

 **NORGES BANK**

Monetary Policy Report
with financial stability assessment

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Monetary Policy Report
with financial stability assessment
2/2013



Norges Bank

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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 the need for countercyclical capital buffers for banks. The *Report* includes projections of developments in the Norwegian economy.

At its meeting on 24 April 2013, the Executive Board discussed relevant themes for the *Report*. At the Executive Board meeting on 5 June 2013, the economic outlook, the monetary policy stance and risk in the financial system were discussed. On the basis of this discussion and a recommendation from Norges Bank's management, the Executive Board adopted at its meeting on 19 June a monetary policy strategy for the period to the publication of the next *Report* on 19 September 2013. The Executive Board's assessment of the economic outlook, the monetary policy strategy and the countercyclical capital buffer requirement is presented in "The Executive Board's assessment".

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

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This *Monetary Policy Report* is based on information in the period to 13 June 2013.
The monetary policy strategy was approved by the Executive Board on 19 June 2013.

Monetary policy in Norway

Objective

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

Implementation

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

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

The decision-making process

The monetary policy stance is presented to the Executive Board for discussion at a meeting about two weeks before the *Monetary Policy Report* is published. Themes of relevance to the *Report* have been discussed at a previous meeting. On the basis of the analysis and discussion, the Executive Board assesses the consequences for future interest rate developments. 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 Market Report. The Governor of Norges Bank provides an assessment of monetary policy in an open hearing before the Standing Committee on Finance and Economic Affairs in connection with the Storting deliberations on the Financial Market Report.

Financial stability – countercyclical capital buffer

Norges Bank has been assigned primary responsibility for elaborating the decision basis for the countercyclical capital buffer. The objective of the buffer is to bolster banks' resilience to an impending downturn and counter wide fluctuations in the supply of credit that may amplify the economic cycle. In drawing up the basis, Norges Bank will collaborate and exchange information with Finanstilsynet (Financial Supervisory Authority of Norway). The Ministry of Finance will set the buffer.

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

A broad assessment of the structure and vulnerabilities of the Norwegian financial system will be published annually in the fourth quarter in a separate report.

The Executive Board's assessment

Monetary policy

At its meeting on 13 March 2013, the Executive Board decided that the key policy rate should be in the interval 1%–2% in the period to 20 June 2013, unless the Norwegian economy was exposed to new major shocks. In the March 2013 *Monetary Policy Report*, capacity utilisation was estimated to be somewhat above a normal level. Inflation remained low and there were prospects that it would take longer for inflation to pick up than projected earlier. Considerable uncertainty remained concerning developments in the international economy. The analysis in the March *Report* implied a key policy rate of around 1.5% in the period to spring 2014, followed by a gradual increase towards a more normal level.

At its meeting on 24 April 2013, the Executive Board discussed themes of relevance for the June 2013 *Monetary Policy Report*, including analyses of banks' response to new capital requirements.

In its discussion at the meeting on 8 May 2013, the Executive Board pointed out that the growth outlook for Europe appeared to have weakened somewhat, while global growth remained firm. The expected upward shift in key rates abroad had again been moved further out in time. Inflation in Norway had been a little lower than projected. Wage growth appeared to be lower than projected this year. On the other hand, the krone had depreciated. The Norwegian economy appeared to be moving broadly in line with that projected. The Executive Board decided to keep the key policy rate unchanged at 1.5%.

In its discussion on 5 June and 19 June, the Executive Board placed emphasis on the following developments:

- Growth among trading partners is somewhat lower than expected. In Europe, the downturn is likely to persist longer than previously projected. In the US, growth is temporarily being dampened by tax increases and expenditure cuts, but growth prospects for the coming years are positive. Growth remains robust in emerging economies, but has been somewhat weaker than envisaged earlier. Oil prices have edged down.
- Key interest rates are close to zero in many countries. Market key rate expectations have shown little change since the March *Report*.
- The krone, as measured by the import-weighted krone exchange rate index (I-44), has been 1.3% weaker so far in Q2 than projected in the March *Report*.
- Banks have increased interest rates on loans to households and enterprises. At the same time, premiums in money and bond markets have edged down.
- Growth in the Norwegian economy has been lower than projected earlier. According to the enterprises in Norges Bank's regional network, output prospects have weakened somewhat. Unemployment has been slightly higher than expected.
- House prices have remained broadly unchanged in recent months, but household debt is still rising at a faster pace than income.
- Consumer price inflation has been slightly higher than projected in the March *Report*. Underlying inflation is now estimated to range between 1¼% and 1¾%. Wage growth is projected at around 3½% in 2013, which is slightly lower than projected earlier.

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 also seeks to be robust and take into account the risk that financial imbalances build up and trigger or amplify an economic downturn. The key policy rate is low because inflation is low and because interest rates abroad are very low. At the same time, there is a substantial spread between the key policy rate and the interest rates facing households and enterprises.

The Executive Board noted that the analyses now suggest that the key policy rate will be lower than the forecast in the March *Report* throughout the entire projection period and that it will take longer for inflation to move up towards the inflation target.

In its discussion, the Executive Board noted that the outlook for the euro area remains highly uncertain. Activity is falling at a slower pace and fiscal tightening appears to be on a smaller scale this year than in 2012. The situation is nevertheless associated with considerable challenges. Unemployment is record high and is particularly high among youth. There is still a need for deleveraging in the private and public sector. An extensive restructuring must be carried out in euro area countries in order to boost their long-term growth potential. It will most likely take several years for production to return to the levels prevailing prior to the financial crisis.

Activity among many Norwegian export companies is being dampened by a high cost level and low external demand, particularly in European markets. Sluggish economic developments and low cost growth among trading partners may have contributed to slower wage growth in Norway, in addition to the high level of labour immigration over many years. These conditions may also have an impact on future wage settlements.

Growth appears to have slackened in several industries. Employment has increased less than projected and unemployment has risen. Capacity utilisation is now assessed to be close to a normal level.

Norwegian banks are adapting to higher capital requirements, including the impending introduction of a countercyclical capital buffer. Banks have increased their lending margins and are improving their capital adequacy already ahead of the introduction of the new regulations. Higher capital-to-loan ratios increase the robustness of banks, and may in addition contribute to restraining the rise in house prices and debt growth. The Executive Board noted that house prices are rising at a somewhat slower pace, but that growth in household debt remains higher than income growth.

In its discussion of the monetary policy situation, weight was given to the fact that inflation is low and that inflation further out is lower than projected in the March *Report*. Capacity utilisation is assessed to be slightly lower than projected earlier. The Executive Board was of the view that these conditions imply a lower key policy rate ahead than projected in the March *Report*. At the same time, weight was given to the dampening impact of external forces on wage and price inflation. As long as the crisis in Europe persists and labour immigration remains high, a pronounced decrease in the key policy rate is likely necessary in order to bring up inflation more rapidly. Such an interest rate response may lead to a further acceleration in house prices and debt, augmenting the risk that financial imbalances trigger or amplify an economic downturn. This suggests a less pronounced response in interest rate setting. Against this background, the Executive Board was of the view that it is appropriate to allow more time to bring inflation up to target. At the same time, weight was given to setting the key policy rate so that there are prospects of rising inflation with a view to preventing inflation expectations from becoming entrenched at too low a level. If the Norwegian economy moves broadly in line with the projections in this *Report*, the Executive Board's assessment is that the key policy rate should remain at today's level or at a somewhat lower level in the period ahead.

At its meeting on 19 June, the Executive Board decided to keep the key policy rate unchanged at 1.5%. At the same meeting, the Executive Board decided that the key policy rate should be in the interval 1%–2% until the publication of the next *Report* on 19 September 2013, unless the Norwegian economy is exposed to new major shocks.

Financial stability – countercyclical capital buffer

At its meeting on 13 March, the Executive Board concluded that banks should build an extra capital buffer in the period ahead that they can draw on to absorb higher losses in bad times. The Executive Board also emphasised that the introduction of a countercyclical capital buffer must be viewed in the light of other requirements applying to banks.

Since the *March Report*, the Storting (Norwegian parliament) has adopted new legislation on capital requirements for banks. As from summer 2014, all banks will be subject to a minimum capital adequacy requirement of 13.5%, at least 10 percentage points of which must consist of Common Equity Tier 1 capital. An extra requirement of up to 1% in 2015 and up to 2% in 2016 will be imposed on banks classified as systemically important. The countercyclical capital buffer will come on top of these requirements.

The basis for the Executive Board's assessment is that banks should build a countercyclical capital buffer 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. A countercyclical capital buffer may also curb credit growth. Banks will be allowed to draw on the buffer in the event of an economic downturn and large bank losses. This may mitigate the procyclical effects of tighter bank lending.

The Executive Board emphasises that the countercyclical capital buffer is not an instrument for fine-tuning the economy. Should economic developments continue to be characterised by relatively long periods of lending growth and low losses, banks should normally hold a countercyclical capital buffer.

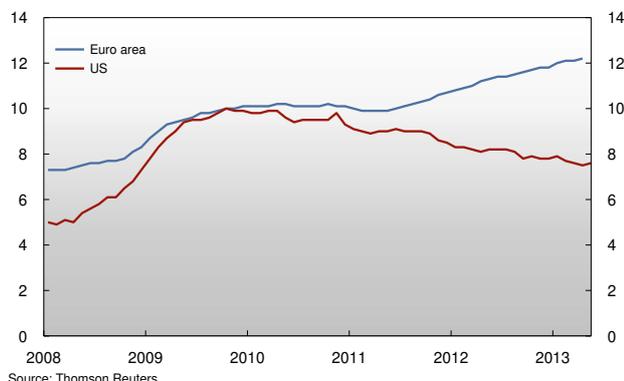
In the view of the Executive Board, several years of rising house prices and lending to households have increased the risk that financial imbalances may trigger or amplify an economic downturn. Household debt is still rising

faster than income and many households may find it challenging to service their debt in the event of a loss of income or higher borrowing rates. Corporate debt growth has been moderate in recent years, and total credit growth has been lower than the estimated historical trend. House price inflation has also slowed somewhat recently.

Over the coming months, the Ministry of Finance will draw up a regulation concerning the countercyclical capital buffer. When the regulation has been finalised, Norges Bank aims to issue concrete advice, on the level of the buffer and the timing of its introduction, probably in the next *Report*, to be published on 19 September. In the view of the Executive Board, banks in Norway are now well positioned to increase their capital ratios. Earnings are solid and losses are currently low. In the opinion of the Executive Board, Norwegian banks should hold a countercyclical capital buffer. The level of the buffer must be considered in the light of other capital requirements that will be gradually increased over the coming years.

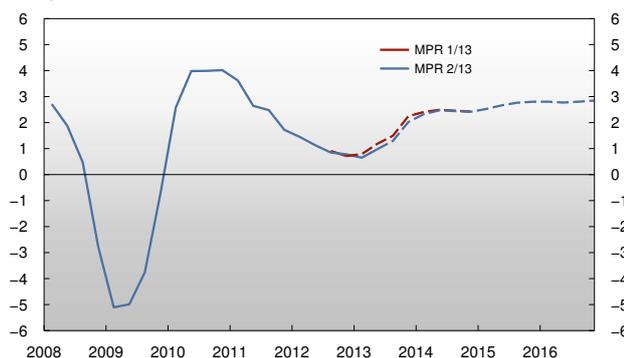
Øystein Olsen
20 June 2013

Chart 1.1 Unemployment rate. Percent of labour force. Seasonally adjusted. January 2008 – May 2013



Source: Thomson Reuters

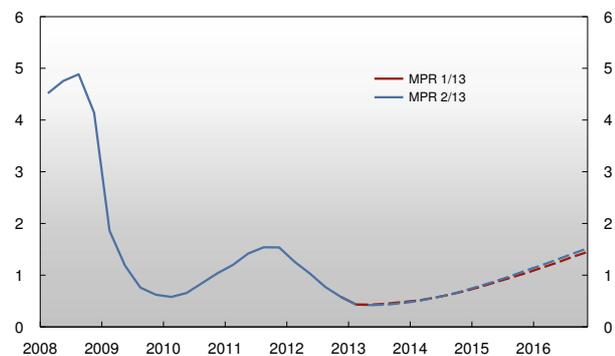
Chart 1.2 GDP for trading partners in MPR 1/13¹⁾ and MPR 2/13. Four-quarter change. Percent. 2008 Q1 – 2016 Q4



1) Shows what growth projections in MPR 1/13 would have been with the revised trading partner aggregate

Sources: Thomson Reuters and Norges Bank

Chart 1.3 Money market rates for trading partners¹⁾ in MPR 1/13 and MPR 2/13. Percent. 2008 Q1 – 2016 Q4



1) Broken red and blue lines show estimated forward rates for trading partners at 8 March 2013 and 13 June 2013. Forward rates are based on Overnight Index Swap (OIS) rates

Source: Norges Bank

1 Monetary policy outlook

The economic situation

Growth in the global economy is being supported by robust growth in emerging economies, but economic developments are weak in many advanced countries. In Europe, several economies are experiencing stagnation or a fall in activity. Growth is being pulled down by fiscal tightening, deleveraging in the private sector and tight credit conditions. Unemployment is high and rising in many countries. There are prospects that the economic downturn in Europe will persist somewhat longer than envisaged earlier. In the US, growth is temporarily being dampened by tax increases and expenditure cuts. Household indebtedness has decreased and the housing market is improving. Unemployment has declined (see Chart 1.1). In emerging economies, developments have been somewhat weaker in recent months than expected earlier, but growth is still high in a number of these countries. Oil prices have edged down since March and are now around USD 105 per barrel.

Economic growth prospects abroad have weakened somewhat since the March 2013 *Monetary Policy Report* (see Chart 1.2). Growth among trading partners is projected to pick up from 1¼% in 2013 to 2½% in 2014.¹ Growth in the world economy is projected at 2½% in 2013. Considerable uncertainty remains as to developments in the international economy ahead, particularly in the euro area.

Equity prices advanced through spring, but have recently dropped slightly. Yields on long-term government securities have increased a little over the past month and are now at about the same level as in March.

Key rates are close to zero in many countries. Market expectations regarding key rates among Norway's trading partners are approximately unchanged on the March *Report* (see Chart 1.3). The European Central Bank (ECB) lowered its key rate from 0.75% to 0.5% in May. Excess liquidity in the Eurosystem remains high, but is expected to decrease gradually ahead. Market participants expect the short-term money rate, EONIA, to drift

1) Norges Bank's trading partner aggregate has now been revised. Emerging economies have been given higher weights. With the new composition, annual GDP growth has been ¼ percentage point higher since 2010. See Section 3 of this *Report* and *Staff Memo* 12/2013 for further details concerning the revision.

upwards from the first half of 2014. The Federal Reserve has communicated that its key rate will most likely remain close to zero up to the first half of 2015.

The krone reached historically strong levels in mid-February and has since weakened somewhat. Measured by the import-weighted krone exchange rate index (I-44), the krone has been 1.3% weaker so far in Q2 than projected in the March *Report* (see Chart 1.4).

Norwegian banks and mortgage companies still have ample access to wholesale funding. Funding costs have decreased over the past year. The risk premium in three-month money market rates is now around 0.30 percentage point, slightly lower than in the March *Report*. Risk premiums on covered bonds and bank bonds have also fallen somewhat since the March *Report*. At the same time, banks have raised interest rates on loans to households and enterprises in response to expectations of stricter capital requirements (see Chart 1.5). Bank lending margins have thus increased.

Growth in the Norwegian economy has been somewhat lower in recent quarters than projected earlier. In May, the enterprises in Norges Bank's regional network reported slower output growth.² At the same time, they lowered their expectations of growth ahead. Employment growth has slowed somewhat and unemployment has been a little higher than projected. The share of enterprises in Norges Bank's regional network reporting capacity problems has been fairly stable recently. Capacity utilisation in the mainland economy is probably slightly lower than projected earlier and is considered to be close to a normal level (see Chart 1.6).

Growth in the Norwegian economy is being supported by vigorous activity in the petroleum sector and construction industry. At the same time, some export-oriented manufacturing segments are feeling the adverse effects of weak developments among our main trading partners and a high cost level in Norway. Both mainland exports and business investment have grown at a fairly moderate pace in recent quarters. Growth in private consumption has been slightly weaker than projected. House prices continued to rise at a fast pace through 2012, but the pace

Chart 1.4 Import-weighted exchange rate index (I-44).¹⁾
1 January 2010 – 13 June 2013

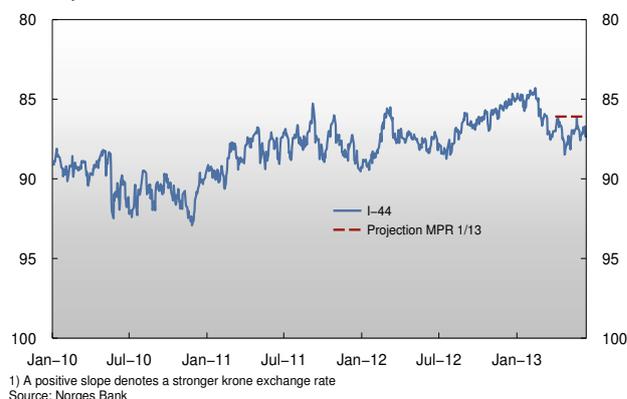


Chart 1.5 Mortgage lending rates¹⁾ and funding costs.
Percent. 1 January 2010 – 13 June 2013

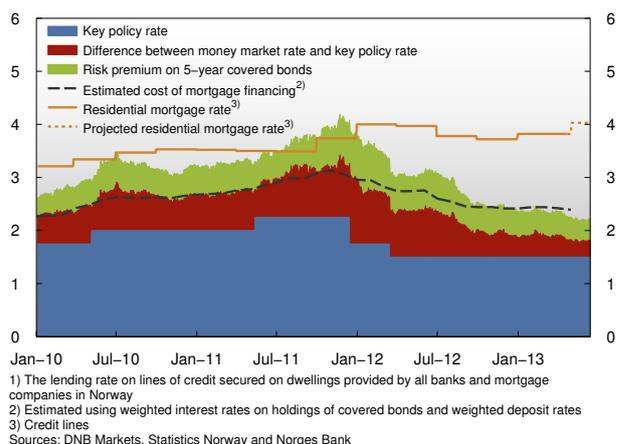
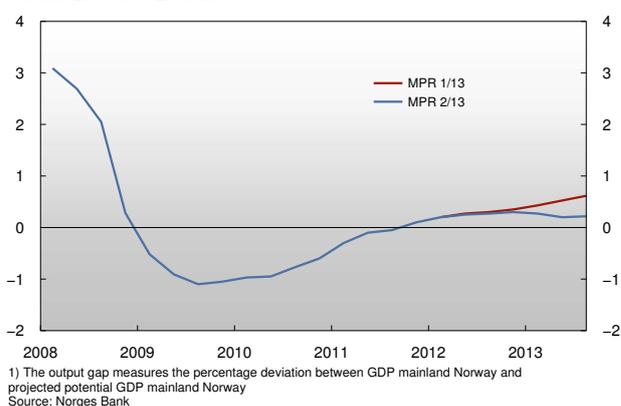
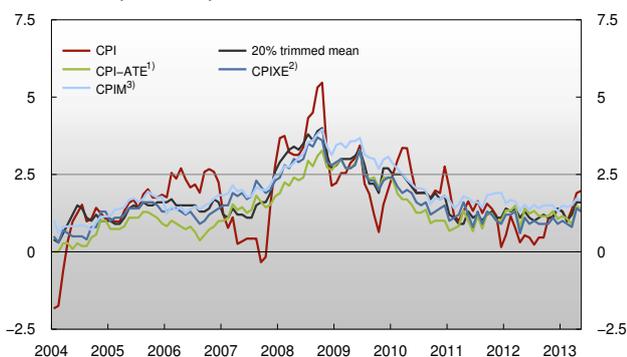


Chart 1.6 Projected output gap¹⁾ in MPR 1/13 and MPR 2/13.
Percent. 2008 Q1 – 2013 Q3



2 For more information on regional network survey 2/2013 and the enterprises and entities contacted, see: <http://www.norges-bank.no/en/about/published/publications/regional-network-reports/regional-2/>

Chart 1.7 Consumer prices. 12-month change. Percent. January 2004 – May 2013



1) CPI adjusted for tax changes and excluding energy products
 2) CPI adjusted for tax changes and excluding temporary changes in energy prices. Real time figures. See Norges Bank Staff Memo 7/2008 and 3/2009. From June 2013, the method for calculating CPIXE will be changed. For more information see www.norges-bank.no
 3) Model-based indicator of underlying inflation. See Norges Bank Economic Commentaries 5/2010
 Sources: Statistics Norway and Norges Bank

has slowed in recent months. Household sector debt is still rising faster than income. The ratio of debt to disposable income is rising from an already high level. At the same time, household saving is high.

Inflation has been a little higher than projected. The twelve-month rise in consumer prices (CPI) was 2.0% in May. Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) was 1.4% (see Chart 1.7). Underlying inflation is projected at between 1¼% and 1¾%. Wage growth is likely to be around 3½% in 2013.

The outlook ahead

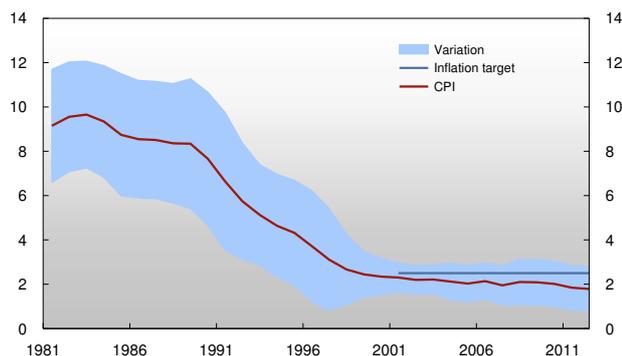
The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of close to 2.5% over time. Over the past 10 years, average inflation has been somewhat below, but close to, 2.5% (see Chart 1.8). Inflation expectations remain close to the inflation target (see Chart 1.9).

The key policy rate is 1.5%. The key policy rate is low because inflation is low and because 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.

The situation in the Norwegian economy differs from that of other advanced economies. In Norway, growth has been supported in large part by high oil prices and strong demand from the petroleum industry, in conjunction with a low key policy rate. Capacity utilisation in the mainland economy has risen gradually since the financial crisis. There are now signs of slowing growth in the Norwegian economy. Employment growth has slackened and Norges Bank's regional network contacts have become slightly less optimistic. Capacity utilisation is projected to remain close to a normal level ahead.

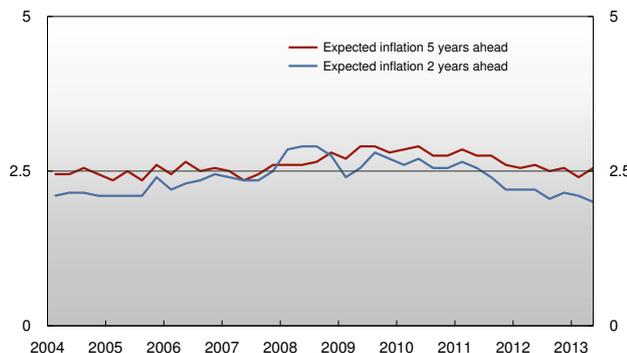
Despite robust growth in the Norwegian economy, inflation has been low for a long time. Cost inflation in sectors supplying goods and services to households has been moderate in recent years. This has held down price inflation for domestically produced goods and services (see Chart 1.10). Weak external price impulses and the appreciation of the krone have led to a fall in prices for imported consumer goods.

Chart 1.8 Inflation. 10-year moving average¹⁾ and variation²⁾ in CPI. Percent. 1981 – 2012



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

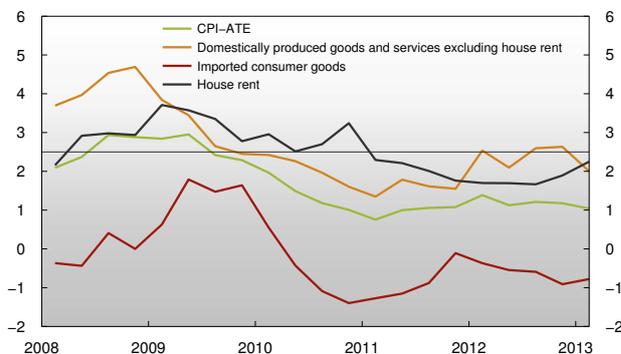
Chart 1.9 Expected consumer price inflation 2 and 5 years ahead.¹⁾ Percent. 2004 Q1 – 2013 Q2



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

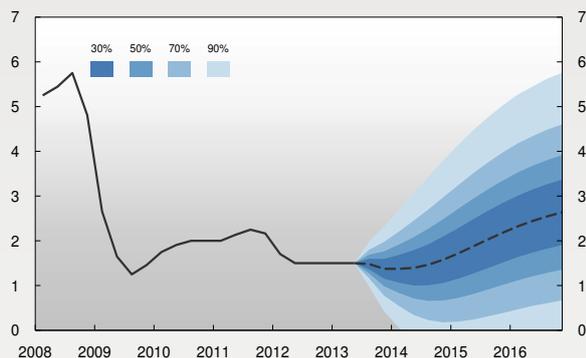
Wage growth in 2013 is likely to be lower than projected in the *March Report*. Sluggish economic growth and low cost inflation among our trading partners have probably contributed to curbing wage growth in Norway. In addition, high labour immigration over several years may also have dampened wage growth. These conditions may also have an impact on wage growth ahead. The rise in prices for imported consumer goods is expected to remain low owing to continued low external price impulses. There are prospects that it will take even longer than previously projected for inflation to pick up.

Chart 1.10 CPI-ATE¹⁾ by supplier sector. Four-quarter change. Percent. 2008 Q1 – 2013 Q1



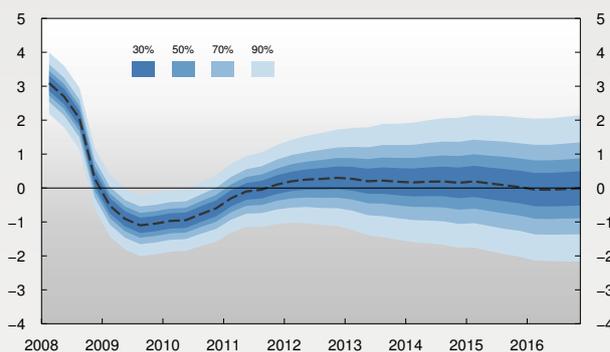
1) CPI adjusted for tax changes and excluding energy products
Sources: Statistics Norway and Norges Bank

Chart 1.11a Projected key policy rate in the baseline scenario with probability distribution. Percent. 2008 Q1 – 2016 Q4



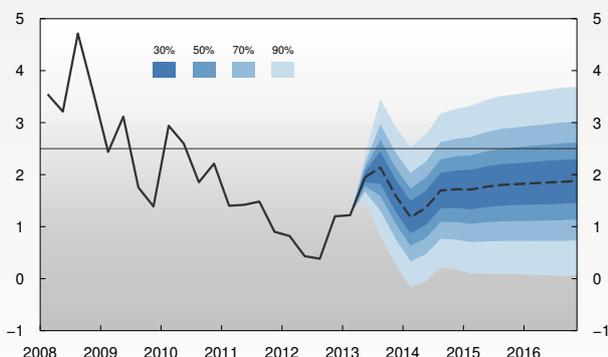
Source: Norges Bank

Chart 1.11b Projected output gap¹⁾ in the baseline scenario with probability distribution. Percent. 2008 Q1 – 2016 Q4



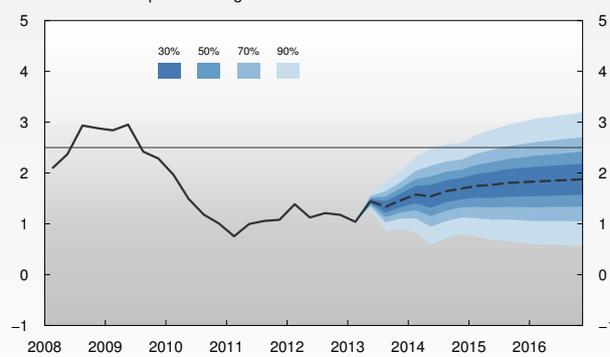
1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP
Source: Norges Bank

Chart 1.11c Projected CPI in the baseline scenario with probability distribution. Four-quarter change. Percent. 2008 Q1 – 2016 Q4



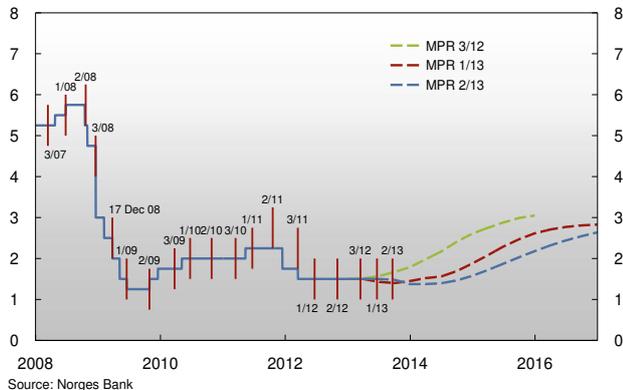
Sources: Statistics Norway and Norges Bank

Chart 1.11d Projected CPI-ATE¹⁾ in the baseline scenario with probability distribution. Four-quarter change. Percent. 2008 Q1 – 2016 Q4



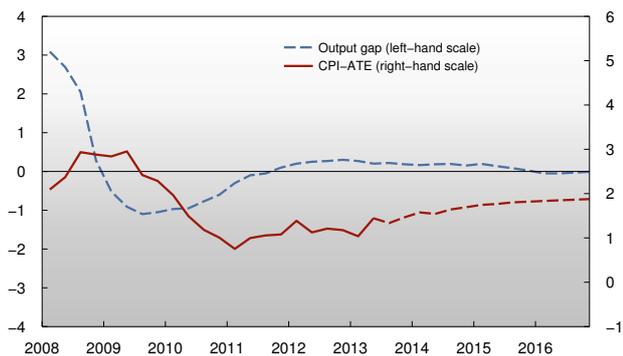
1) CPI adjusted for tax changes and excluding energy products.
Sources: Statistics Norway and Norges Bank

Chart 1.12 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 2016



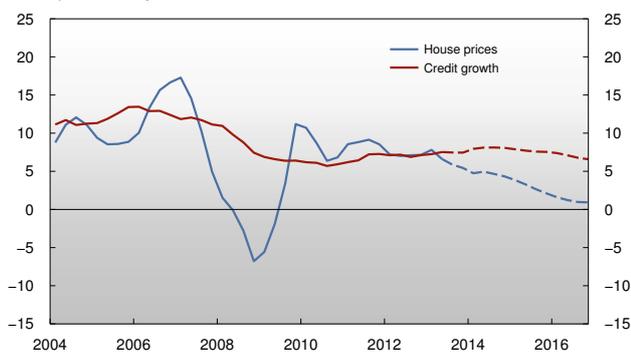
Source: Norges Bank

Chart 1.13 Projected inflation¹⁾ and output gap in the baseline scenario. Percent. 2008 Q1 – 2016 Q4



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

Chart 1.14 Household credit growth¹⁾ and house prices. Four-quarter change. Percent. 2004 Q1 – 2016 Q4



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

The key policy rate is set with a view to stabilising inflation at the inflation target without triggering excessive fluctuations in output and employment. Monetary policy in Norway should also be robust and mitigate the risk that financial imbalances build up and trigger or amplify a downturn in the economy (see box on the criteria for an appropriate interest rate path on pages 20 and 21 and box on flexible inflation targeting on page 19).

Since the March *Report*, inflation has been slightly higher than projected and the krone has depreciated. On the other hand, wage growth is likely to be lower than projected earlier and capacity utilisation is projected to be slightly lower than previously envisaged. Growth among our trading partners has been revised down further. In addition, the spread between bank lending rates and the key policy rate has widened a little and the spread is expected to remain wider ahead than previously projected. On balance, new information since the March *Report* suggests a lower forecast for the key policy rate.

It is primarily external factors that are holding down price and cost inflation in the Norwegian economy. As long as external economic developments remain sluggish and labour immigration remains high, wage growth and inflation in Norway are likely to remain dampened. In such a situation, a pronounced decrease in the key policy rate is likely necessary in order to bring inflation more quickly up towards target. At the same time, such a change in the interest rate may amplify house price inflation and debt growth, which are already at high levels. This may increase the risk that financial imbalances trigger or amplify an economic downturn. This suggests a less pronounced response to the low outlook for inflation and using a longer period for bringing up inflation.

The analyses in this *Report* imply a key policy rate at the current level, or somewhat lower, in the year ahead (see Charts 1.11 a-d and Chart 1.12). The rate is projected to rise gradually from the end of next year. Along this path, the key policy rate is lower than projected in the March *Report* throughout the entire projection period (see box on page 22).

This projection for the key policy rate entails prospects of a gradual rise in inflation and results in capacity utilisation that is close to a normal level through the projection period (see Chart 1.13).

The rise in house prices is projected to slow and is expected to be lower than growth in household disposable income in the coming years (see Chart 1.14). On the other hand, there are prospects of a continued rise in household debt ratios (see Chart 1.15).

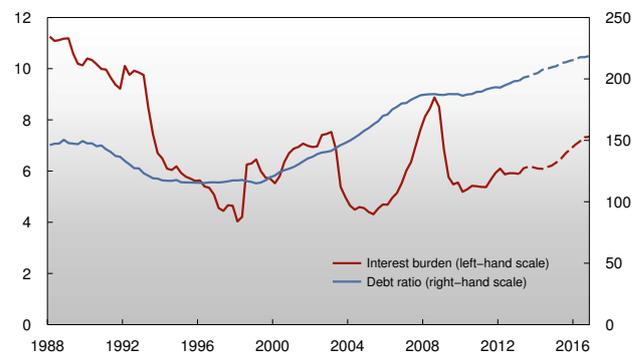
Money market rates are projected to track developments in the key policy rate (see Chart 1.16). Bank lending rates are expected to track developments in money market rates in the short term, but may rise somewhat less further out in the projection period (see Chart 1.17). The interest rate differential against other countries is expected to narrow somewhat in the short term, and then gradually widen. The result may be that the krone remains strong (see Chart 1.18).

Mainland GDP is projected to grow by around 2¾% annually between 2014 and 2016.. Unemployment is expected to remain at today's level. Wage growth is projected at 3¾% in 2014 and 4¼% in 2015 and 2016. Activity levels are still expected to remain high in oil-related sectors. At the same time, sluggish growth among trading partners and further weakening of Norway's competitiveness will weigh on growth in other export sectors. Mainland business investment is expected to grow more slowly in the years ahead than has been observed in the past few years. At the same time, high population growth will also sustain housing investment at a high level. Growth in private consumption is projected at around 3% annually through the projection period. The saving ratio is expected to rise somewhat, but is projected to be lower than in the March Report.

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 perception of the functioning of the economy and monetary policy. If economic developments are broadly in line with projections, economic agents can expect the interest rate path to be approximately as projected. Monetary policy may respond to changes in the economic outlook, or if the relationships between the interest rate, inflation, output and employment differ from those assumed.

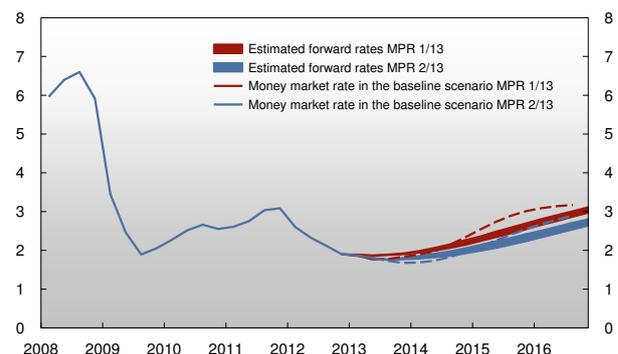
There is uncertainty about future interest rate developments. The uncertainty surrounding Norges Bank's projections is illustrated using fan charts (see Charts 1.11 a-d). The width of the fan reflects historical uncertainty.

Chart 1.15 Household debt ratio¹⁾ and interest burden.²⁾ Percent. 1988 Q1 – 2016 Q4



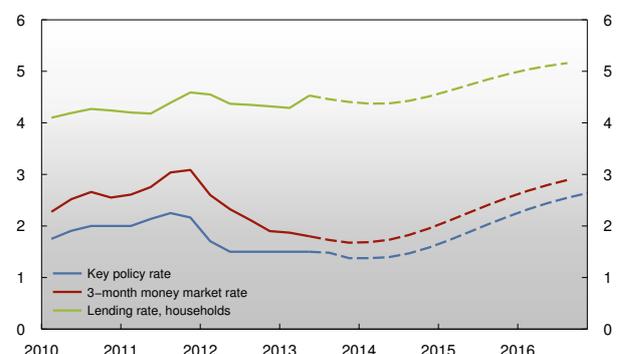
1) Loan debt as a percentage of disposable income adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2012 Q3
2) Interest expenses after tax as a percentage of disposable income adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 – 2016 plus interest expenses
Sources: Statistics Norway and Norges Bank

Chart 1.16 Three-month money market rate in the baseline scenario¹⁾ and estimated forward rates.²⁾ Percent. 2008 Q1 – 2016 Q4



1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that announced interest rate changes are priced into the money market.
2) Forward rates are based on money market rates and interest rate swaps. The blue and red bands show the highest and lowest forward rates in the period 31 May – 13 June 2013 and 25 February – 8 March 2013
Sources: Thomson Reuters and Norges Bank

Chart 1.17 Projected key policy rate, three-month money market rate¹⁾ and interest rate on loans to households²⁾ in the baseline scenario. Percent. 2010 Q1 – 2016 Q4



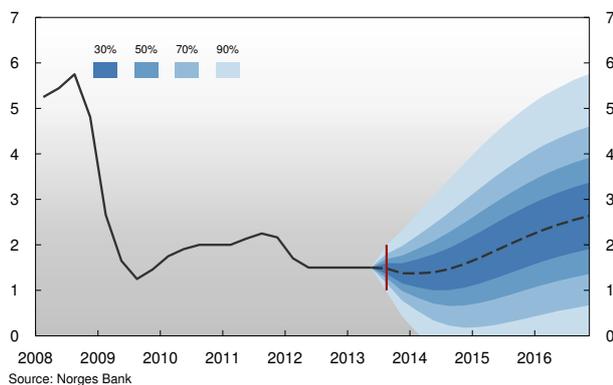
1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the announced interest rate changes are priced into the money market
2) Average interest rate on all loans to households from banks and mortgage companies
Sources: Statistics Norway and Norges Bank

Chart 1.18 Three-month money market rate differential between Norway¹⁾ and trading partners and the import-weighted exchange rate index (I-44).²⁾ January 2004 – December 2016



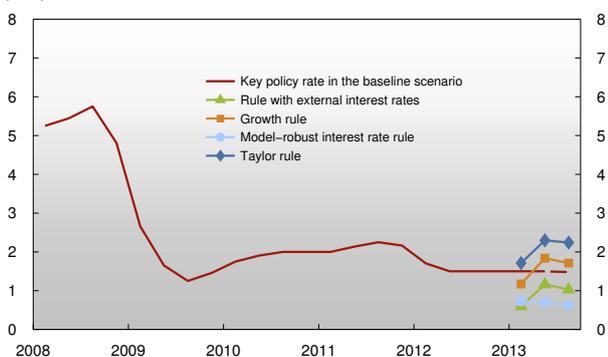
1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that announced interest rate changes are priced into the money market
2) A positive slope denotes a stronger krone exchange rate
Sources: Thomson Reuters and Norges Bank

Chart 1.19 Projected key policy rate in the baseline scenario and strategy interval with probability distribution. Percent. 2008 Q1 – 2016 Q4



Source: Norges Bank

Chart 1.20 Key policy rate and calculations based on simple monetary policy rules.¹⁾ Percent. 2008 Q1 – 2013 Q3



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

Chart 1.19 shows there is a high probability that the key policy rate will be within the interval approved by the Executive Board in the period to 19 September. However, there is also some probability that the key policy rate will be set higher or lower than indicated by the interval. In autumn 2008, the Norwegian economy was exposed to major shocks as a consequence of the international financial crisis, and the key policy rate was set below the lower limit of the interval.

The projections in this *Report* imply that inflation will gradually pick up. With high inward labour migration and weak economic growth among Norway's trading partners, wage growth may be lower than expected in the years ahead. In sectors supplying goods and services to households, cost inflation has been lower than in the economy as a whole in recent years. It cannot be ruled out that this trend may continue. There is also a risk of a further appreciation of the krone. Should the outlook for inflation, output or employment be substantially lower than projected, the key policy rate may be set lower than the forecast in this *Report*.

The key policy rate may also be increased more quickly than projected in this *Report*. In recent months, inflation has been somewhat higher than projected. The increase in inflation partly reflects temporary conditions. However, it cannot be ruled out that the recent pickup in inflation is a sign of higher underlying inflation than currently projected. At the same time, activity in the Norwegian economy may turn out to be higher than projected in this *Report*.

Cross-checks of the interest rate forecast

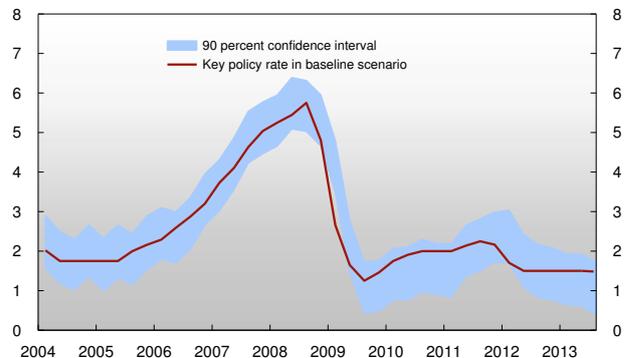
Simple monetary policy rules can prescribe interest rate setting that is robust to different assumptions about the functioning of the economy. The Taylor rule is based on projections for inflation, the output gap, money market premiums and the normal interest rate level. The Taylor rule calls for a key policy rate that is somewhat higher than the interest rate in the baseline scenario (see blue line in Chart 1.20). The growth rule, where the output gap is replaced by a growth gap, produces a key policy rate that is nearly identical with the interest rate forecast in this *Report* (see orange line). The light blue line shows

a model-robust rule³ based on calculations in various models for the Norwegian economy. This rule gives greater weight to the output gap and inflation than the Taylor rule. It also gives weight to the interest rate in the previous period. The model-robust rule implies a key policy rate that is lower than the interest rate in the baseline scenario. A simple rule that gives considerable weight to changes in the interest rate differential against other countries also implies a lower interest rate than in the baseline scenario (see green line).

Forward money and bond market rates are another cross-check for the interest rate forecast. Estimated forward rates are somewhat higher than the money market forecast for the coming year (see Chart 1.16). Into the projection period, the estimated forward rates suggest that market participants expect somewhat lower money market rates than projected in this *Report*.

Norges Bank's previous interest rate setting can also serve as a cross-check for the interest rate in the baseline scenario. Chart 1.21 shows an estimated model that seeks in a simplified way to provide an explanation of historical developments in the key policy rate based on inflation, wage growth, mainland GDP and interest rates abroad. The interest rate in the previous period is also important. 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 and the chart shows that the interest rate in the baseline scenario is in the upper part of this band.

Chart 1.21 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.¹⁾ Percent. 2004 Q1 – 2013 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. The equation is estimated over the period 1999 Q1 – 2013 Q1. See *Staff Memo 3/2008* for further discussion. Source: Norges Bank

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

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.¹ 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 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.

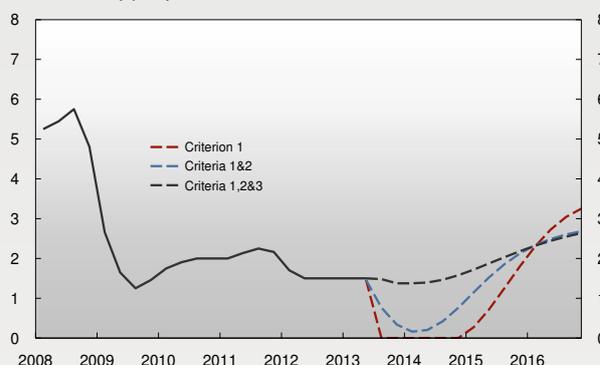
2. **The inflation targeting regime is flexible:**

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:**

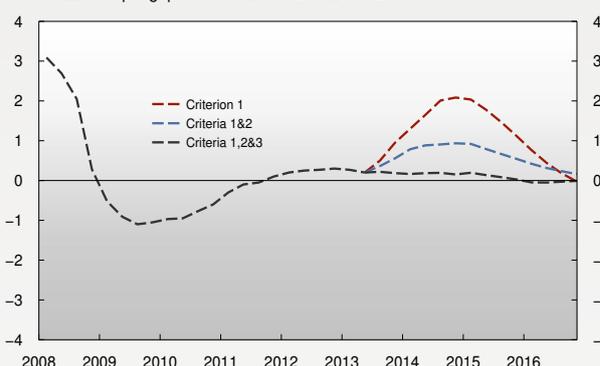
The interest rate should be set so that monetary policy mitigates the risk of a build-up of financial imbalances, and so that acceptable developments in inflation and output are also likely under alternative assumptions about the functioning of the economy.

Chart 1.22a Key policy rate. Percent. 2008 Q1 – 2016 Q4



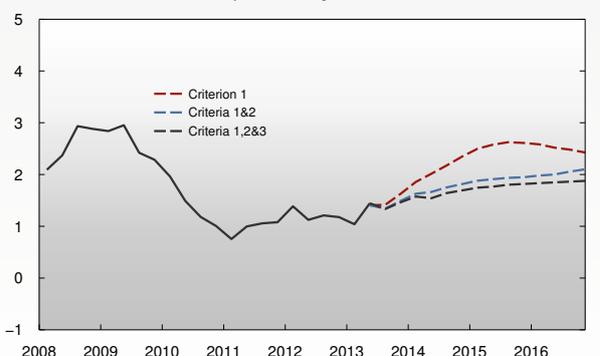
Source: Norges Bank

Chart 1.22b Output gap. Percent. 2008 Q1 – 2016 Q4



Source: Norges Bank

Chart 1.22c CPI-ATE.¹⁾ Four-quarter change. Percent. 2008 Q1 – 2016 Q4



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

The various considerations expressed in the criteria must be 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 bring about a more stable attainment of inflation, output and employment targets over time.

Charts 1.22 a-c illustrate the forecasts for the key policy rate, output gap and inflation when the various criteria are taken into account.

If monetary policy gave weight only to the current low level of inflation, the key policy rate would, according to a technical model-based analysis, be lowered sharply and kept near zero for some time, (see red lines in the charts).² Inflation might then pick up fairly quickly, partly owing to a weaker krone, but output and employment might then show substantial fluctuations.

When weight is also given to avoiding excessive fluctuations in output and employment, the key policy rate will, according to a technical model-based analysis, be somewhat higher in the coming years (see blue line).³ Inflation will then take somewhat longer to rise towards 2.5%, but developments in output and employment will be more stable.

Monetary policy also seeks to be robust and to mitigate the risk of a build-up in the economy of financial imbalances. This consideration is now pushing up the interest rate path. 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. In the baseline scenario, output and employment are projected to move on a more stable path, while it takes longer for inflation to move up towards target.

- 1 The trade-offs between price stability and stability in the real economy is often expressed in the literature as a loss function, which takes into account variability in output and variability in inflation:

$$L_t = (\pi_t - \pi)^2 + \lambda(y_t - y)^2$$

where L_t is the loss, $(\pi_t - \pi)$ is the deviation between actual inflation and the inflation target and $(y_t - y)$ is the output gap. How much weight is given to stable developments in output/employment relative to inflation is determined by the parameter λ .

- 2 In this model analysis, we have used our macroeconomic model NEMO, using a loss function that only gives weight to inflation.
- 3 In this model analysis, we have used NEMO with a loss function that gives weight to both inflation and the output gap, where the weight of the output gap is set at 0.5.

Flexible inflation targeting

Monetary policy is oriented towards low and stable inflation. The operational target of monetary policy is annual consumer price inflation of approximately 2.5% over time. At the same time, monetary policy shall contribute to stable developments in output and employment. Thus, the inflation targeting regime is flexible.

The inflation target for monetary policy was introduced in 2001. Since then, developments in consumer prices have been well within the range of flexibility provided in the mandate for monetary policy. While the 12-month rise in the CPI has been 1.8% on average, annual inflation has varied between 0.4% and 3.8%. Consumer price inflation can, to some extent, vary from month to month and from year to year as a consequence of more random fluctuations in certain prices, including energy prices. Measured as a two-year moving average, annual inflation has varied between 1% and 3%. Inflation has been low and stable.

Monetary policy is flexible and in interest rate setting Norges Bank can give weight to factors other than price inflation as long as inflation expectations remain low and stable. When inflation is high, the key policy rate will thus be set with a view to bringing down inflation and preventing inflation expectations from becoming unanchored. Expectations of high inflation may become self-reinforcing, driving up inflation even further. At the same time, high inflation tends to lead to wider variability in inflation, which makes it more difficult for households and businesses to plan. Moreover, experience shows that there are considerable costs associated with bringing inflation down from high levels.

Conversely, when inflation is low, the key policy rate will be set with a view to bringing up inflation and to preventing inflation expectations from becoming entrenched at too low a level. Inflation expectations that are too low may weaken the effectiveness of

monetary policy. When inflation or output has become too low following an economic downturn, real interest rates should be reduced to counteract these developments. There are limits to how low the key policy rate can be set. If inflationary expectations are very low, this will limit the scope for decline in the real interest rate. This may have a self-reinforcing effect and pull inflation further down. The extreme outcome may be a deflationary recession, with high costs to the economy in general and to borrowers in particular.

Interest rate setting, inflation and the wider economy will be affected by the shocks to which the economy is exposed. Norges Bank will to a further extent than otherwise accept high inflation if both the current situation and outlook for production and employment in Norway are weak. Likewise, Norges Bank will to a further extent than otherwise accept low inflation if both the current situation and the outlook for production and employment in Norway are favourable. Norges Bank also gives weight to robustness and takes account of the risk of a build-up of financial imbalances. These considerations will also affect how quickly inflation is brought back to target.

Inflation is currently low, but is projected in this *Report* to rise gradually to 1¾% by end-2016. Inflation is low partly owing to low external price impulses and a strong krone. The krone is strong partly because oil prices are high and because interest rates abroad are close to zero. At the same time, the crisis in Europe is having a dampening effect on wage growth in Norway. Thus, there are powerful external forces that are holding down price and cost inflation. This also means that the key policy rate must be set very low to fully counteract these forces. In a situation where debt and house prices continue to rise, and with capacity utilisation in the Norwegian economy close to a normal level, allowing time to bring inflation back to target will be a reasonable course of action.

Changes in the projections since *Monetary Policy Report 1/13*

The interest rate forecast in this *Monetary Policy Report* is lower than in the March 2013 *Report* (see Chart 1.23). The projections are based on the criteria for an appropriate interest rate path (see box on page 19), an overall assessment of the situation in the Norwegian and global economy, and Norges Bank's perception of the functioning of the economy.

Chart 1.24 illustrates how news and new assessments have affected the interest rate forecast through their impact on the outlook for inflation, output and employment.¹ The isolated contributions of the different factors are shown by the bars in the chart. The overall change in the interest rate forecast compared with the previous *Report* is shown by the black line.

The prospects for economic growth abroad have weakened somewhat since the March *Report*. This suggests a somewhat lower key policy rate in Norway (see dark blue bars).

The krone has depreciated and is somewhat weaker than projected in the March *Report*. A weaker krone

contributes in isolation to both higher inflation and higher economic activity. This suggests a higher key policy rate (see purple bars).

Output and demand growth in the Norwegian economy has also been lower than projected. Employment growth has slowed, and unemployment has been slightly higher than projected. Capacity utilisation is assessed to be slightly lower than projected in the March *Report*. This suggests a lower key policy rate (see green bars).

Consumer price inflation has been slightly higher than projected in the March *Report*. In isolation, this suggests a higher key policy rate (see red bars). At the same time, inflation prospects have been dampened as wage growth appears to be lower than previously projected. Lower wage growth pushes down the interest rate forecast (see light blue bars).

Premiums in the money market have declined somewhat and are slightly lower than projected in the March *Report*. In isolation, lower premiums push in the direction of a higher key policy rate (see grey bars). At the same time, banks have raised interest

Chart 1.23 Key policy rate in the baseline scenario in MPR 1/13 with probability distribution and key policy rate in the baseline scenario in MPR 2/13 (red line). Percent. 2008 Q1 – 2016 Q4

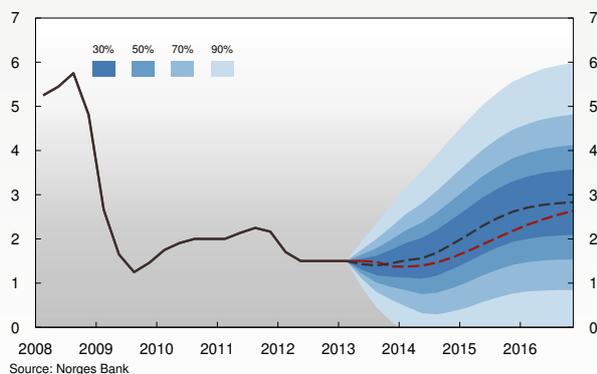
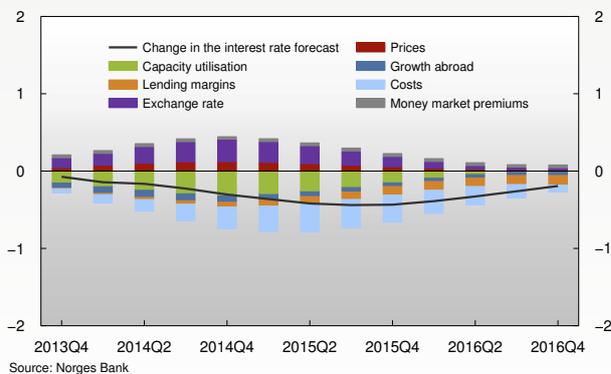


Chart 1.24 Factors behind changes in the interest rate forecast since MPR 1/13. Accumulated contribution. Percentage points. 2013 Q4 – 2016 Q4



rates on loans to households and enterprises. Bank lending margins, the spread between money market rates and lending rates, are expected to remain at somewhat higher levels than previously projected. This pushes in the opposite direction and suggests, in isolation, a lower key policy rate (see orange bars).

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

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

Table 1 Projections for macroeconomic aggregates in *Monetary Policy Report 2/13*. Percentage change from previous year (unless otherwise stated). Change from projections in *Monetary Policy Report 1/13* in brackets.

	2013	2014	2015	2016
CPI	1¾ (¼)	1½ (0)	1¾ (-¼)	1¾ (-¼)
CPI-ATE ¹⁾	1¼ (0)	1½ (0)	1¾ (-¼)	1¾ (-¼)
Annual wages ²⁾	3½ (-½)	3¾ (-½)	4¼ (-¼)	4¼ (0)
Mainland demand ³⁾	2¾ (-¼)	3¼ (-½)	2¾ (-½)	2¾ (-¼)
GDP, mainland Norway	2½ (-¼)	2¾ (-¼)	2¾ (¼)	2¾ (0)
Output gap, mainland Norway (level) ⁴⁾	¼ (-¼)	¼ (-¼)	0 (-¼)	0 (0)
Employment, persons, QNA	1¼ (-¼)	1¼ (0)	1¼ (¼)	1¼ (¼)
Registered unemployment (rate, level)	2½ (0)	2¾ (¼)	2¾ (¼)	2¾ (0)
Level				
Key policy rate ⁵⁾	1½ (0)	1½ (-¼)	2 (-¼)	2½ (-¼)
Import-weighted exchange rate (I-44) ⁶⁾	87 (1½)	87 (2½)	86½ (2)	86¾ (1¾)
Foreign money market rates ⁷⁾	½ (0)	½ (0)	1 (0)	1¼ (0)

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) Forward rates are based on money market rates and interest rate swaps.

Source: Norges Bank

2 Financial stability

Financial imbalances may build up in times of solid growth in the economy. When debt and asset prices rise, the magnitude of a fall is also greater and thereby the vulnerability of the financial system. Banks' capital adequacy, and particularly the countercyclical capital buffer, is intended to reduce this vulnerability. The buffer is to be built up in good times so that it can be drawn down in the event of an economic downturn and prospects of large bank losses. This may induce banks to exercise greater caution in lending during an upturn and tighten lending to a lesser extent in

a downturn than would otherwise be the case. The countercyclical capital requirement will be set by the Ministry of Finance based on advice from Norges Bank. Under the new regulatory framework, the buffer requirement can be introduced in autumn 2013 with effect from the second half of 2014.¹ Norges Bank's criteria for an appropriate countercyclical capital buffer are described below.

¹ For foreign branches in Norway, the requirement will not apply with certainty until 2016, and will then be introduced gradually. It is up to the supervisory authorities in the relevant bank's home country to decide whether the requirement should apply before 2016.

Criteria for an appropriate countercyclical capital buffer¹

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 property prices tend to go hand in hand with increasing debt growth. When banks change their behaviour and obtain a larger share of their funding directly in the financial market, they grow faster and tend to increase their risk exposure at the same time.

Norges Bank's advice to activate or 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 prices², and iv) the wholesale funding ratio of Norwegian credit institutions (See Charts 2.1 to 2.4).³ On the whole, the four indicators provide early warning signals of vulnerabilities and financial imbalances. Historically, they have risen ahead of periods of financial instability.

As a basis for its advice on the capital buffer, Norges Bank will analyse developments in the key indicators and compare the current situation with historical trends and averages. There will not be a mechanical relationship between changes in the indicators and Norges Bank's 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. The size of the buffer will be viewed in the light of other requirements applying to banks, particularly when new requirements are introduced.

Banks will be allowed to draw on the buffer 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

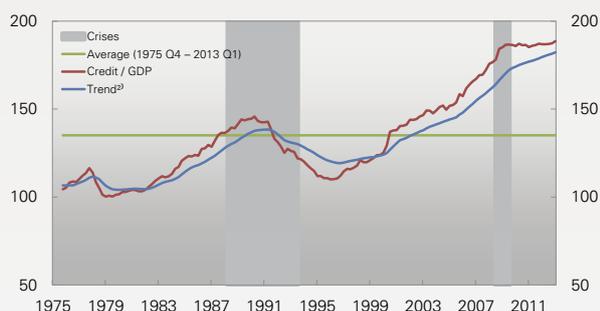
would otherwise be the case. This may mitigate the procyclical effects of tighter bank lending.

The key indicators are not well suited to signalling whether the buffer should be reduced. Other information, such as market turbulence and loss prospects for the banking sector, will then be more relevant. If Norges Bank's assessment suggests an abrupt tightening of bank lending owing to the capital requirements, the Bank would issue advice that banks should be allowed to draw on the buffer. The buffer will not be released to alleviate isolated problems in some banks.

The countercyclical capital buffer is not an instrument for fine-tuning the economy. In the interest of robustness, the buffer 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.

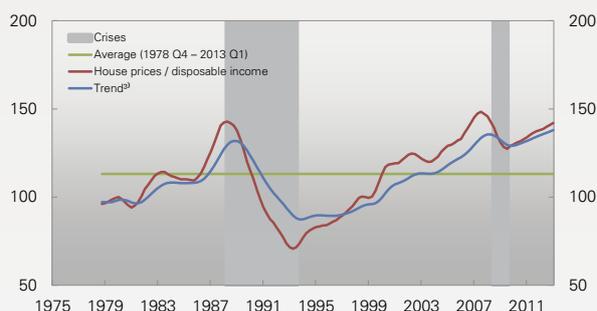
- 1 See also Norges Bank *Papers* 1/2013: Criteria for an appropriate countercyclical capital buffer.
- 2 The indicators are based on selling prices for office premises in Oslo calculated by OPAK using *Dagens Næringsliv*'s (Norwegian financial daily) commercial property price index.
- 3 As experience and insights are gained, the set of indicators can be developed further.

Chart 2.1 Total credit¹⁾ mainland Norway as a percentage of mainland GDP. Percent. 1975 Q4 – 2013 Q1



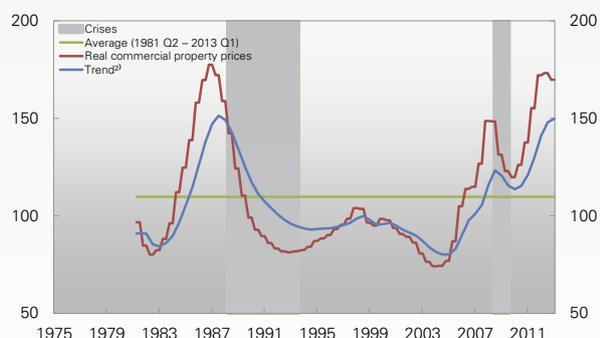
- 1) Sum of C3 non-financial enterprises in mainland Norway (total economy before 1995) and C2 households
 - 2) One-sided Hodrick-Prescott filter with recursive projections. Lambda = 400 000
- Sources: Statistics Norway, IMF and Norges Bank

Chart 2.2 House prices¹⁾ relative to disposable income²⁾. Index. 1998 Q4 = 100. 1978 Q4 – 2013 Q1



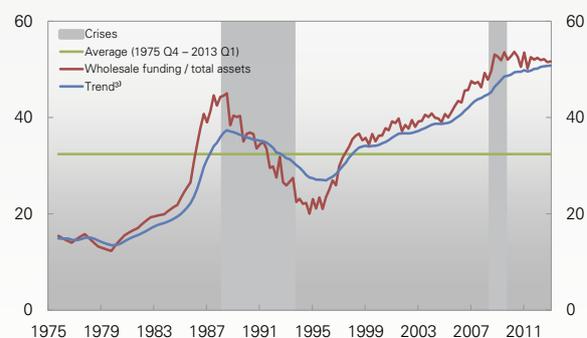
- 1) Quarterly figures before 1990 are calculated by linear interpolation of annual figures
 - 2) Adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3
 - 3) One-sided Hodrick-Prescott filter with recursive projections. Lambda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

Chart 2.3 Real commercial property prices.¹⁾ Index. 1998 = 100. 1981 Q2 – 2013 Q1



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

Chart 2.4 Banks¹⁾ wholesale funding as a percentage of total assets.²⁾ Percent. 1975 Q4 – 2013 Q1



- 1) All banks and covered bond mortgage companies in Norway, excluding branches and subsidiaries of foreign banks in Norway
 - 2) Quarterly figures before 1989 are calculated by linear interpolation of annual figures
 - 3) One-sided Hodrick-Prescott filter with recursive projections. Lambda = 400 000
- Source: Norges Bank

After a long period of expansion, several of the indicators of financial imbalances have stabilised in recent years (see Chart 2.1 to 2.4). Debt and asset prices are no longer rising as rapidly as in the pre-crisis years. The indicators are nonetheless at high levels and are still above the estimated trends (see box on page 30). This indicates that the economy is still vulnerable.

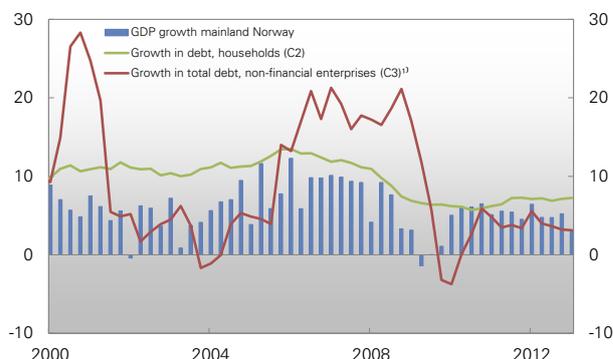
Since mid-2009, total credit has grown approximately in pace with GDP (see Chart 2.1). Overall debt growth is being fuelled by household borrowing (see Chart 2.5). Household debt is rising faster than income, and the ratio of debt to disposable income has thus continued to increase (see Chart 2.6). There are prospects that household debt ratios will continue to rise ahead (see Chart 1.15). When these ratios increase, households become more vulnerable to a loss of income or higher interest rates. An analysis of Norwegian tax data from individual tax returns shows that the share of households with a very high debt to disposable income ratio rose between 2010 and 2011 (see box on page 32). Financial saving is increasing for the household sector overall, but financial buffers are still small for households with high debt.

Although house price inflation in recent months has been somewhat slower than projected in the March 2013 *Monetary Policy Report*, the year-on-year rise at the end of Q1 was still higher than the rise in disposable income (see Chart 2.7). Norges Bank expects house prices to rise at a slower pace than disposable incomes in the years ahead. If developments are in line with projections, the potential for a fall in house prices may gradually diminish.

Since the financial crisis, debt growth for non-financial enterprises has been lower than growth in GDP (see Chart 2.5). Corporate credit demand is closely linked to investment. In May 2013, enterprises in Norges Bank's regional network reported plans for moderate investment growth over the next 12 months (see Chart 2.8), which is in line with investment plans in recent years.

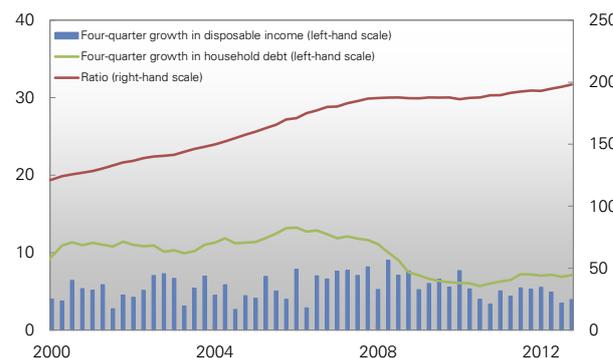
Bank loans are the most important source of funding for non-financial enterprises, representing 80% of total domestic credit (C2) (see Chart 2.9). The banks that participate in Norges Bank's Survey of Bank Lending have in recent years reported a tightening of credit standards for the corporate sector. Lending from banks and mortgage companies account for a smaller portion of enterprises'

Chart 2.5 Debt of households and non-financial enterprises, and mainland GDP. Four-quarter growth. Percent. 2000 Q1 – 2013 Q1



1) Sum of C2 non-financial enterprises and foreign debt of non-financial enterprises. Mainland Norway
Sources: Statistics Norway, IMF and Norges Bank

Chart 2.6 Household debt to disposable income ratio¹. Percent. 2000 Q1 – 2012 Q4



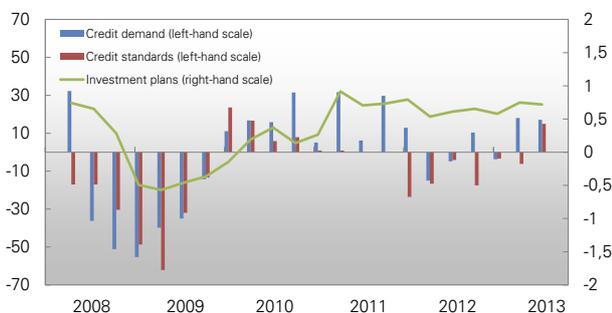
1) Loan debt as a percentage of disposable income, adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3
Sources: Statistics Norway and Norges Bank

Chart 2.7 House prices and disposable income¹. Four-quarter change. Percent. 2000 Q1 – 2013 Q1



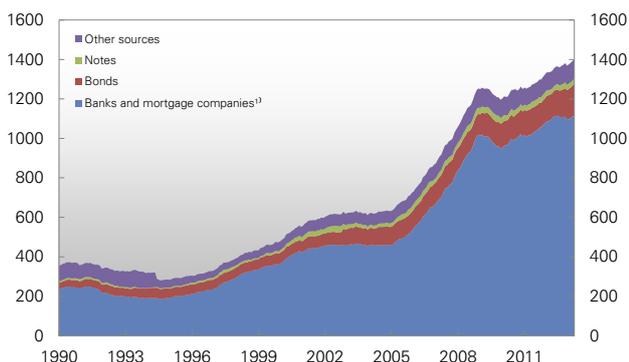
1) Adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3
Sources: Statistics Norway, Norwegian Association of Real Estate Agents (NEF), Eiendomsmeidlerforetakenes Forening (EFF), Finn.no, Eiendomsverdi and Norges Bank

Chart 2.8 Investment plans¹⁾ and credit demand²⁾ from non-financial enterprises, and banks' credit standards for non-financial enterprises. 2007 Q4 – 2013 Q1



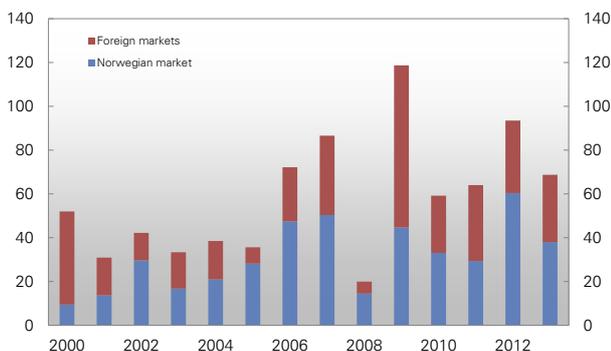
1) Enterprises in Norges Bank's regional network. Expected change in investments over the next 12 months. The index ranges from -5 to +5, where -5 indicates a sharp fall and +5 indicates strong growth
 2) The scale ranges from -100 percent to +100 percent, where -100 indicates a substantial tightening of credit standards/reduction in credit demand, while +100 indicates a substantial easing of credit standards/increase in credit demand
 Source: Norges Bank

Chart 2.9 Domestic credit to Norwegian non-financial enterprises (C2). Stocks. In billions of NOK. January 1990 – April 2013



1) Both Eksportfinans and Export Credit Norway are classified as mortgage companies in this chart, while Export Credit Norway is classified as "other sources" in Statistics Norway's statistics.
 Sources: Statistics Norway and Norges Bank

Chart 2.10 Bond issuance by Norwegian non-financial enterprises in domestic and foreign bond markets. In billions of NOK. 2000 – 2013¹⁾



1) 2013 is based on observations to 13 June
 Sources: Stamdata and Bloomberg

total debt, having declined by more than 2 percentage points since 2012. The decrease in the share of bank debt is matched by higher bond debt. Bonds accounted for more than half of the growth in corporate debt from domestic sources in the year to April 2013.² In 2012, Norwegian non-financial enterprises issued bonds in the amount of NOK 60bn in the Norwegian bond market (see Chart 2.10). Issue volumes increased in most business sectors, but particularly in the shipping and commercial property sectors.³ These are sectors which experienced a tightening of bank lending in 2012. So far in 2013, Norwegian enterprises have issued NOK 70bn in bonds, close to 50% more than in the same period in 2012. In spite of the increase, bond debt as a share of total corporate debt is lower now than it was through the 1990s.

In some commercial property segments, prices have increased considerably in recent years (see Charts 2.3 and 2.11). Banks have substantial exposures to commercial property, particularly in the Oslo region office segment, where the volume of vacant office space increased somewhat over the six months to March 2013 (see Chart 2.11) as new office buildings were completed. At the same time, demand for office space has been high, and market participants expect stable or somewhat lower vacancy rates ahead.⁴ This may contribute to keeping rental and selling prices high. In recent years, banks have tightened credit standards for the commercial property sector. Stricter standards for new loans have reduced risk in banks' commercial property portfolios.⁵

The share of Norwegian banks' and mortgage companies' activities funded by money and bond market credit has been relatively stable since the financial crisis after increasing markedly in the pre-crisis years (see Chart 2.4). When banks expand rapidly, growth in lending is difficult to fund using deposits and equity. With solid growth in deposits combined with moderate lending growth, banks currently have limited need to increase the share of market funding. See Section 3 for more details on banks' funding structures and access to funding.

2 Based on growth in holdings.

3 See *Economic Commentaries* 2/2013.

4 For example report by property company Eiendomsspar, "Oslostudiet 2013", and report by DNB Næringsmegling (commercial property department of DNB bank) of March 2013.

5 Banks' reports to Finanstilsynet (Financial Supervisory Authority of Norway) suggest that the risk in commercial property portfolios overall was reduced between 2011 and 2012. See Finanstilsynet: Risk Outlook 2013.

On 22 March, the Ministry of Finance put forward a legislative proposal on new capital requirements for Norwegian banks. The act was adopted by the Storting (Norwegian parliament) on 10 June and enters into force on 1 July this year. The new regulatory framework is based on the EU's Capital Requirements Directive, the so-called CRD IV framework. The minimum total capital requirement will remain at 8% of which 4.5% must be Common Equity Tier 1 (CET1) capital. In addition, four capital buffers will be introduced: the capital conservation buffer, the systemic risk buffer, the systemic institution buffer and the countercyclical capital buffer (see Chart 2.12).⁶ The countercyclical capital buffer will normally be set at between 0% and 2.5%. All the buffers are to consist of CET1 capital and are referred to as "soft" requirements.⁷ It is intended that the new capital buffers be calculated on the same basis as the current minimum capital requirements.⁸

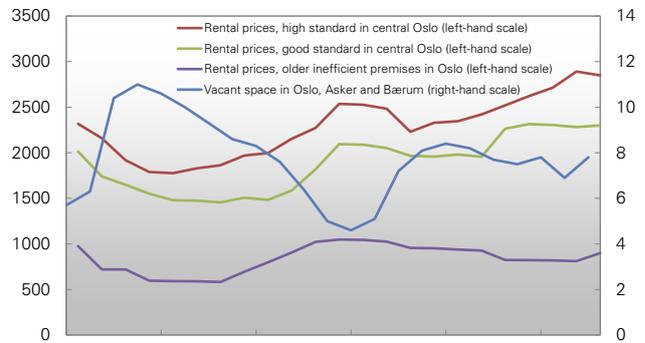
The systemic risk buffer, the systemic institution buffer and the countercyclical capital buffer are all intended to act as buffers against various forms of systemic risk. The countercyclical capital buffer differs from the others in that it is designed to act as a buffer against systemic risk that varies over time.

Implementation will take place somewhat earlier in Norway than scheduled in the international framework. When the systemic risk buffer and the systemic institution buffer have been fully phased in, the CET1 requirement will be 12% for a systemically important Norwegian bank. Including the countercyclical capital buffer, the requirement will vary between 12% and 14.5%.

At end-2012, all large Norwegian banking groups satisfied the CET1 requirement that will apply from 1 July 2013 (see Chart 2.13). The extent of the required increase in capital adequacy ratios for the various banking groups ahead will partly depend on which banks that are identified as systemically important and on the size of the countercyclical capital buffer.

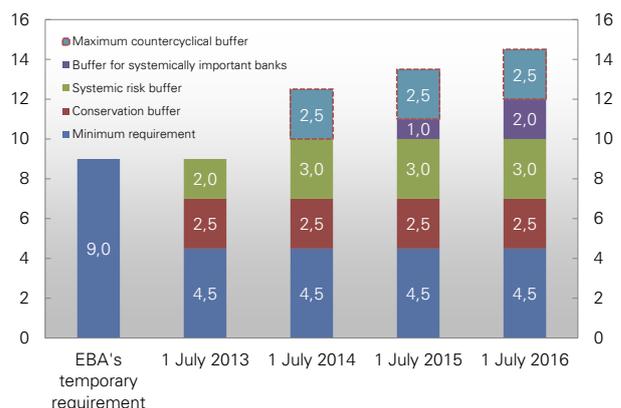
6 The systemic institution buffer will only apply to institutions that are identified later this year as systemically important.
 7 Banks that fail to meet the buffer requirement must present a plan to Finanstilsynet (Financial Supervisory Authority of Norway) showing how they will increase their CET1 capital ratio and will be subject to restrictions on dividend and other payments until the requirements have been satisfied.
 8 See press release from the Ministry of Finance 14 June 2013: "Sanction and entry into force of new capital requirements".

Chart 2.11 Vacant space¹⁾ and rental prices²⁾ for office premises. Percent and NOK per square meter. First half of 2002 – first half of 2013



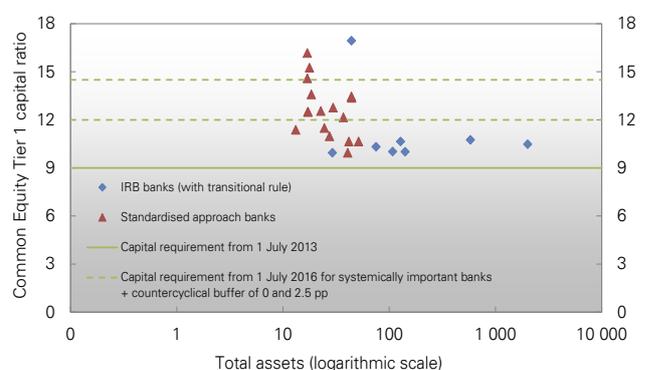
1) Square meters vacant space as a percentage of total square meters. To March 2013
 2) Rental prices at constant 2013 prices. To June 2013
 Sources: OPAK, Dagens Næringsliv, DNB Næringsmegling and Statistics Norway

Chart 2.12 Common Equity Tier 1 capital ratio requirements in the new regulatory framework. Percent. 30 June 2012 – 1 July 2016



Sources: Ministry of Finance and Norges Bank

Chart 2.13 Banking groups¹⁾ Common Equity Tier 1 capital ratios. Percent. Total assets. In billions of NOK. At 31 December 2012



1) Banking groups with total assets in excess of NOK 10bn, excluding branches of foreign banks in Norway
 Sources: Finanstilsynet, banking groups' income statements and Norges Bank

Banks can improve capital adequacy in different ways. First, they can improve capital adequacy by raising equity capital, either by issuing shares or retaining profits. Second, banks can also improve capital adequacy by reducing assets or changing the composition of their lending portfolio to shift into lower risk-weighted assets.

Banks' CET1 capital ratios increased overall by 1.2 percentage points in 2012. If dividend payments had not been made, the increase would have been about 1.4 percentage points. The risk-weighted value of banks' assets was virtually unchanged, reflecting the change in lending portfolio composition. Banks reduced their exposure to high risk-weighted foreign corporate debt⁹ and increased lending to the household sector, where risk weights are lower.

According to the projections in this *Report*, growth in credit to households and enterprises ahead will result in an annual increase in banks' RWAs of around 4%.¹⁰ With earnings at the same level as in 2012, banks will be able to increase their CET1 ratios by up to an annual 1 percentage point overall by retaining earnings.¹¹ To increase capital ratios more rapidly, banks would have to increase their net earnings or reduce growth in RWAs. Banks have recently increased their lending margins, which has improved earnings and will enable a more rapid increase in capital ratios. Banks can also opt to raise fresh capital through share issues.

9 The reduction is the result of both a stronger krone and an actual reduction in lending.

10 This is a simplified calculation based on banks' lending to households and enterprises and assuming that 60% of lending is to households and 40% to enterprises. We have assumed that the transitional rule will still apply as a binding rule and that about half of corporate debt growth will be bond debt.

11 We have assumed that earnings are used in their entirety to increase equity.

Measuring financial imbalances

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. The gap between the key indicators and their estimated trends can serve as a measure of financial imbalances. When actual developments deviate substantially from trend, it may indicate that developments are not sustainable over time. This may signal future financial crises. 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 have been considered.

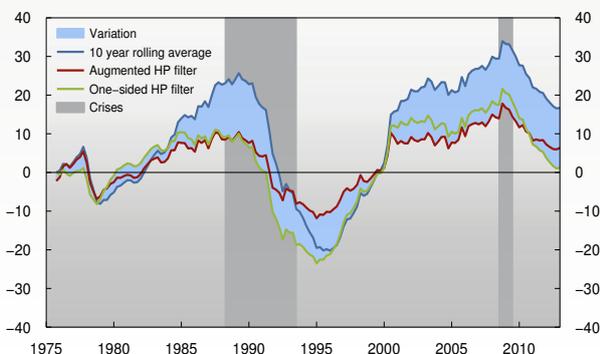
The Basel Committee on Banking Supervision recommended using a one-sided Hodrick-Prescott (HP) filter as a technical starting point for calculating the trend of the credit-to-GDP ratio.¹ The HP filter uses both historical and future information in calculating the trend. A pure one-sided filter does

not use assumptions about developments ahead. Trends are estimated so that they provide an expression of what the trend would be at any point in time during the observation period.

An advantage of the one-sided HP filter is that more recent observations are given higher weights. This could be a way of capturing structural breaks in the indicator. At the same time, the trend is rendered sensitive to sharp increases or decreases in the indicators towards the end of the observation period. By augmenting the observation period with a forecast based on the assumption of an unchanged level ahead, such pronounced changes have less influence on trend estimates. Calculations show that this also reduces the uncertainty linked to the trend estimates of the indicators. The method is also used in the trend calculations in Charts 2.1 to 2.4.²

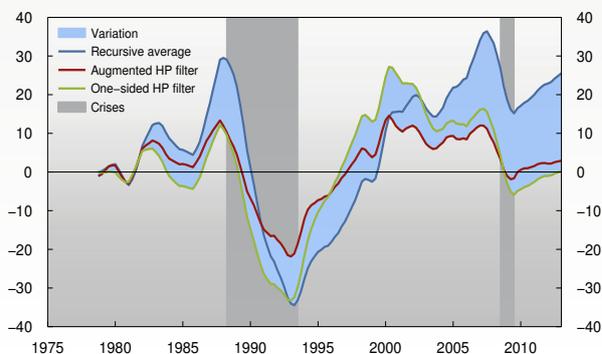
For indicators that can be assumed to be stationary over time, a historical mean may also be a useful reference point. House prices as a percentage of disposable income and real commercial property

Chart 2.14 Total credit¹⁾ mainland Norway as a percentage of mainland GDP. Highest and lowest gap values. Percentage points. 1975 Q4 – 2013 Q1



1) Sum of C3 non-financial enterprises in mainland Norway (total economy before 1995) and C2 households
Sources: Statistics Norway, IMF and Norges Bank

Chart 2.15 House prices¹⁾ relative to disposable income²⁾. Highest and lowest gap values. Percent. 1978 Q4 – 2013 Q1



1) Quarterly figures before 1990 are calculated with 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

prices can be assumed to return to their historical mean over time. For these two indicators, we have therefore chosen to estimate an alternative trend in the form of a mean. The mean is estimated recursively so that trend at all points in time is not influenced by data that are published at a later time. A historical mean is not suitable as a reference point for indicators that cannot be expected to return to historical levels, such as credit-to-GDP and banks' wholesale funding ratio. The evolution towards deeper and broader financial markets since the deregulation in the 1980s and 1990s implies a more active use of credit and financial markets by households and enterprises. For these variables we have chosen to base the mean on a 10-year moving period.

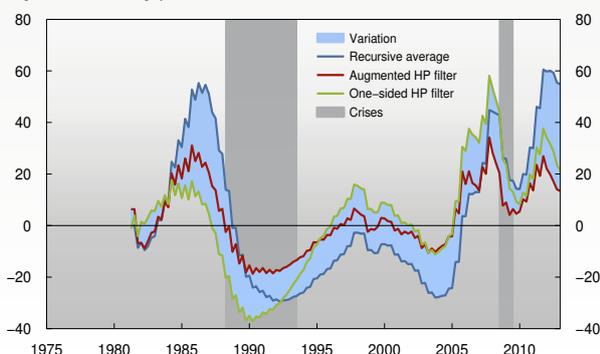
Charts 2.14 to 2.17 show the key indicators measured as the deviation from their trends. The charts show a one-sided HP filter as applied by the Basel Committee, a HP filter estimated on data extended using a forecast and mean calculations as described above. Compared with the Basel Committee's method, trends calculated using the extended HP filter produce a somewhat bigger gap

between the credit-to-GDP ratio, house prices as a share of disposable income, and banks' wholesale funding ratios and their trends at the end of the period. The distance between the highest and lowest gap values can be said to be a measure of the uncertainty linked to the calculations. Compared with their historical mean, all the indicators are at high levels.

Work is underway in a number of countries to develop indicators for financial imbalances. As further insight is gained, Norges Bank's indicators and trend calculation methods can also be further developed.

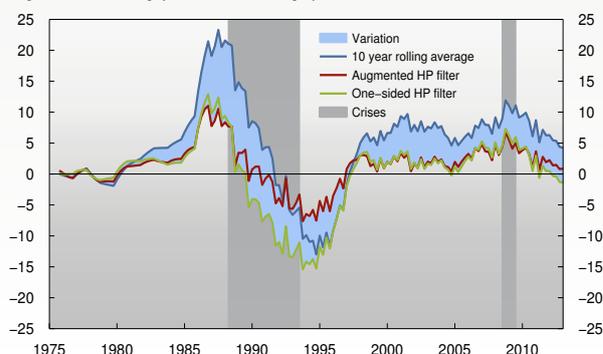
- 1 Basel Committee on Banking Supervision, "Guidance for national authorities operating the countercyclical capital buffer", December 2010.
- 2 For a further analysis of this methodology, see "Key indicators for a countercyclical capital buffer in Norway – Trends and Uncertainty", Norges Bank Staff Memo 13/2013.

Chart 2.16 Real commercial property prices.¹⁾
Highest and lowest gap values. Percent. 1981 Q2 – 2013 Q1



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 2.17 Banks¹⁾ wholesale funding as a percentage of total assets.²⁾
Highest and lowest gap values. Percentage points. 1975 Q4 – 2013 Q1



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

Household vulnerability¹

Households with high debt relative to income and assets are vulnerable to interest rate increases or a loss of income. Household debt is largely secured on dwellings, and history has shown that defaults on residential mortgages are rare in Norway. Our analyses confirm that the majority of households have a considerable distance to default. However, in the event of a loss of income or rising interest rates, many households would have to reduce spending on goods and services. This may lead to a downward shift in turnover, earnings and production in the business sector, which may subsequently result in rising losses on banks' corporate loan exposures.

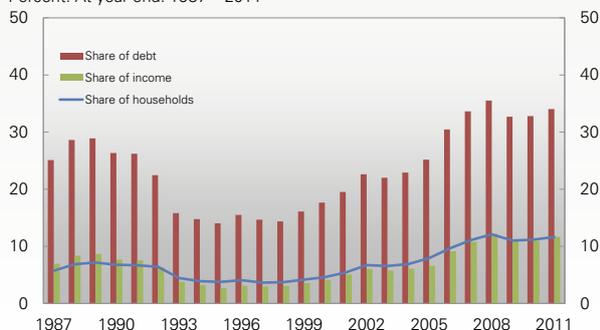
The share of households with a ratio of debt to disposable income of over 500% is high and edged up between 2010 and 2011 (see Chart 2.18). The increase in house prices and household debt in 2012 and 2013 suggests that the share has continued to rise. At the same time, total household debt is shifting towards older households (over 55) (see Chart 2.19). The debt to income ratio is generally

lower for older households than for younger households, making them less vulnerable.

Interest rate sensitivity increases with the level of debt relative to disposable income. As long as borrowing rates are low, the interest burden² will also be low. Should borrowing rates rise to the same level as in 2008, i.e. 7%-8%, about 20% of households would have an interest burden of more than 20%. Approximately half of the households with debt to disposable income ratios of 500% already had an interest burden of over 20% at the time of the low interest rate level in 2011. Higher interest payments reduce households' disposable income, resulting in lower demand for goods and services.

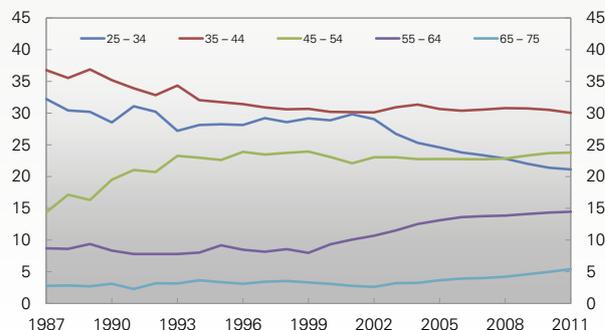
The household sector holds considerable financial wealth. A relatively high level of saving in recent years has led to a further increase in household financial wealth. In isolation, financial assets that can easily be drawn on make households more robust. This wealth is unevenly distributed, and financial

Chart 2.18 Share of households with a debt to disposable income ratio of over 500 percent, and their share of total income after taxes and debt. Percent. At year end. 1987 – 2011



Sources: Statistics Norway (tax assessment data) and Norges Bank

Chart 2.19 Distribution of household debt by different age groups.¹⁾ Percent. At year end. 1987 – 2011



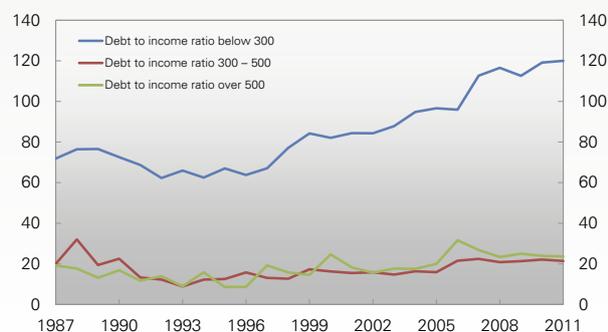
1) The under-25 and over-75 age groups are not included in the chart
Sources: Statistics Norway (tax assessment data) and Norges Bank

assets as a share of debt is increasing for households with low debt relative to disposable income (see Chart 2.20). The relationship between financial assets and liabilities is stable for groups with high or medium levels of debt relative to disposable income.

Although Norwegian banks' losses on residential mortgage loans have been low so far, other countries' experience of the financial crisis show that banks must also be prepared for losses on residential mortgage loans. Households with little financial leeway after normal expenses have been covered are particularly vulnerable to default on their loans. The share of households with a margin³ of less than one month's wages has gradually decreased in Norway (see Chart 2.21). This reflects both lower standard consumption costs, as a result of a low rise in prices for consumer goods, and a decrease in borrowing rates. These households held less than 10% of total debt at the beginning of 2012. Loss of income and interest rate increases could result in default for these households, but total bank losses would probably be small.

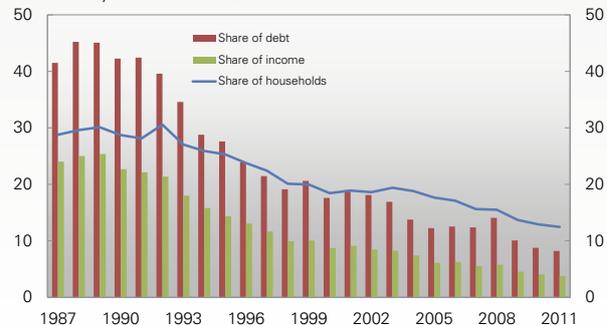
- 1 The analysis is based on tax assessment data for Norwegian households. The most recent available figures are from 31 December 2011. Households where the primary wage-earner is self-employed are excluded.
- 2 Interest burden = interest payments/(disposable income + interest payments).
- 3 Margin = disposable annual income – standard consumption (estimated by the National Institute for Consumer Research (SIFO)) – housing consumption (Norges Bank estimates based on Statistics Norway's survey of consumer expenditure) – interest payments.

Chart 2.20 Financial assets¹⁾ as a share of debt for households with varying debt to income ratios. Percent. At year-end. 1987 – 2011



1) According to tax assessments, excluding insurance claims
Sources: Statistics Norway (tax assessment data) and Norges Bank

Chart 2.21 Share of households with a margin¹⁾ of less than one month's income, and their share of total income after taxes and debt. Percent. At year-end. 1987 – 2011



1) Households' margin is calculated as disposable annual income less standard consumption by type of household as calculated by the National Institute for Consumer Research (Sifo). Housing consumption according to own calculations based on Statistics Norway's Survey of consumer expenditure and interest payments are also deducted.
Sources: Statistics Norway (tax assessment data), Sifo and Norges Bank

3 The projections

The global economy

Growth prospects for most of our main trading partners are somewhat weaker than projected in the March 2013 *Monetary Policy Report*. Growth in the US is temporarily being restrained by tax increases and expenditure cuts. In Europe, highly indebted countries are expected to take longer to emerge from recession. Growth in emerging economies also appears to be somewhat weaker this year. In 2014, growth is expected to approach its long-term trend, but due to a high degree of resource availability in many countries, it will take time for unemployment to decline to more normal levels.

As from this *Report*, a revised trading partner aggregate is applied (see *Staff Memo* 12/2013). Up to the financial crisis, the revision entails only small changes in GDP growth for trading partners as a whole, but after 2010 annual GDP growth has been $\frac{1}{4}$ percentage point higher with the new country composition (see Chart 3.1). Growth among trading partners is expected to increase from $1\frac{1}{4}\%$ in 2013 to $2\frac{1}{2}\%$ in 2014. The projection for 2013 has been revised down by $\frac{1}{4}$ percentage point since the March *Report* (see Table 3.1). Global growth is projected at $2\frac{1}{2}\%$ in 2013, slightly below the average for the past 30 years.

In the light of slightly weaker growth prospects, most central banks in advanced countries have maintained a very loose monetary policy. In April, the Bank of Japan announced further quantitative easing. In order to attain its inflation target of 2% within two years, the Bank of Japan is seeking to double the size of base money, also referred to as the monetary base, by the end of 2014¹. The planned increase will be achieved primarily via purchases of Japanese government bonds. The scheme involving Outright Monetary Transactions (OMT) announced by the ECB in autumn has not been used so far, but has bolstered confidence that the Eurosystem will remain intact. Loose monetary policies contributed to a fall in yields in these countries and to a rise in stock indices up to May. Government bond yields have recently

¹ Base money (M0) comprises banknotes and coin in circulation in addition to deposits with the central bank, the latter referred to as central bank reserves or banks' liquidity. When the central bank buys government bonds or other securities in its conduct of monetary policy, it pays by crediting banks' accounts in the central bank, resulting in an increase in base money. The concepts are discussed further in Norges Bank *Staff Memo* 5/2011 (Norwegian only).

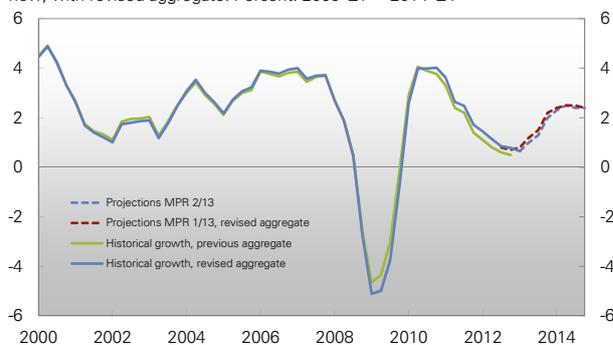
Table 3.1 Projections for GDP growth in other countries.
Change from previous year. Percent. Change from projections in *Monetary Policy Report* 1/13 in brackets

	Share of world GDP ¹⁾ (percent)	2013	2014	2015 – 2016 ²⁾
US	23	2 (- $\frac{1}{4}$)	2 $\frac{3}{4}$ (0)	3 $\frac{1}{4}$ (0)
Euro area	20	- $\frac{1}{2}$ (- $\frac{1}{4}$)	1 (- $\frac{1}{4}$)	1 $\frac{3}{4}$ (0)
UK	4	1 (0)	1 $\frac{3}{4}$ (- $\frac{1}{4}$)	2 $\frac{1}{4}$ (0)
Sweden	0.7	1 $\frac{1}{2}$ ($\frac{1}{4}$)	2 $\frac{1}{2}$ (0)	2 $\frac{3}{4}$ (0)
China	9	7 $\frac{3}{4}$ (- $\frac{1}{4}$)	7 $\frac{3}{4}$ (- $\frac{1}{4}$)	7 $\frac{1}{2}$ (0)
Emerging economies ³⁾	12	4	4 $\frac{1}{2}$	4 $\frac{3}{4}$
Trading partners ⁴⁾	78	1 $\frac{1}{4}$ (- $\frac{1}{4}$)	2 $\frac{1}{2}$ (0)	2 $\frac{3}{4}$ (0)
World (PPP) ⁵⁾	100	3 $\frac{1}{4}$ (- $\frac{1}{4}$)	4 (0)	4 $\frac{1}{4}$ (0)
World (market exchange rates) ⁵⁾	100	2 $\frac{1}{2}$ (- $\frac{1}{4}$)	3 $\frac{1}{4}$ (- $\frac{1}{4}$)	3 $\frac{3}{4}$ (0)

- ¹⁾ Country's share of global output measured in a common currency (market exchange rate). Average 2009–2011.
- ²⁾ Average annual growth.
- ³⁾ Emerging economies in the trading partner aggregate excluding China: Brazil, India, Indonesia, Russia, Turkey, Poland and Thailand. GDP weights.
- ⁴⁾ Export weights, 25 main trading partners. The aggregate has been changed from this *Report* onwards. Canada, Austria, Greece, the Czech Republic, Hungary and Taiwan are excluded. Brazil, India, Indonesia, Russia and Turkey are included. The changes in the projections are related to what the growth projections would have been in MPR 1/13 with the revised trading partner aggregate.
- ⁵⁾ GDP weights. Norges Bank's estimates for 25 trading partners, other estimates from IMF.

Sources: IMF, Eurostat and Norges Bank

Chart 3.1 GDP trading partners. Four-quarter growth. Historical data with revised and previous trading partner aggregate. Projections in MPR 1/13 and now, with revised aggregate. Percent. 2000 Q1 – 2014 Q4



Sources: Thomson Reuters and Norges Bank

Chart 3.2 Yields on 10-year government bonds. Percent. 1 January 2010 – 13 June 2013



Source: Bloomberg

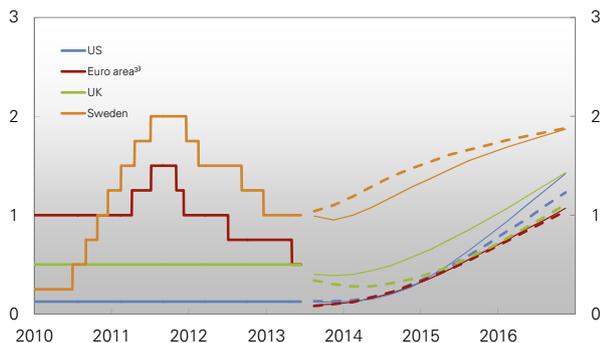
Chart 3.3 Developments in equity markets. Index. 1 January 2010 = 100. 1 January 2010 – 13 June 2013



Source: Bloomberg

increased, however, both in debt-laden euro area countries and in the large economies (see Chart 3.2). The increase reflects some improvement in the US labour market and hence expectations that the Federal Reserve will reduce its monthly bond purchases already in 2013. Since the *March Report*, government bond yields for the large economies have remained broadly unchanged, while they have edged down for the heavily indebted euro area countries. Stock markets have also turned somewhat, with a recent drop in equity prices (see Chart 3.3). On the whole, stock indices in the US and Europe are somewhat higher than at the time of the publication of the *March Report*.

Chart 3.4 Key rates and estimated forward rates at 8 March 2013 and 13 June 2013.¹⁾ Percent. 1 January 2010 – 31 December 2016²⁾



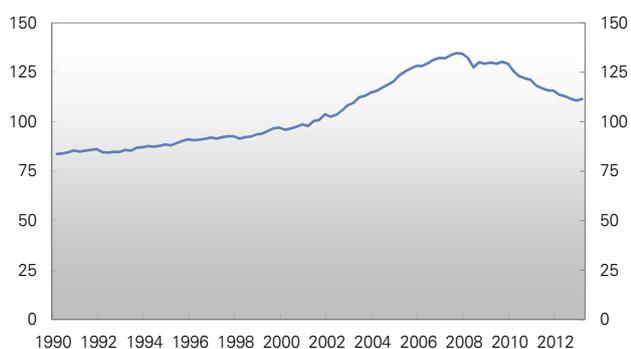
1) Broken lines show estimated forward rates at 8 March 2013. Thin lines show forward rates at 13 June 2013. Forward rates are based on Overnight Index Swap (OIS) rates
2) Daily data from 1 January 2010 and quarterly data from 2013 Q3
3) EONIA for the euro area from 2013 Q3
Sources: Bloomberg and Norges Bank

Key policy rates in the US, UK and Japan have remained unchanged since the March 2013 *Monetary Policy Report*. Market participants expect unchanged key policy rates in these countries in the next few years (see Chart 3.4). The ECB lowered its key policy rate from 0.75% to 0.5% in May. Market prices do not indicate any change in the key policy rate in the coming years. In Sweden, the key policy rate has been unchanged at 1% since the previous *Report*, but market participants have priced in some probability of a rate cut later this year. For trading partners as a whole, market key rate expectations are approximately unchanged on the *March Report*.

Growth prospects for regions and countries

In the US, GDP growth was somewhat lower than expected in 2013 Q1. Automatic public spending cuts from 1 March and previously adopted tax increases are dampening growth in the short term. Unemployment has declined, not only owing to an increase in employment, but also to labour force outflows. The labour force participation rate in the US is now at its lowest level since the mid-1980s. Private consumption and investment are expected to grow faster in the period ahead. Deleveraging in the household sector has come a long way (see Chart 3.5), and the housing market is steadily improving. In addition, fiscal policy will be less contractionary in 2014 than in 2013. In the longer run, increased energy production and improved cost competitiveness are also expected to boost growth.

Chart 3.5 US household debt as a share of disposable income. Percent. 1990 Q1 – 2013 Q1



Sources: Thomson Reuters and Norges Bank

Euro area GDP declined for the sixth consecutive quarter. The decline in Q1 was nonetheless clearly more moderate than in Q4 and there are signs of some stabilisation in the hardest-hit countries. For euro area core countries

developments are more mixed. Germany experienced weak growth, while activity is falling in France. For the euro area as a whole, it appears that domestic demand is falling less rapidly than earlier. Private consumption has stabilised at a low level and investment is falling at a slower pace. Planned fiscal tightening measures are on a smaller scale than in 2012. Unemployment is record high.

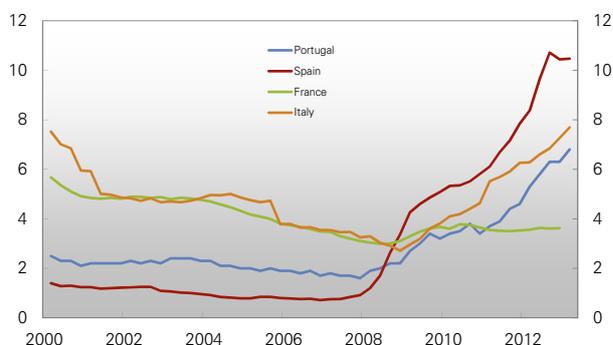
The improvement in financial markets observed since summer 2012 has so far only had limited positive effects on the real economy in the euro area. In particular, the situation in the banking sector is still difficult in many countries. Although capital adequacy has improved, increasing default rates are fuelling fears of higher losses and weaker earnings ahead (see Chart 3.6). Increased capital requirements are also restraining banks' capacity and willingness to lend, while falling house prices and rising unemployment are reducing collateral values and borrowers' payment capacity. Debt ratios are high and access to credit is difficult for many small and medium-sized firms in heavily indebted countries. At the same time, weak growth prospects are having a dampening impact on credit demand (see Chart 3.7).

Euro area growth is expected to be somewhat lower than anticipated in the *March Report*, reflecting tight credit standards and lower export-oriented demand, particularly from emerging economies. The work towards Banking Union and measures to improve credit accessibility will likely contribute to a gradual normalisation of the inter-bank market and increased willingness of banks to lend. GDP growth is projected to increase to 1% in 2014.

In the UK, the catch-up following the sharp fall in activity in 2008 and 2009 has been unusually weak. Low wage growth and persistently high inflation have led to a deterioration of UK households' purchasing power. Growth is expected to continue on a weak trend in the coming years owing to continued high private sector debt ratios, tight fiscal policy and weak developments in important export markets.

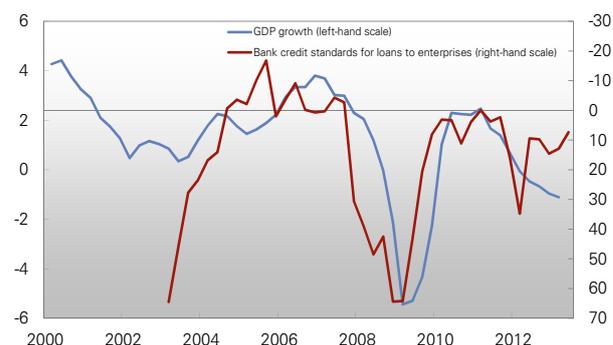
Growth in the Swedish economy accelerated in Q1. Private consumption grew at a brisk pace and household optimism has improved. On the other hand, the export sector is feeling the adverse effects of a continued fall in euro area activity and slower growth in emerging economies. Manufacturing production has been virtually

Chart 3.6 Non-performing loans as a share of total loans. Percent. 2000 Q1 – 2013 Q1



Sources: Thomson Reuters and Banque de France

Chart 3.7 Euro area bank credit standards. Net data¹. 2003 Q1 – 2013 Q2. GDP. Four-quarter change. Percent. 2000 Q1 – 2013 Q1



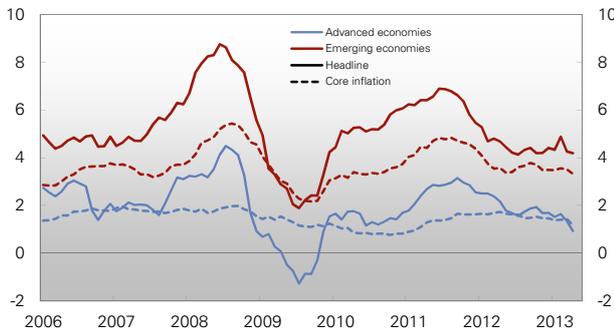
1) Euro area bank lending survey. Values above zero indicate tighter credit conditions
Source: Thomson Reuters

Chart 3.8 Retail sales in emerging economies. Volume. Three-month moving average. 12-month change. Percent. January 2000 – March 2013



1) Adjusted for flooding in Thailand in 2011
Sources: Thomson Reuters, IMF and Norges Bank

Chart 3.9 Consumer prices in advanced and emerging economies.¹⁾ 12-month change. Percent. January 2006 – April 2013



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

Table 3.2. Projections for consumer prices in other countries (change from previous year, percent) and oil price. Change from projections in *Monetary Policy Report 1/13* in brackets

	2013	2014	2015–16 ¹⁾
US	1½ (-¼)	2 (0)	2¼ (0)
Euro area ²⁾	1½ (-¼)	1½ (0)	1¾ (0)
UK	2½ (¼)	2¼ (0)	2 (0)
Sweden	0 (-½)	1½ (-¾)	2½ (0)
China	2¾ (-½)	3½ (0)	3¼ (0)
Emerging economies ³⁾	6	5¾	5½
Trading partners ⁴⁾	1¾ (-¼)	2¼ (0)	2½ (0)
Oil price Brent Blend ⁵⁾	105	100	95

¹⁾ Average annual rise.

²⁾ Weights from Eurostat (each country's share of euro area consumption).

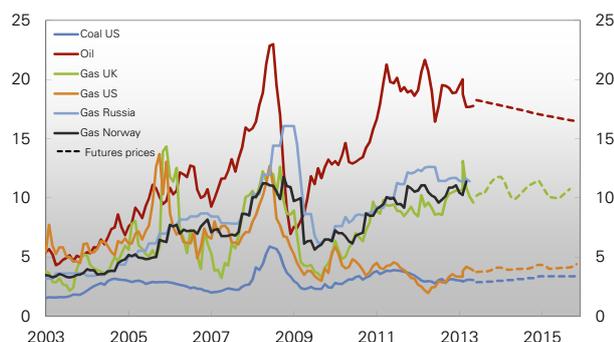
³⁾ Emerging economies in the trading partner aggregate excluding China: Brazil, India, Indonesia, Russia, Turkey, Poland and Thailand. GDP weights.

⁴⁾ Import weights, 25 main trading partners. The aggregate has been changed from this *Report* onwards. Canada, Austria, Greece, the Czech Republic, Hungary and Taiwan are excluded. Brazil, India, Indonesia, Russia and Turkey are included. The changes in the projections are related to what the inflation projections would have been in MPR 1/13 with the revised trading partner aggregate.

⁵⁾ Futures prices (average for the past five trading days). USD per barrel. For 2013, an average of spot prices so far this year and futures prices for the rest of the year is used.

Sources: Eurostat, Thomson Reuters and Norges Bank

Chart 3.10 Prices for coal, crude oil and natural gas. USD per MMBTU. January 2003 – December 2015



Sources: IMF, Thomson Reuters, Statistics Norway, Ministry of Finance and Norges Bank

unchanged over the past six months. Looking ahead, the rate of growth is expected to pick up, supported by an expansionary economic policy and a gradual improvement among Sweden's main trading partners.

In China, GDP growth was somewhat weaker in Q1 than anticipated in the *March Report*, primarily reflecting lower-than-expected growth in investment and manufacturing production. House price inflation has edged up and further regulations were introduced in April in order to limit overinvestment in the housing market. The authorities now seem to be tolerating somewhat lower growth than earlier to pave the way for increased private consumption and a more sustainable economic development. Against the background of continued high credit growth, increased infrastructure investment and further stabilisation of the housing market, economic growth is now projected between 7.5% and 8% over the next few years.

Developments in other emerging economies have also been somewhat weaker than expected in the *March Report*. After a gentle improvement towards the end of 2012, export growth has slowed, in particular growth in exports to advanced economies. Domestic demand has been strong for a long period. This must be viewed in the light of low interest rates, high credit growth and expansionary fiscal policies. However, growth in demand is now slowing in many emerging economies (see Chart 3.8). Lower credit growth in many countries is likely to continue to pull down growth further ahead. In Brazil, an expansionary policy is fuelling a moderate increase in domestic demand, while weak competitiveness is curbing exports.

Prices

Consumer price inflation has fallen in many advanced countries (see Chart 3.9). For most of Norway's trading partners, inflation is projected to be somewhat lower this year than expected in the *March Report*, reflecting the fall in commodity prices in recent months and low capacity utilisation in most advanced economies. Long-term inflation expectations appear to be firmly anchored to inflation targets in both the US and Europe. Consumer price inflation for our trading partners as a whole is now projected to increase to around 2½% annually as economic growth gradually picks up (see Table 3.2).

The oil price is just above USD 100, about USD 10 lower than in the *March Report*. The fall in oil prices primarily

reflects slower-than-expected Q1 growth in the US and China. Futures prices indicate some decline in oil prices ahead, which is probably due to expectations of moderate growth in global oil demand, in conjunction with an increase in non-OPEC production, particularly in North America. The projections in this *Report* are based on the assumption that oil prices will track futures prices (see Table 3.2).

Norwegian gas export prices remain high (see Chart 3.10). Relatively high futures prices for oil and British gas indicate continued high prices for Norwegian gas exports.

The Economist commodity-price index has fallen by about 3% since the March *Report*. Prices for industrial metals have dropped by about 5% in the same period. Futures prices point to some rise in prices ahead (see Chart 3.11). Food commodity prices have declined by about 2%, but are still high from a historical perspective. After falling in March and April, most commodity prices have edged up recently.

Foreign exchange markets

Since the March 2013 *Monetary Policy Report*, central bank measures have continued to influence developments in a number of major currencies. The Japanese yen depreciated after the Bank of Japan announced further quantitative easing, but has later recovered. The US dollar has fluctuated with market expectations concerning central bank bond buying, but has overall depreciated. The euro has appreciated somewhat. Pound sterling depreciated at the beginning of the year, but has since appreciated on signs of improvement in the UK economy.

The effective krone exchange rate reached historically strong levels in mid-February, but depreciated again in the following two months. The depreciation reflected lower oil price and a larger decline in market interest rates in Norway than abroad. So far in the second quarter, the krone measured by the import-weighted exchange rate index (I-44), has on average been 1.3% weaker than assumed in the previous *Monetary Policy Report* (see Chart 3.12). In this *Report*, the import-weighted krone exchange rate index (I-44) is projected to remain close to the average rate over recent months in the coming quarters.

Chart 3.11 Commodity prices. USD. Index. 2 January 2007 = 100. January 2003 – December 2015

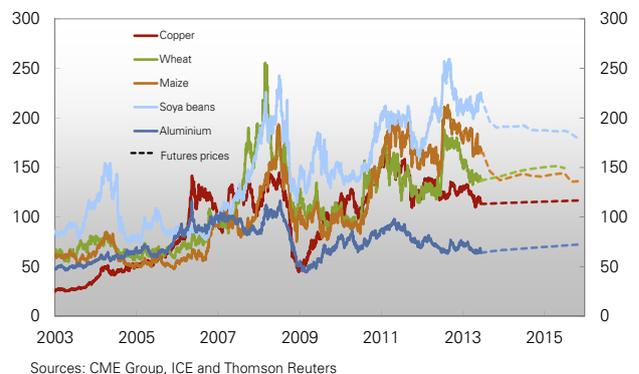
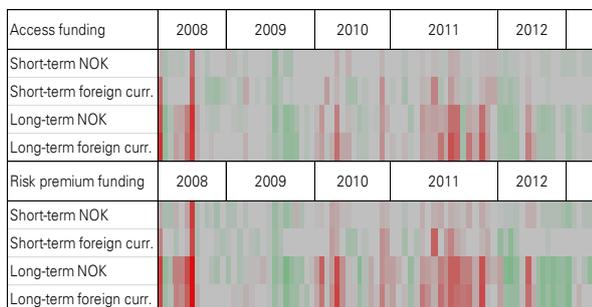


Chart 3.12 Developments in the krone exchange rate. Import-weighted exchange rate index (I-44)¹⁾. 1 January 2006 – 13 June 2013



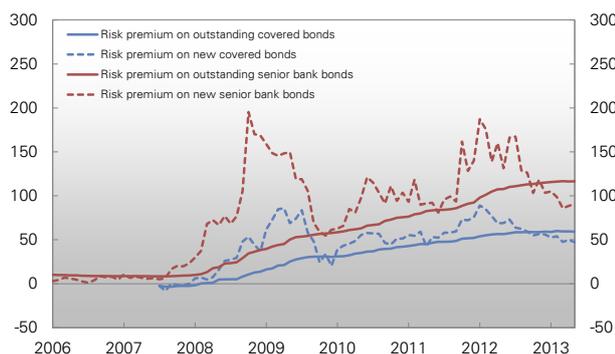
1) A positive slope denotes a stronger krone exchange rate
Source: Norges Bank

Chart 3.13 Banks' qualitative assessment of access to and premiums on wholesale funding.¹⁾ March 2008 – May 2013



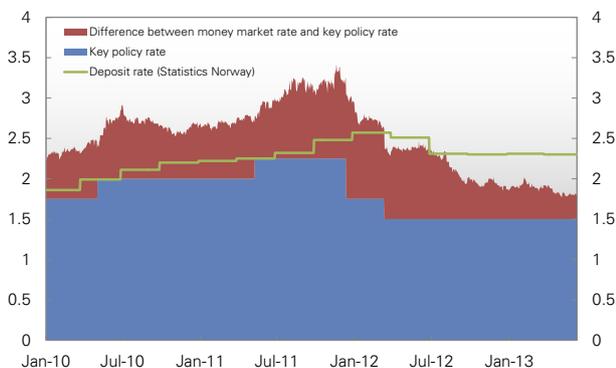
1) Average of banks reporting in Norges Bank's liquidity survey. For short-term funding in foreign currency, only banks active in these markets are included. Red indicates reduced access and higher premiums, grey indicates unchanged, green indicates increased access and lower premiums. During some periods of increased market turmoil, banks have reported twice a month
Source: Norges Bank

Chart 3.14 Average risk premium¹⁾ on new and outstanding bond debt for Norwegian banking groups²⁾. Basis points. January 2006 – May 2013



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

Chart 3.15 Deposit rate¹⁾ and money market rate. Percent. 1 January 2010 – 13 June 2013



1) All banks in Norway
Sources: Statistics Norway and Norges Bank

Norwegian banks

Wholesale funding and deposits are banks' most important funding sources. The price of wholesale funding for banks has declined since the March *Report*, while deposit rates have remained broadly unchanged.

Risk premiums in the money market in many countries have declined to near pre-crisis levels. The risk premium in the Norwegian three-month money market rate has fallen to levels of around 0.30 percentage point, somewhat lower than projected in the March *Report*. Premiums are expected to remain at this level ahead.

Norwegian banks and mortgage companies continue to have ample access to funding (see Chart 3.13), and risk premiums on new long-term wholesale funding have fallen since the March *Report*. After having risen since 2007, average risk premiums on holdings of bank bonds have now stabilised (see Chart 3.14). If premiums on new funding remain at the current level ahead, the average premium on holdings of bank bonds will decline somewhat.

There is still considerable uncertainty regarding developments in risk premiums on long-term wholesale funding. Deleveraging in Europe, high deposit growth and continued high levels of central bank liquidity provision are reducing the supply of bank and mortgage company bonds, keeping risk premiums on bank bonds and covered bonds low. The build-up of bank capital may also reduce bondholders' risk of losses, thus lowering the risk premiums on this type of funding. On the other hand, the manner in which Cypriot banks were dealt with in March drew attention to the coming European Recovery and Resolution Directive. It is expected that holders of bank bonds will have to absorb losses, also short of insolvency, when banks do not meet capital requirements. This may lead to higher risk premiums on this type of funding.

In the past year, banks paid relatively high interest rates on customer deposits, and deposit rates were higher than money market rates (see Chart 3.15). Lower risk premiums on wholesale funding may suggest that in the period ahead, banks will be unwilling to pay such high deposit rates.

Banking groups' pre-tax profits were higher in 2013 Q1 than in 2012 Q1. Loan losses continue to be low. Including the entire profit for the quarter, the CET1 ratio at IRB banking groups² rose by 0.1 percentage point to 10.7%.³

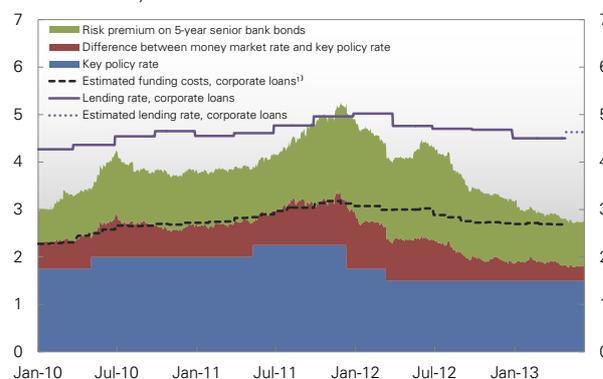
Banks' lending rates were approximately unchanged between 2012 Q4 to 2013 Q1 (see Charts 1.5 and 3.16). Lending spreads, the difference between lending rates and money market rates, were somewhat lower in Q1 than projected in the March *Report*. Most Norwegian banks announced higher lending rates in March. The reason cited for the increase, which became effective for loan customers from the end of April, is stricter capital requirements. The changes in capital requirements are described in Section 2. The rate increases are expected to boost lending spreads from 2013 Q2, with spreads expected to remain at that level for the remainder of the year before they are gradually reduced (see Chart 3.17).

Norwegian banks and mortgage companies have maintained growth in household lending in 2013 Q1, while growth in corporate lending has slowed. The lending survey from Q1 showed that banks expect somewhat tighter credit standards in Q2. This may reflect expectations of stricter capital requirements. To increase their capital ratios, banks may opt to reduce lending. Most effective would be a reduction in loans with high risk weights. Corporate loans have higher risk weights than residential mortgages. On 22 March, the Ministry of Finance circulated for comment a proposal to adjust risk weights for residential mortgages.⁴ The analyses in this *Report* are based on the continued application of current rules, including the Basel I floor⁵.

Developments in the structure of bank funding are affected by expected regulatory liquidity and stable funding requirements. Norwegian banks are well on the way to meeting the expected short-term liquidity requirement (LCR⁶)(see Chart 3.18). If the Basel Committee's proposal to ease the requirement from January this year

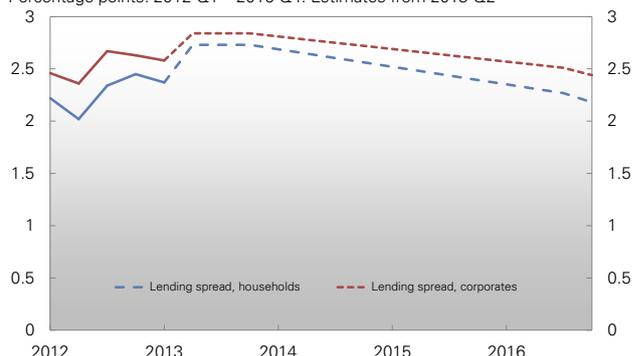
2 IRB banking groups comprise the six largest Norwegian banking groups, as well as Sparebanken Hedmark and Bank 1 Oslo Akershus. These banks use the IRB (internal ratings-based) approach to calculate their capital requirements.
 3 This is an estimate, since accrued interim profit less allocation of dividend is not added to CET1 capital until year-end.
 4 Norges Bank's response to the consultation dated 31 May 2013 is available on the Bank's website: <http://www.norges-bank.no/no/om/publisert/brev-og-uttalelser/2013/beregningsgrunnlag-kapitalkrav/> (Norwegian only)
 5 Under this transitional arrangement, total risk-weighted assets for IRB banks must be at least 80% of what they would have been under the Basel I framework.
 6 LCR = Liquidity Coverage Ratio.

Chart 3.16 Lending rate on corporate loans and funding costs. Percent. 1 January 2010 – 13 June 2013



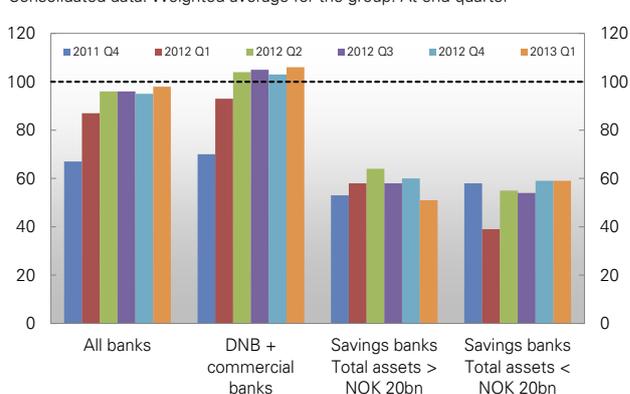
1) Estimated using weighted interest rate on holdings of senior bank bonds and weighted deposit rate
 Sources: DNB Markets, Statistics Norway and Norges Bank

Chart 3.17 Spread on loans over the money market rate. Lending from banks and mortgage companies.¹⁾ Percentage points. 2012 Q1 – 2016 Q4. Estimates from 2013 Q2



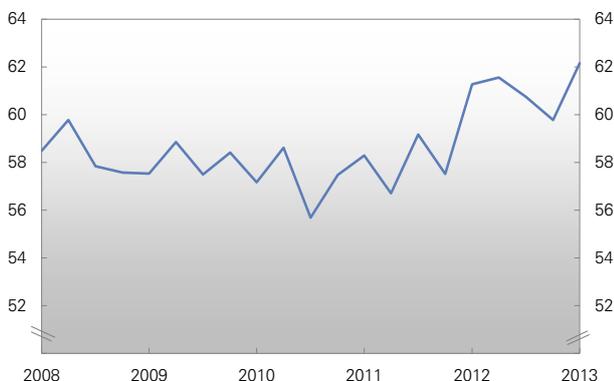
1) All banks and mortgage companies in Norway
 Sources: Statistics Norway and Norges Bank

Chart 3.18 Banks' liquidity coverage ratio (LCR).²⁾ Consolidated data. Weighted average for the group. At end-quarter



1) All banks in Norway, excluding branches of foreign banks in Norway
 2) Calculations are based on the recommendations published by the Basel Committee in 2010
 Sources: Finanstilsynet and Norges Bank

Chart 3.19 Deposit-to-loan ratio.¹⁾ Percent. 2008 Q1 – 2013 Q1

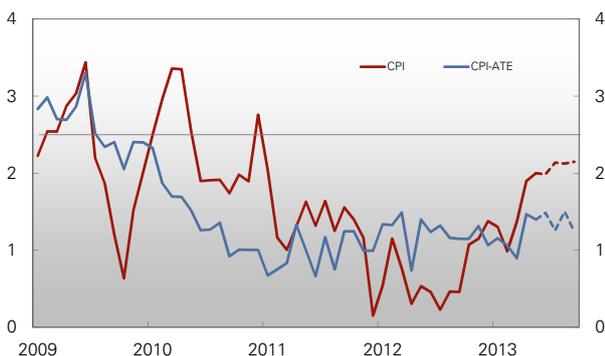


1) All banks and mortgage companies in Norway, excluding branches and subsidiaries of foreign banks in Norway
Source: Norges Bank

is implemented, banks will satisfy the LCR to a further extent.

Banks' deposit-to-loan ratios, i.e. deposits relative to loans to customers, continue to increase (see Chart 3.19). Deposits are normally regarded to be a stable form of funding. Slower growth in loans than in deposits has led to higher deposit-to-loan ratios, reducing the need for wholesale funding. The expiry of NOK 94bn⁷ in swap agreements in the coming year will increase needs for new long-term funding.

Chart 3.20 CPI and CPI-ATE¹⁾. 12-month change. Percent. January 2009 – September 2013²⁾



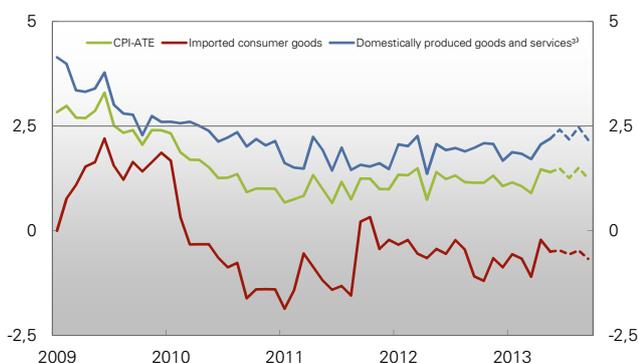
1) CPI adjusted for tax changes and excluding energy products
2) Projections for June 2013 – September 2013 (broken lines)
Sources: Statistics Norway and Norges Bank

Consumer prices

Inflation is low, but has been a little higher than projected in the *March Report*. Underlying inflation is estimated at 1¼% – 1¾%. In May, twelve-month consumer price inflation (CPI) was 2.0% (see Chart 3.20). Inflation adjusted for tax changes and excluding energy products (CPI-ATE) was 1.4%. Adjusted for tax changes and temporary changes in energy prices (CPIXE), inflation was 1.3%.⁸

Prices for domestically produced goods and services in the CPI-ATE have risen somewhat more rapidly than expected in the *March Report* (see Chart 3.21). The rise in rental prices was low throughout 2012, but has picked up somewhat so far this year. The overall rise in prices for domestically produced goods and services is projected to be 2¼% in 2013 Q3. Over time, prices for domestically produced goods and services have moved in pace with costs among businesses supplying goods and services to the household sector (see Chart 3.22). Cost inflation in CPI-relevant sectors has been lower than overall cost inflation in the mainland economy. There are indications that wage growth in 2013 will be lower than projected in the *March Report*. Demand for goods and services is also slightly weaker, implying somewhat lower inflation in the years ahead than projected in the *March Report*.

Chart 3.21 CPI-ATE¹⁾. Total and by supplier sector. 12-month change. Percent. January 2009 – September 2013²⁾



1) CPI adjusted for tax changes and excluding energy products
2) Projections for June 2013 – September 2013 (broken lines)
3) Norges Bank's estimates
Sources: Statistics Norway and Norges Bank

7 As at 19 June 2013.

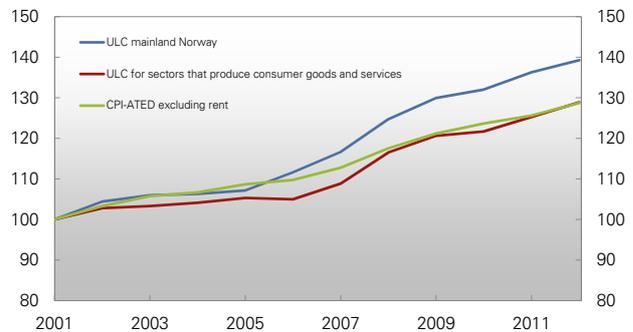
8 As from the June figures for consumer prices, the method for calculating CPIXE will be changed. For more information, see Norges Bank's website

The rise in prices for imported consumer goods has fallen slightly less than expected in recent months (see Chart 3.23). There are prospects that these prices will continue to fall in the period ahead. External price impulses to Norwegian consumer prices are expected to be negative in 2013, and the past appreciation of the krone is also likely to curb the rise in prices for imported consumer goods measured in NOK in the period ahead. The rise in prices for imported consumer goods, as measured by the CPI-ATE, will be a negative $-\frac{1}{2}\%$ in 2013 Q3.

Overall, CPI-ATE inflation is projected at $1\frac{1}{4}\%$ in 2013 Q3, approximately in line with the projections in the March *Report*. The projections for CPI-ATE inflation are within the most probable outcomes in the projections from Norges Bank's System for Averaging short-term Models (SAM) (see Chart 3.24).

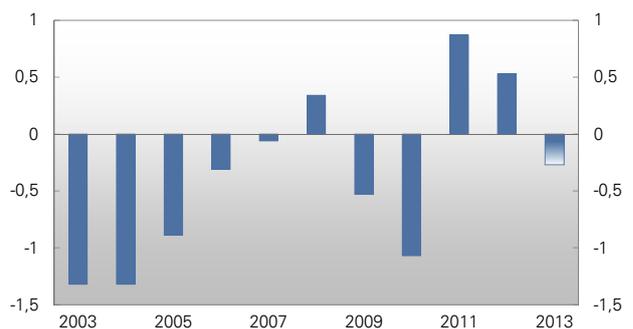
The rise in electricity prices has pushed up twelve-month CPI inflation through the latter part of 2012 and so far in 2013. The twelve-month rise in energy prices is expected to be high in the coming quarters. CPI inflation is projected at $1\frac{3}{4}\%$ in 2013

Chart 3.22 Unit labour costs and prices for domestically produced consumer goods and services, excluding rent. Index. 2001 = 100. 2001 – 2012



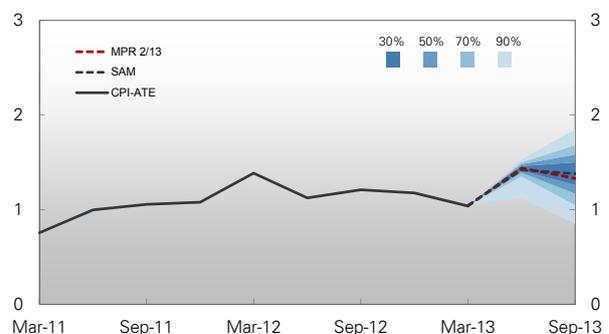
Sources: Statistics Norway and Norges Bank

Chart 3.23 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Percent. 2003 – 2013¹⁾



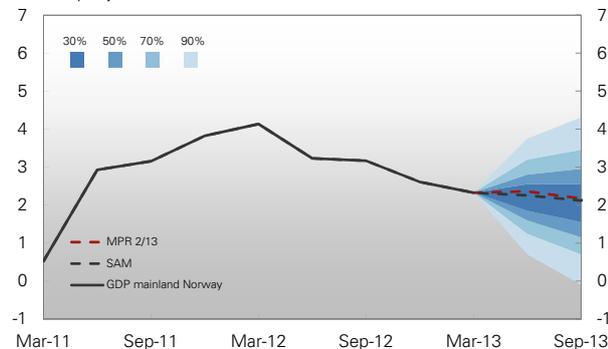
1) Projection for 2013
Source: Norges Bank

Chart 3.24 CPI-ATE¹⁾. Actual figures, baseline scenario and projections from SAM²⁾ with fan chart. Four-quarter change. Percent. 2011 Q1 – 2013 Q3³⁾



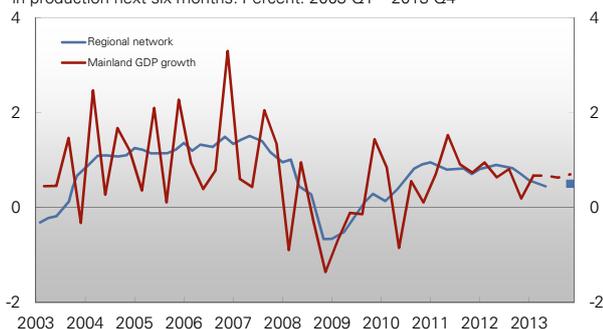
1) CPI adjusted for tax changes and excluding energy products
2) System for averaging short-term models
3) Projections for 2013 Q2 – 2013 Q3 (broken lines)
Sources: Statistics Norway and Norges Bank

Chart 3.25 GDP mainland Norway. Actual figures, baseline scenario and projections from SAM¹⁾ with fan chart. Four-quarter change. Volume. Seasonally adjusted. Percent. 2011 Q1 – 2013 Q3²⁾



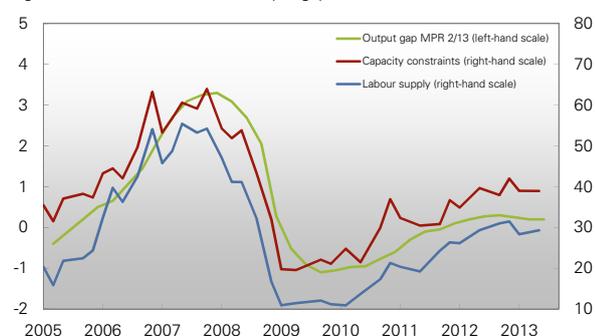
1) System for averaging short-term models
2) Projections for 2013 Q2 – 2013 Q3 (broken lines)
Sources: Statistics Norway and Norges Bank

Chart 3.26 GDP mainland Norway¹⁾ and Norges Bank's regional network's indicator of production growth over the past three months and expected growth in production next six months. Percent. 2003 Q1 – 2013 Q4²⁾



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

Chart 3.27 Capacity constraints and labour supply¹⁾ as reported by Norges Bank's regional network and estimated output gap. Percent. 2005 Q1 – 2013 Q2



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

The Norwegian real economy

Output and capacity utilisation

Growth in the Norwegian economy is slowing somewhat (see Chart 3.25). Growth in mainland GDP has been somewhat lower than projected in the *March Report*. Favourable terms of trade, strong population growth and a high level of activity in the petroleum sector have supported a higher level of growth than among Norway's trading partners. Ahead, lower household income growth and weak growth prospects in Europe may pull down slightly on growth in the Norwegian economy. Growth in the coming quarters is expected to be just below ¾%, slightly lower than in the *March Report*. Mainland GDP is projected to grow by 2½% in 2013. The projections are in line with the projections from the Bank's System for Averaging short-term Models (SAM).

The enterprises in Norges Bank's regional network reported in May that output growth had been somewhat lower than expected and that prospects had weakened (see Chart 3.26). The growth outlook had been revised down in almost all sectors.

Capacity utilisation in the mainland economy appears to have risen somewhat less than previously projected and is probably close to a normal level. The share of enterprises in the regional network reporting capacity pressures has been fairly stable over the past year (see Chart 3.27). Statistics Norway's business tendency survey indicates that manufacturing activity is at a fairly neutral level. The overall picture of the labour market also indicates that output in the Norwegian economy is close to its potential level.

Productivity growth in the Norwegian economy has been low since the financial crisis. At the same time, there has been a substantial rise in employment. This may indicate that underlying productivity growth has also been low. In the period ahead, underlying productivity growth is expected to rise gradually towards a more normal level. Population growth is also expected to remain high. Overall, potential output growth is projected at 2½% in 2013. Over the coming quarters, growth in the economy is expected to be in line with projected growth in potential output so that capacity utilisation in the mainland economy will remain stable.

Labour market

Labour market developments have been slightly weaker than projected in the *March Report*. According to the Labour Force Survey (LFS), the labour supply has risen by about 1% over the past year. There is some uncertainty related to developments in employment. Since autumn 2012 the difference between employment growth as recorded in the LFS and as recorded in the quarterly national accounts has been unusually wide. Employment growth has been weaker than expected according to the LFS, but has increased in line with our projections according to the quarterly national accounts. Weak growth in LFS employment has been reflected in higher unemployment. LFS unemployment has risen since autumn 2012 and is now 3.7% of the labour force. Registered unemployment has also increased recently and is now 2.7%. Overall, unemployment has been slightly higher than expected.

Inward labour migration continues to rise, although at a somewhat slower pace in 2013 Q1 than previously expected. Inward labour migration is expected to remain high over the coming years, supporting high population growth (see Table 3.3).

The contacts in Norges Bank's regional network have revised up expectations concerning growth in employment (see Chart 3.28). Expectations surveys carried out by the Confederation of Norwegian Enterprise (NHO) and Opinion Perduco show that employment growth in 2013 will be lower than in 2012. Employment is projected to rise by approximately ¼% in the quarters ahead. Labour force participation and unemployment are projected to remain fairly stable in the period ahead.

It appears that wage growth will be lower than projected in the *March Report* (see Chart 3.29). The centralised wage negotiations between the Norwegian Confederation of Trade Unions (LO) and NHO resulted in a 3.4% increase. Enterprises in Norges Bank's regional network expect wage growth in 2013 to be 3¾%. Wage expectations are highest in the public sector and lowest in manufacturing. According to Opinion Perduco's expectations survey for the second quarter, the social partners expect wage growth of 3.6%. Average annual wage growth for 2013 is projected at 3½%. The projections imply real wage growth in 2013 of 2%. This is lower than in the two preceding years. Projected wage growth for

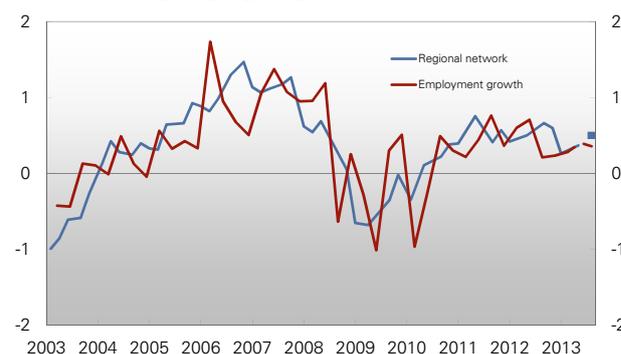
Table 3.3. Population and labour force growth. Change from previous year. Percent

	2012	2013	2014
Population growth in the age group 15–74	1,7	1½	1½
Growth in labour force conditional on unchanged labour force participation*	1,3	1¼	1¼
Labour force growth	1,8	1¼	1¼

* Unchanged labour force participation for all age groups since the 2007 level.

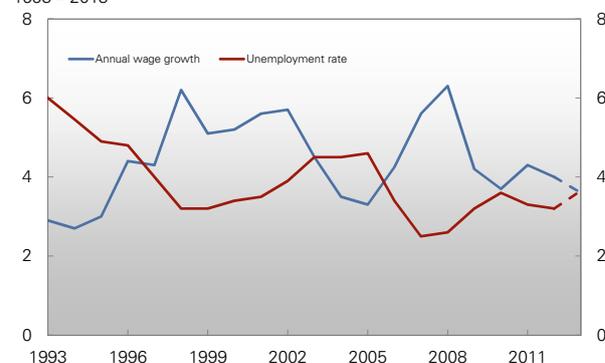
Sources: Statistics Norway and Norges Bank

Chart 3.28 Employment¹⁾ and Norges Bank's regional network's indicator of change in employment and expected change in employment next three months. Percent. 2003 Q1 – 2013 Q3²⁾



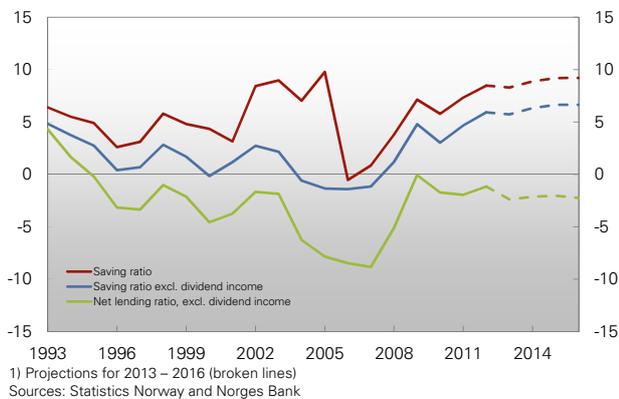
1) Seasonally adjusted quarterly change in Quarterly National Accounts
2) Latest observation in the Regional network is May 2013.
Latest observation in the Quarterly National Accounts is 2013 Q1, projections for 2013 Q2 – 2013 Q3 (broken line)
Sources: Statistics Norway and Norges Bank

Chart 3.29 Annual wage growth¹⁾ and LFS unemployment. Percent. 1993 – 2013²⁾



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

Chart 3.30 Household saving and net lending as a share of disposable income. Percent. 1993 – 2016¹⁾



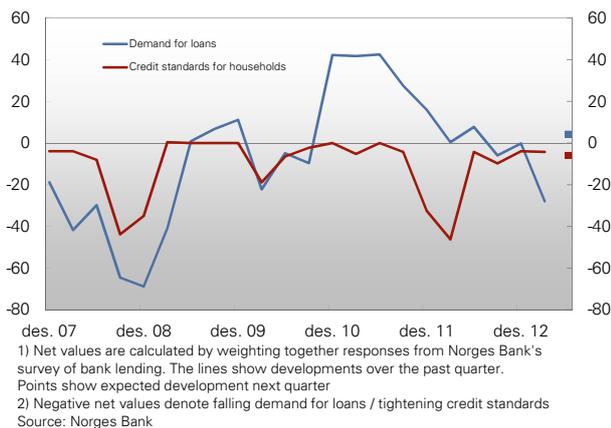
the years ahead is somewhat lower than in the *March Report*. It is likely that high inward labour migration and low wage growth abroad will continue to restrain wage growth in the Norwegian economy ahead.

Households and enterprises

Households

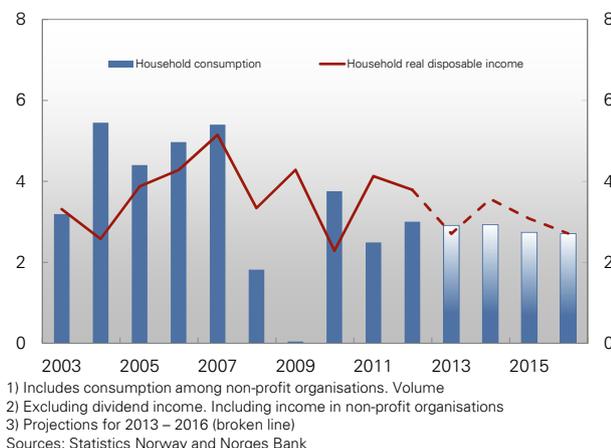
Growth in household consumption has been fairly moderate since the financial crisis. Consumption of both goods and services has so far in 2013 shown slightly weaker developments than projected in the *March Report*. Contacts in Norges Bank's regional network expect growth in services consumption to remain fairly weak ahead.

Chart 3.31 Changes in loan demand and credit standards on loans to households. Net values.^{1,2)} Percent. 2007 Q4 – 2013 Q1



Household income is still showing solid growth. The household saving ratio has increased in recent years and has now reached a historically high level (see Chart 3.30). Tighter bank credit standards (see Chart 3.31), continued uncertainty regarding the effect of the turbulence in the euro area on Norwegian household finances and a high debt to income ratio are some of the factors that may have contributed to the rise in the saving ratio. The pension reform and demographic changes have probably also contributed to the rise. Lower wage growth and prospects for more moderate employment growth imply somewhat lower income growth in the period ahead. Confidence indicators suggest that households are somewhat less optimistic about developments in the Norwegian economy. Private consumption is projected to increase by 3% from 2012 to 2013, which is slightly lower than projected in the *March Report* (see Chart 3.32). The household saving ratio is projected at a little higher than 8% in 2013.

Chart 3.32 Household consumption¹⁾ and real disposable income²⁾. Annual change. Percent. 2003 – 2016³⁾



In recent months, house prices have been lower than projected in the *March Report* (see Chart 3.33). Household debt growth has risen approximately as expected. Debt growth continues to outpace income growth, and the debt to income ratio has increased further from a high level. According to Norges Bank's survey of bank lending for 2013 Q1, banks are experiencing falling demand for residential mortgage loans. The rise in house prices is expected to slow slightly ahead, primarily as a result of lower income growth. This will probably also lead to a somewhat more rapid decrease in household debt growth than projected in the *March Report*. House prices and debt are expected to rise by 6½% and 7½% respectively in 2013.

Measured as a share of mainland GDP, housing investment has now reached its pre-crisis level (see Chart 3.34). Growth in housing investment is also expected to outstrip total growth in the mainland economy through the year. With high population growth, there is an increasing need for more housing. Housing completions are expected to number around 28 000 in 2013, which is slightly lower than the increase in the number of households (see Chart 3.35). Regional network enterprises reported in May that activity in the construction sector was slowing, and the prospects for output growth have also been revised down. Housing investment is projected to rise by 8% in 2013.

Enterprises

Norwegian enterprises are affected by developments in the global economy. High cost inflation over time has led to a deterioration in competitiveness for many Norwegian export firms. This has contributed to lower growth in exports of traditional goods than growth in export markets would imply. Exports of engineering products and oil industry supplier services have remained high. A strong increase in global petroleum investment may contribute to continued substantial growth in exports from industries supplying goods and services to the petroleum sector. Exports of traditional goods and services are projected to increase by ½% between 2013 and 2014.

Activity in the petroleum sector remains high (see Chart 3.36). Over the past two years, petroleum investment has risen by more than 14% and has remained high in 2013. A number of new development projects are scheduled to start in the years ahead. There are also plans for extensive modifications and further development of existing off-shore facilities. Petroleum investment is projected to rise by 10% in 2013, 5% in 2014 and 3% over the subsequent two years.

Growth in mainland business investment has been low since the financial crisis. High levels of capital were built up in both the manufacturing and commercial property sectors in the pre-crisis period. This build-up of capital may have had a dampening impact on investment growth in the subsequent years. In addition, weak developments abroad, tighter credit standards and high funding costs have curbed investment growth. Mainland business investment is projected to be virtually unchanged between 2012 and 2013.

Chart 3.33 Household credit¹⁾ and house prices²⁾. 12-month growth and monthly growth. Percent. January 2003 - September 2013³⁾

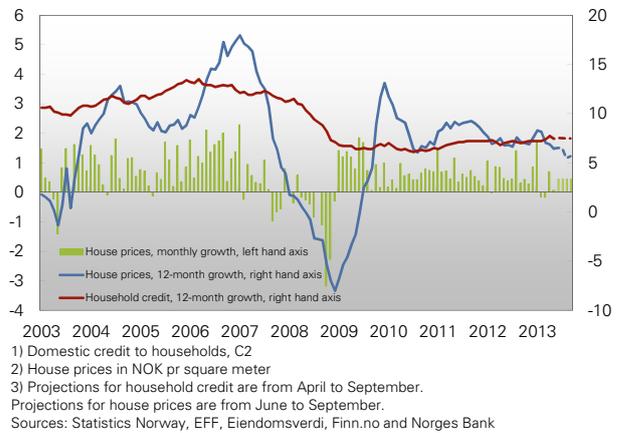


Chart 3.34 Investment as a share of GDP, mainland Norway. Volume. Percent. 1993 - 2013¹⁾

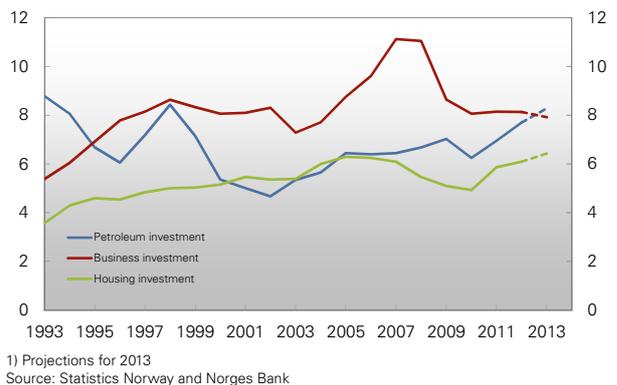


Chart 3.35 Difference between number of housing completions and increase in households, and population growth. 2003 - 2013¹⁾

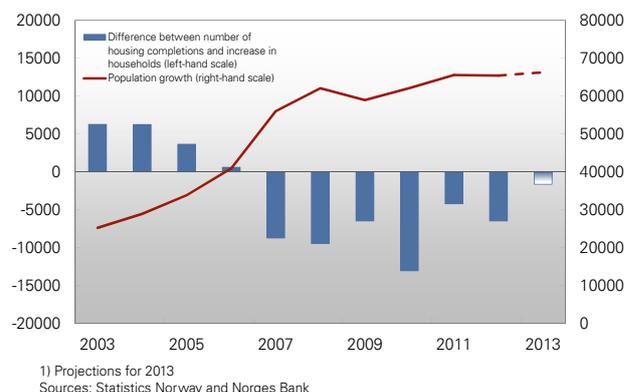
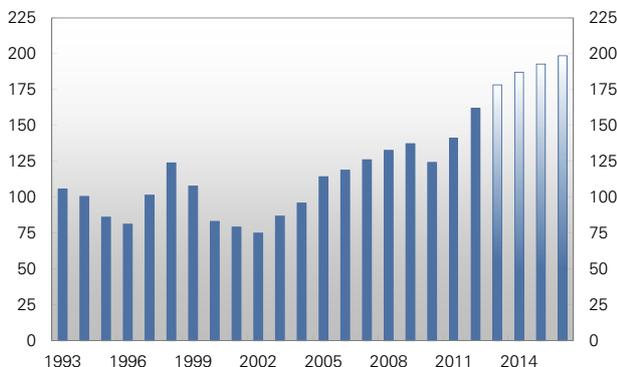
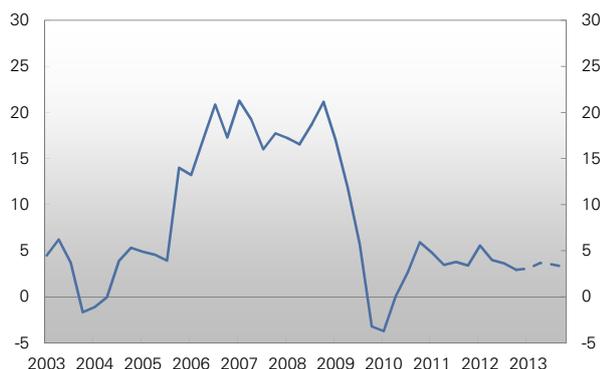


Chart 3.37 Petroleum investment. Constant 2010 prices. In billions of NOK. 1993 – 2016¹⁾



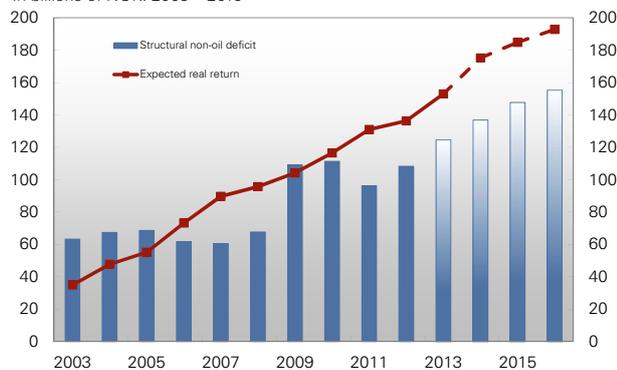
1) Projections for 2013 – 2016
Sources: Statistics Norway and Norges Bank

Figur 3.37 Credit growth for non-financial corporations¹⁾ in mainland Norway. Four-quarter growth. Percent. 2003 Q1 - 2013 Q4²⁾



1) The sum of C2 non-financial corporations and foreign debt of non-financial corporations.
2) Projections for 2013 Q1 - 2013 Q4
Sources: Statistics Norway, IMF og Norges Bank

Chart 3.38 Structural non-oil deficit and expected real return on the Government Pension Fund Global. Constant 2013 prices. In billions of NOK. 2003 – 2016¹⁾



1) Projections for 2013 – 2016
Sources: Ministry of Finance and Norges Bank

Corporate debt growth has slowed in pace with lower investment growth (see Chart 3.37). Although bank loans are still enterprises' most important source of funding, bond debt has become increasingly important as a funding source. Tighter bank credit standards may have contributed to these developments. In listed companies, earnings have fallen relative to interest-bearing debt and debt-servicing capacity has decreased. Regional network contacts report that growth in profitability is slowing. Low corporate investment may contribute to moderate credit growth ahead. Credit to mainland enterprises is expected to grow by 3¼% by end-2013.

Fiscal policy

The fiscal policy assumptions in this *Report* are based on the projections in the Revised National Budget for 2013. In the Budget, petroleum revenue spending in 2013, as measured by the structural non-oil deficit, is projected at NOK 125bn. The projected deficit is equivalent to 3.3% of the market value of the Government Pension Fund Global (GPFG) at the beginning of the year.

The structural deficit is projected at 5.3% of trend GDP for mainland Norway in 2013, an increase of 0.6 percentage point on 2012. In terms of level, the structural deficit is the same as in the original budget, but the increase on 2012 is higher than expected as the deficit for 2012 has been revised down.

The fiscal policy guidelines call for restraint in periods of limited spare capacity in the economy. Budget savings in the years ahead may also ease fiscal adjustment as the expected rise in costs related to an ageing population picks up in earnest. The deficit is therefore assumed to remain well below 4% of the capital in the GPFG through the projection period (see Chart 3.38).

The projections imply a faster rise in petroleum revenue spending than in activity in the wider economy, partly reflecting a substantial rise in pension expenditure in the years ahead as the large cohorts of the post-war baby boomers reach retirement age. Growth in public consumption and investment is assumed to be more moderate.

Annex

Monetary policy meetings

Tables and detailed projections



Monetary policy meetings with changes in the key policy rate

Date	Key policy rate ¹⁾	Change
24 October 2013		
19 September 2013		
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
17 December 2008	3.00	-1.75
29 October 2008	4.75	-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	Main-land consumption	Private consumption	Public consumption	Mainland fixed investment	Petroleum investment ¹⁾	Main-land 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	7.7	9.0
2011		1.2	2.5	2.5	1.8	8.5	14.1	0.5	3.8
2012		3.1	3.4	3.0	1.8	3.7	14.5	2.2	2.4
2012 ³⁾	Q2	0.6	0.6	1.0	1.2	2.9	6.4	2.8	3.5
	Q3	-0.6	0.8	0.6	0.4	3.6	0.6	-0.8	0.4
	Q4	0.1	0.2	0.4	0.4	0.0	6.6	-1.9	-1.5
2013	Q1	-0.2	0.7	1.0	0.5	-1.6	5.5	1.6	0.3
2012-level, in billions of NOK		2 907	2 200	1 175	619	410	172	454	799

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		2.2	2.6	2.6	2.1	2.7	2.3
2010		2.4	1.4	1.7	2.4	1.4	2.3
2011		1.3	1.0	1.1	1.1	1.1	1.2
2012		0.8	1.2	1.0	0.6	1.4	0.4
2013	Jan	1.3	1.2	1.0	1.3	1.1	1.2
	Feb	1.0	1.1	0.9	0.9	1.0	0.6
	Mar	1.4	0.9	0.8	1.3	1.0	1.1
	Apr	1.9	1.5	1.4	1.9	1.3	1.8
	May	2.0	1.4	1.3	2.0	1.4	1.8

²⁾ CPIXE: CPI adjusted for tax changes and excluding temporary changes in energy prices.

See Norges Bank *Staff Memo 7/2008* and *Staff Memo 3/2009* for a description of the CPIXE.

³⁾ CPI-AT: CPI adjusted for tax changes.

⁴⁾ CPI-AE: CPI excluding energy products.

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

Sources: Statistics Norway and Norges Bank

Table 3 Projections for main economic aggregates

	In billions of NOK		Percentage change from previous year (unless otherwise stated)			
	2012	2012	Projections			
			2013	2014	2015	2016
Prices and wages						
CPI		0.8	1¾	1½	1¾	1¾
CPI-ATE ¹⁾		1.2	1¼	1½	1¾	1¾
Annual wages ²⁾		4	3½	3¾	4¼	4¼
Real economy						
GDP	2 907	3.1	½	2½	2¾	2¼
GDP, mainland Norway	2 200	3.4	2½	2¾	2¾	2¾
Output gap, mainland Norway (level) ³⁾		0.3	¼	¼	0	0
Employment, persons, QNA		2.2	1¼	1¼	1¼	1¼
Labour force, LFS		1.8	1	1¼	1¼	1¼
LFS unemployment (rate, level)		3.2	3¾	3¾	3¾	3¾
Registered unemployment (rate, level)		2.5	2½	2¾	2¾	2¾
Demand						
Mainland demand ⁴⁾	2 204	2.8	2¾	3¼	2¾	2¾
- Private consumption	1 175	3.0	3	2¾	2¾	2¾
- Public consumption	619	1.8	2½	2½	.	.
- Fixed investment, mainland Norway	410	3.7	2¾	5	.	.
Petroleum investment ⁵⁾	172	14.5	10	5	3	3
Mainland exports ⁶⁾	454	2.2	½	¾	.	.
Imports	799	2.4	¼	3¼	.	.
Interest rate and exchange rate						
Key policy rate (level) ⁷⁾		1.6	1½	1½	2	2½
Import-weighted exchange rate (I-44) ⁸⁾		87.1	87	87	86½	86¾

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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2013