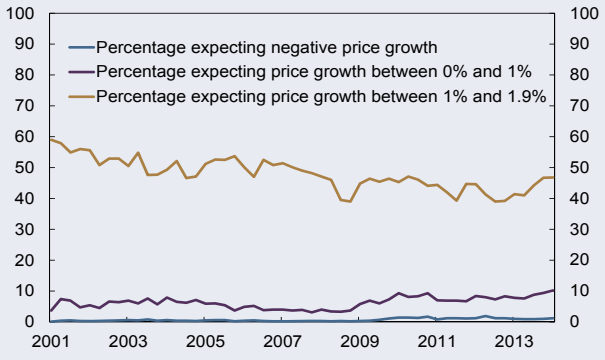
expecting a price fall in the euro area is small and stable (see Chart 4).

In recent years, several member states have experienced periods of falling consumer prices. According to the ECB, this does not mean that they are in deflation. In June 2013, the President of the ECB, Mario Draghi, defined deflation as a protracted fall in prices across different commodities, sectors and countries, with self-fulfilling expectations. Applying this definition, we have constructed a deflation indicator.

The deflation indicator consists of three partial indicators; the share of price indicators that show a price fall (broadness), how long they have done so (persistence) and whether a further price fall is expected (expectations). All three must show deflation for the composite indicator to show deflation. A composite indicator value of 1 implies deflation (see *Economic Commentaries* 1/2014 for further description).

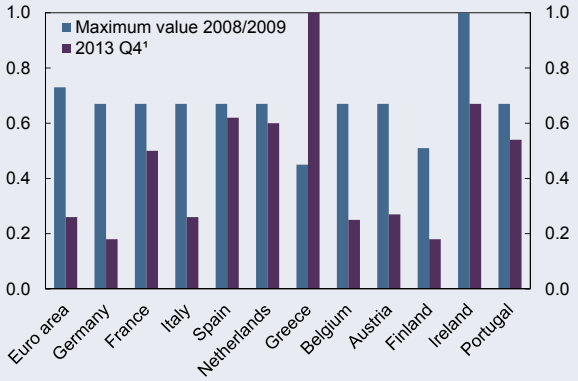
The deflation indicator shows that the euro area as a whole and most individual countries in the euro area are farther away from deflation today than during the financial crisis (see Chart 5), with the exception of the periphery countries where the indicator is approaching or exceeds the levels prevailing during the financial crisis. The indicator nonetheless shows that the periphery countries, with the exception of Greece, are far away from a situation with broad-based deflation.

Chart 4 Distribution of inflation expectations 4-5 years ahead. Q1 2001 – Q1 2014



Source: ECB Survey of Professional Forecasters

Chart 5 Deflation indicator. A higher value indicates lower price and cost growth. A value of 1 indicates deflation



1) Deflation indicator excluding GDP deflator and wages for Portugal and Ireland.
Sources: Thomson Reuters and Norges Bank

DEVELOPMENTS IN THE NORWEGIAN KRONE

In the years following the financial crisis in 2008/2009, interest rates were unusually low internationally and the future of the euro area was shrouded in uncertainty. In Norway, growth and interest rates were higher than in most advanced economies and public finances were sound. Against this background, the krone was seen as an attractive investment currency and it appreciated through 2011 and 2012 (see Chart 1). In early 2013, the effective krone exchange rate reached its strongest level since May 1986.[1]

However, the krone weakened by a little more than 10% through the remainder of the year, partly reflecting signs of weaker growth in the Norwegian economy. The krone depreciated in pace with the lowering of mainland GDP growth forecasts by both Norges Bank and market participants. Weaker growth prospects also contributed to a downward revision of Norges Bank's key policy rate forecast through the year (see Chart 2) and the interest rate differential against Norway's trading partners narrowed. The depreciation of the krone was, however, considerably more pronounced than the narrowing of the interest rate differential against trading partners would imply (see Chart 3).[2] Nor were there any clear indications that the equilibrium rate for the krone had shifted abruptly in the course of 2013. A considerable portion of the depreciation was thus interpreted as an increase in the risk premium for NOK and thereby contributed to the change in the key policy rate forecast through the year, as shown in the green columns in Chart 2.

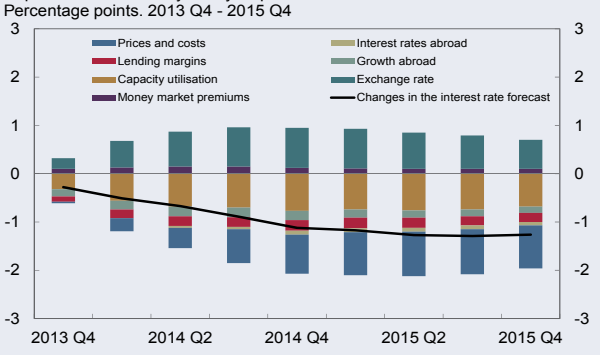
Several conditions may explain the increase in the risk premium for NOK through 2013. First, the increase likely reflects an improvement in the situation in the euro area. The sovereign debt crisis in the euro area prompted investors to reduce euro holdings in their portfolios and increase holdings of currencies of countries with sound public finances and solid economic growth, such as the Norwegian krone. In the course of 2013, however, the uncertainty surrounding the euro area diminished and some of these positions were reversed.

Second, uncertainty in financial markets increased when the Federal Reserve indicated in May and June that it might taper its asset purchases in the near future. Long-term interest rates in major advanced economies increased markedly. Persistently low interest rates in major advanced economies had long

Chart 1 Krone exchange rate developments.
Import-weighted exchange rate (I-44).[1] 1 January 2011 - 20 March 2014

1) A positive slope denotes a stronger krone exchange rate.
Source: Norges Bank

Chart 2 Changes in the forecast for the key policy rate from Monetary Policy Report 3/12 to Monetary Policy Report 4/13.
Percentage points. 2013 Q4 - 2015 Q4



Source: Norges Bank

induced investors to shift into currencies yielding higher returns, such as the Australian and New Zealand dollar and the Norwegian krone. Higher long-term rates in the US and increased volatility reduced investor appetite for these currencies. At the same time, the prospect of tapering fuelled uncertainty, leading to reduced liquidity in several financial markets, including the NOK market (see Chart 4).[3]

Third, conditions specific to Norway contributed to the increase in the risk premium for NOK. Norges Bank published a lower-than-expected forecast for the key policy rate in the June 2013 *Monetary Policy Report* and there were widespread perceptions in the market of increased uncertainty surrounding the interest rate outlook in Norway. Increased uncertainty, in conjunction with the conditions abroad, prompted many investors to sell NOK at the same time. Our market contacts reported a sharp decline in liquidity, which amplified movements in the exchange rate. This probably contributed to a more pronounced krone depreciation than implied by interest rate developments. Chart 4 shows that NOK liquidity declined more than SEK liquidity. According to market contacts, even transactions involving small volumes could lead to sharp exchange rate movements. In the latter part of summer and in autumn, NOK movements around releases of new information about the Norwegian economy were considerably more pronounced than usual. Liquidity remained low to the end of 2013 and the krone continued to depreciate.

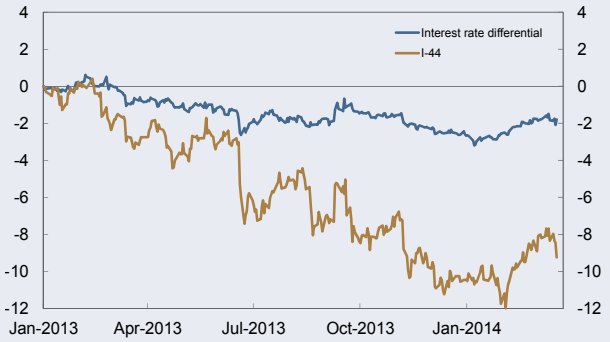
In recent months, the krone has appreciated considerably. The interest rate differential against trading partners has widened somewhat and liquidity has improved. This indicates that the risk premium for NOK has declined.

1 Measured by the PPI. Measured by I-44 the krone exchange rate was at its strongest level since data have been available (August 1989).

2 According to the theory of uncovered interest rate parity (UIP), an unexpected increase in the interest rate differential against other countries will result in an immediate appreciation of the krone exchange rate, while an unexpected reduction will result in an immediate depreciation. Chart 3 shows the cumulative change in the import-weighted krone exchange rate (I-44) since 2 January 2013 and the cumulative change in the 5-year interest rate differential against trading partners in the same period. If the krone exchange rate can be explained solely by the interest rate differential, there should be co-movement between them according to the UIP condition.

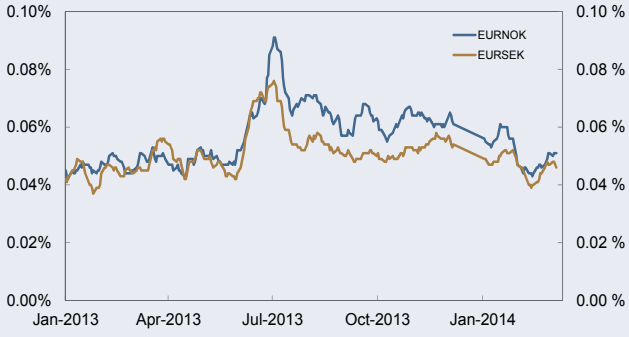
3 A Federal Reserve survey of liquidity in US financial markets in the period May-July confirms the perception of our market contacts that there was a low degree of liquidity across financial markets during that period. See link http://www.federalreserve.gov/econresdata/releases/SCOOS_201309.htm

Chart 3 I-44[1)] and 5-year interest rate differential against trading partners. Accumulated percentage change since 2 January 2013. Percent. At 20 March 2014



1) Negative figures denote a weaker krone exchange rate.
Sources: Thomson Reuters and Norges Bank

Chart 4 Difference between buy and sell EURNOK and EURSEK exchange rates.[1)] In percent of mid-price. 10-day moving average. 15 January 2013 - 20 March 2014



1) A positive slope denotes less liquidity.
Sources: Thomson Reuters and Norges Bank

THE NEUTRAL AND THE NORMAL INTEREST RATE

In the economic literature, theoretical concepts such as the *normal* interest rate and the *neutral* interest rate are often used to describe underlying economic conditions. The concepts are not normative, but can nonetheless function as useful benchmarks in the assessment of monetary policy. The concepts are not always precisely defined, and different terms are often used almost interchangeably.[1]

The *neutral* real interest rate can be understood as the level of the real interest rate that is consistent with normal capacity utilisation. The neutral real interest rate may vary considerably over time as a result of economic shocks. For example, the neutral real interest rate will fall in the event of a temporary increase in the willingness to save.

The *normal* real interest rate can be interpreted as the neutral interest rate in the absence of shocks. The normal interest rate is thereby the interest rate level that can be expected in more normal times, when various types of shock have faded away. The normal *nominal* interest rate will be equal to the normal real interest rate plus long-term inflation expectations.

Both the normal and the neutral interest rate are unobservable and can vary over time. The *normal* real interest rate will be closely linked to underlying growth capacity, and will typically change gradually. The *neutral* interest rate will in principle change in pace with the various shocks to which the economy is exposed. In the example above, the neutral interest rate will be below the normal rate as long as the situation of increased willingness to save persists.

Our analyses include an explicit assessment of what in our view is a normal key policy rate. Projections for the key policy rate will move towards this level as various shocks fade away. In monetary policy, there is a trade-off between the objective of low and stable inflation and the objective of stable developments in output and employment. Norges Bank also gives weight to robustness in monetary policy. Considerations other than a short-term stabilisation of capacity utilisation could therefore result in a deviation of the actual key policy rate from a neutral rate.

Internationally, both nominal and real interest rates have shown a marked decrease since the beginning of the 1980s (see Chart 1). Lower actual and expected inflation was an important factor behind the decrease in nominal long-term interest rates in the 1980s and the beginning of the 1990s. The fall in real interest rates has been particularly marked over the past 15–20 years. These developments partly reflect structural changes resulting in freer capital movements and thereby reduced real interest rate differentials across countries, but also a gradual moderation in underlying growth. In addition, large savings surpluses in emerging economies, particularly China, have probably been an important factor behind the fall in international real interest rates. In the wake of the financial crisis, the investment share in advanced economies has also declined considerably, and underlying productivity growth has slowed. Extraordinary measures introduced by many central banks have also pushed down long-term rates in recent years.

Long-term rates as shown in Chart 1 are not suited to an assessment of the market's estimate of the

1 In some contexts, the normal interest rate is referred to as the natural interest rate or a short-term equilibrium interest rate, and the normal rate is also referred to as a long-term neutral rate or a long-term equilibrium rate. These concepts are discussed in detail in «The neutral real interest rate», *Economic Bulletin* 2/2007 and *Economic Commentaries* 1/2010, available on Norges Bank's website.

normal rate. Market participants' assessment of the future interest rate level is reflected more accurately by implied forward interest rates.[2] Long-term implied rates will to a lesser extent than spot rates be influenced by the current economic situation and will to a greater extent reflect growth and inflation expectations. These rates will thereby be closer to the interest rate level that is expected when the economy is in balance, and they provide a better basis than spot rates for estimating the normal interest rate level. Chart 2 shows 5-year yields five years ahead based on international swap rates.[3] For Norway's trading partners, these rates have been between 2¾% and 4% over the past year. These rates are over time approximately ¼ percentage point above comparable government bond yields. With long-term inflation expectations around 2% and a premium over risk-free interest rates of ¼ percentage point, international swap rates imply a normal risk-free real interest rate abroad of between ½% and 1¾%.

Comparable Norwegian swap rates have stood at around 4% over the past year. Over time, Norwegian rates track foreign rates, but are generally slightly higher. This is consistent with Norway's somewhat higher inflation target. With long-term inflation expectations close to 2½% and a premium over risk-free rates of ¼ percentage point, Norwegian swap rates should imply a normal risk-free real interest rate in Norway of about 1¼%.

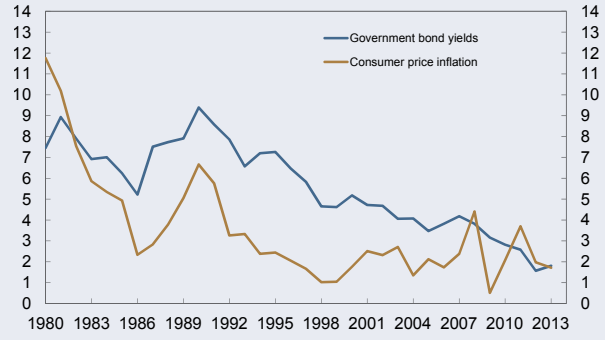
Norges Bank's projections of the normal interest rate have been gradually revised down in pace with international developments.[4] Our projections have

2 In the absence of term premiums and other risk premiums, implied forward rates can be interpreted as the market's interest rate expectations. The implied 5-year interest rate five years ahead can be estimated based on today's 5- and 10-year yields. This is the rate achieved when the return on a 5-year investment five years ahead that is reinvested for a further five years yields a total return equal to the return on current 10-year investments. For further discussion and interpretation of implied forward rates, see Norges Bank *Staff Memo* 4/2011. (Norwegian only)

3 A swap rate is an interest rate swap where two parties agree to exchange a floating rate (for example 6-month LIBOR) for a fixed rate for an agreed period. One of the parties receives a fixed rate, the swap rate, and pays the floating rate, while the other party pays the fixed rate and receives the floating rate. The swap rate is used as an indication of market interest rate expectations for the specified period.

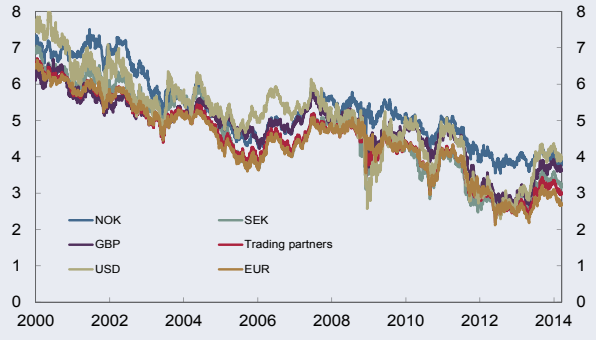
4 See Norges Bank Inflation Report 1/05, Monetary Policy Report 1/10 and Monetary Policy Report 1/12.

Chart 1 Government bond yields (10-year) and consumer price inflation for trading partners[1)]
Percent. 1980 - 2013



1) Germany, Sweden, UK, France and US. 25 trading partners from 1991.
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 2 5-year interest rates five years ahead[1)]
Percent. 3 January 2000 - 20 March 2014



1) Implied five-year interest rates five years ahead based on 5- and 10-year swap rates.
Source: Bloomberg

recently been based on a normal money market rate in Norway of around 4%, with a normal key policy rate of slightly below 4%. The projection is uncertain. It cannot be ruled out that structural developments in the global economy may lead to a further fall in the normal interest rate.

In the wake of the financial crisis, there has been a need for an adjustment of debt levels in many countries. Deleveraging in the private and public sector is dampening activity and the neutral real interest rate abroad has probably fallen sharply. In many countries policy rates have been set close to zero and various types of quantitative easing have been employed to further stimulate activity. It will probably take many years for the economic situation to normalise.[5]

Market participants now expect a money market rate among Norway's trading partners of around 1¾% at the end of 2017, well below the level that may be assumed to be a normal interest rate. Unusually low interest rates abroad also influence the neutral interest rate in Norway through the exchange rate channel. Furthermore, the neutral key policy rate in Norway is affected by the expectation that bank lending rates will be unusually high for some time ahead. Both lower-than-normal rates abroad and higher-than-normal lending margins are shocks that imply that the neutral interest rate will probably be lower than the normal rate for several years ahead. This influences the outlook for the key policy rate in our projections.

5 Larry Summers has presented the hypothesis that the neutral real interest rate in the US is considerably below zero: "*Suppose then that the short-term real interest rate that was consistent with full employment had fallen to negative two or negative three percent. Even with artificial stimulus to demand you wouldn`t see any excess demand.*" (Larry Summers, 8 November 2013)

ANNEX

MONETARY POLICY MEETINGS WITH CHANGES IN THE KEY POLICY RATE

Date	Key policy rate[1]	Change
18 June 2014		
7 May 2014		
26 March 2014	**1,50**	**0**
4 December 2013	1.50	0
23 October 2013	1.50	0
18 September 2013	1.50	0
19 June 2013	1.50	0
8 May 2013	1.50	0
13 March 2013	1.50	0
19 December 2012	1.50	0
31 October 2012	1.50	0
29 August 2012	1.50	0
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

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
2008		0.1	1.5	1.8	2.7	-1.3	5.2	4.5	3.9
2009		-1.6	-1.6	0.0	4.3	-13.2	3.4	-8.4	-12.5
2010		0.5	1.7	3.8	1.3	-4.5	-9.5	7.5	9.0
2011		1.3	2.6	2.6	1.1	6.3	11.3	1.0	3.8
2012		2.9	3.4	3.0	1.8	4.5	14.6	1.1	2.3
2013		0.6	2.0	2.1	1.6	4.7	18.0	0.4	2.5
2013[3]	Q1	-0.4	0.6	1.0	0.3	2.6	1.9	2.2	1.5
	Q2	1.1	0.3	0.2	0.1	1.8	7.8	0.1	1.1
	Q3	0.8	0.5	0.0	0.3	-2.7	6.3	-2.8	0.9
	Q4	-0.2	0.6	0.4	0.5	0.9	-4.5	-0.7	-1.1
2013 level, in billions of NOK		3 004	2 319	1 233	657	442	207	469	844

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

Sources: Statistics Norway and Norges Bank

TABLE 2 Consumer prices

Annual change/twelve-month change. Per cent		CPI	CPI-ATE[1]	CPIXE[2]	CPI-AT[3]	CPI-AE[4]	HICP[5]
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	2.3
2011		1.2	0.9	1.1	1.1	1.1	1.2
2012		0.8	1.2	1.0	0.6	1.4	0.4
2013		2.1	1.6	1.4	2.1	1.6	2.0
2014	Jan	2.3	2.4	2.2	2.3	2.4	2.1
	Feb	2.1	2.4	2.1	2.1	2.4	1.9

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 GDP GROWTH IN OTHER COUNTRIES

Change from projections in *Monetary Policy Report* 4/13 in brackets	Share of world GDP[1] (percent)	Change from previous year. Percent.			
		2014	2015	2016	2017
US	23	2¾ (0)	3¼ (0)	3¼	3¼
Euro area	20	1¼ (¼)	1½ (0)	1½	1¾
UK	4	2¾ (¼)	2½ (0)	2½	2½
Sweden	0.7	2¾ (¼)	3 (½)	2½	2½
China	9	7¼ (0)	7 (0)	7	6¾
Emerging economies[2]	12	3¼ (-½)	4 (-½)	4½	4½
Trading partners[3]	78	2¼ (0)	2½ (0)	2½	2¾
World (PPP)[4]	100	3¾ (0)	4 (0)	4	4
World (market exchange rates)[4]	100	3¼ (0)	3½ (0)	3½	3½

1 Country's share of global output measured in a common currency (market exchange rate). Average 2009–2011.
2 Emerging economies in the trading partner aggregate excluding China: Brazil, India, Indonesia, Russia, Turkey, Poland and Thailand. GDP weights.
3 Export weights, 25 main trading partners.
4 GDP weights. Norges Bank's estimates for 25 trading partners, other estimates from IMF.

Sources: IMF, Thomson Reuters and Norges Bank

TABLE 4 PROJECTIONS FOR CONSUMER PRICES IN OTHER COUNTRIES

Change from projections in *Monetary Policy Report* 4/13 in brackets	Change from previous year. Percent.			
	2014	2015	2016	2017
US	1½ (-¼)	2 (0)	2	2¼
Euro area	1 (-¼)	1¼ (0)	1½	1¾
UK	2 (-¼)	2 (0)	2	2
Sweden	½ (-¾)	2¼ (0)	2½	2¼
China	3 (-¼)	3½ (0)	3¼	3
Emerging economies[1]	6 (¼)	5½ (0)	5¼	5¼
Trading partners[2]	1¾ (-¼)	2¼ (0)	2¼	2¼
Oil price Brent Blend. USD per barrel[3]	106	101	98	95

1 Emerging economies in the trading partner aggregate excluding China: Brazil, India, Indonesia, Russia, Turkey, Poland and Thailand. GDP weights.
2 Import weights, 25 main trading partners.
3 Futures prices (average for the past five trading days). For 2014, an average of spot prices so far this year and futures prices for the rest of the year is used.

Sources: IMF, Thomson Reuters and Norges Bank

TABLE 5 PROJECTIONS FOR MAIN ECONOMIC AGGREGATES

	In billions of NOK	Percentage change from previous year (unless otherwise stated) Projections				
	2013	2013	2014	2015	2016	2017
Prices and wages						
CPI		2.1	2	2	2¼	2¼
CPI-ATE[1]		1.6	2¼	2	2¼	2¼
Annual wages[2]		3.9	3½	3¾	4	4
Real economy						
GDP	3 004	0.6	1½	2	2½	2½
GDP, mainland Norway	2 319	2.0	1¾	2½	3	2¾
Output gap, mainland Norway (level)[3]		0	-½	-¾	-½	-¼
Employment, persons, QNA		1.2	1	¾	1	1
Labour force, LFS		1.0	1¼	1	1	1
LFS unemployment (rate, level)		3.5	3¾	4	4	4
Registered unemployment (rate, level)		2.6	3	3	3	3
Demand						
Mainland demand[4]	2 332	2.4	1¾	3¼	3	2¾
- Private consumption	1 233	2.1	1¾	3¼	3¼	2¾
- Public consumption	657	1.6	2	2¼	.	.
- Fixed investment, mainland Norway	442	4.7	1¼	4¼	.	.
Petroleum investment[5]	207	18.0	1½	¾	-1¾	-½
Mainland exports[6]	469	0.4	1½	2½	.	.
Imports	844	2.5	2	4¼	.	.
Interest rate and exchange rate						
Key policy rate (level)[7]		1.5	1½	1¾	2	2½
Import-weighted exchange rate (I-44)[8]		88.9	91½	90	89¾	89¾

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

· Not available

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

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