



NORGES BANK

2|15 JUNE

**MONETARY
POLICY REPORT**

**WITH FINANCIAL
STABILITY ASSESSMENT**

Norges Bank

Oslo 2015

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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 forms the basis for Norges Bank's advice on the level of the countercyclical capital buffer. The *Report* includes projections of developments in the Norwegian economy.

At the Executive Board meeting on 3 June 2015, the economic outlook, the monetary policy stance and the need for a countercyclical capital buffer for banks were discussed. On the basis of that discussion and the advice of Norges Bank's executive management, the Executive Board made its decision on the key policy rate at its meeting on 17 June 2015. The Executive Board also approved Norges Bank's advice to the Ministry of Finance on the level of the countercyclical capital buffer. The Executive Board's assessment of the economic outlook and the monetary policy stance is provided in "The Executive Board's assessment". The advice on the level of the countercyclical capital buffer is submitted to the Ministry of Finance in connection with the publication of the *Report*. The advice is made public when the Ministry of Finance has made its decision. The *Report* is available at www.norges-bank.no.

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This *Monetary Policy Report* is based on information in the period to 12 June 2015.

Monetary policy in Norway

OBJECTIVE

Norges Bank's operational implementation of monetary policy shall be oriented towards low and stable inflation. The operational target of monetary policy is low and stable inflation, with annual consumer price inflation of close to 2.5% over time.

IMPLEMENTATION

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

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

DECISION PROCESS

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.

The *Monetary Policy Report* is published four times a year in connection with four of the monetary policy meetings. On the basis of the analysis and discussion, the Executive Board assesses the consequences for future interest rate developments. The final decision on the key policy rate is made on the day prior to the publication of the *Report*.

REPORTING

Norges Bank reports on the conduct of monetary policy in the *Monetary Policy Report* and the *Annual Report*. The Bank's reporting obligation is set out in Article 75c of the Constitution, which stipulates that the Storting shall supervise Norway's monetary system, and in Section 3 of the Norges Bank Act. The *Annual Report* is submitted to the Ministry of Finance and communicated to the King in Council and to the Storting in the Government's Financial Markets Report. The Governor of Norges Bank provides an assessment of monetary policy in an open hearing before the Standing Committee on Finance and Economic Affairs in connection with the Storting deliberations on the Financial Markets Report.

Countercyclical capital buffer

The objective of the countercyclical capital buffer is to bolster banks' resilience to an impending downturn and counter possible procyclical effects of banks' lending practice.

The Regulation on the Countercyclical Capital Buffer was issued by the Government on 4 October 2013. The Ministry of Finance sets the level of the buffer four times a year. Norges Bank draws up a decision basis and provides advice to the Ministry regarding the level of the buffer. The decision basis includes Norges Bank's assessment of systemic risk that is building up or has built up over time. In drawing up the basis, Norges Bank and Finanstilsynet (Financial Supervisory Authority of Norway) exchange relevant information and assessments. The advice and a summary of the background for the advice are submitted to the Ministry of Finance in connection with the publication of Norges Bank's *Monetary Policy Report*. The advice is published when the Ministry of Finance has made its decision.

The buffer rate shall ordinarily be between 0% and 2.5% of banks' risk-weighted assets. The buffer requirement will apply to all banks with activities in Norway, eventually including branches of foreign banks.

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

EXECUTIVE BOARD'S ASSESSMENT

At its meetings on 3 June and 17 June 2015, the Executive Board discussed the monetary policy stance. The starting point for the discussion was the strategy that the Executive Board adopted at its meeting on 18 March 2015 and the analysis in the March 2015 *Monetary Policy Report*. The analysis in the March *Report* implied a key policy rate of around 1% over the coming years. With this path for the key policy rate, there were prospects that inflation would edge up in the coming quarters and thereafter remain a little higher than 2% through the projection period. Capacity utilisation was projected to decline in the coming period, but to move up to a normal level towards the end of the projection period. At the monetary policy meeting on 6 May, the key policy rate was left unchanged. At the same time, the Executive Board was of the view that there were prospects that the key policy rate would be lowered in June.

Global economic developments have so far been slightly weaker than expected in March, but there are still prospects that growth will gain some momentum ahead. In many countries, inflation is very low, partly owing to the fall in oil prices and low wage growth. Policy rates are still close to zero in many of our trading partner countries. Market expectations concerning foreign policy rates in the coming period have shown little change. There have been wide swings in global long-term interest rates in recent months. On the whole, they have risen somewhat since March, but rates are still low. In addition to keeping policy rates at a low level, a number of central banks are buying securities to ease monetary policy further. Monthly bond purchases by the European Central Bank (ECB) have amounted to EUR 60bn since March, and Sveriges Riksbank has increased its purchases of government bonds in recent months.

Foreign exchange markets appear to be reacting more strongly than normal to news about economic developments and monetary policy both in Norway and other countries. So far in Q2, the krone exchange rate has on average been on a par with the March projection, but has weakened in recent weeks.

Oil prices have recently varied between USD 60 and 65 per barrel and are somewhat higher than anticipated in March. Growth in the supply of oil is moderating and there are signs of rising oil demand. At the same time, oil inventories are at historically high levels. Oil futures prices reflect expectations of a further, albeit modest, increase in oil prices.

New information on activity in the Norwegian economy indicates that growth has been a little weaker than projected and that the prospects ahead have weakened somewhat. Consumption remains steady, but business investment has declined. Growth in housing investment has been lower than expected. In May, the enterprises in Norges Bank's regional network reported slower output growth, with expectations of continued weak growth ahead and a weaker outlook than in January. Expectations have in particular weakened in the oil service sector and in the commercial services industry. Further out, there are now prospects that the decline in oil investment will be less pronounced than envisaged in March.

As expected, unemployment has edged up. While registered unemployment has increased in line with the projections in the March *Report*, LFS unemployment has risen to a further extent. A flexible labour supply in Norway is helping to curb the rise in unemployment. There are signs that foreign labour inflows into Norway are declining

in pace with slower growth in the Norwegian economy. Unemployment is nonetheless expected to edge up in the period ahead.

This year's wage settlement indicates that wage growth may turn out to be somewhat lower than previously anticipated. A need for restructuring, combined with a relatively high cost level in Norway, may result in moderate wage settlements in the years ahead too.

Consumer price inflation has varied between 2% and 2½% in recent months. Prices for domestically produced goods and services have risen at a slower pace than projected, while prices for imported consumer goods have risen faster than projected in the *March Report*. The pass-through from the krone depreciation in autumn 2014 appears to have occurred a little earlier than expected. The krone depreciation is expected to push up the rise in prices for imported consumer goods further in the period ahead. Lower wage growth and fading effects of a weaker krone will dampen inflation ahead.

Since the beginning of the year, banks have reduced their lending rates a little more than expected in March. At the same time, the premium in the Norwegian money market has increased and been somewhat higher than expected.

House price inflation has moderated in recent months, but there are wide regional variations. Household debt is still rising faster than income. The low interest rate level is contributing to sustaining the rise in house prices and debt. On the other hand, somewhat weaker economic developments in the Norwegian economy and government measures relating to bank lending practices may help curb house price inflation and household debt accumulation.

The Executive Board notes that the analyses in this *Report* show that the outlook for the Norwegian economy is weaker than in March. The effects of lower oil prices and weaker demand from the petroleum industry appear to be somewhat more pronounced than assumed earlier. The analysis implies a key policy rate forecast of a little higher than ¾% in the coming year, followed by a gradual rise.

In its discussion of monetary policy in the period ahead, the Executive Board gave weight to the fact that growth prospects and the forces driving inflation further ahead have weakened. Both the objective of keeping inflation close to target and the aim of sustaining capacity utilisation in the years ahead imply a lower key policy rate. On the other hand, a lower interest rate may fuel house price inflation and debt growth. An overall assessment led the Executive Board to conclude that the key policy rate should now be reduced.

At its meeting on 17 June, the Executive Board decided to lower the key policy rate by 0.25 percentage point to 1.0%. The Executive Board's current assessment of the outlook for the Norwegian economy suggests that the key policy rate may be reduced further in the course of autumn.

Øystein Olsen
17 June 2015

1 ECONOMIC SITUATION

Slightly weaker global developments

Growth in the global economy remains moderate, but has so far in 2015 been slightly weaker than expected (see Chart 1.1). The tentative recovery in the euro area is continuing. Real wage growth and higher employment have pushed up growth in household consumption. At the same time, uncertainty related to the financial support programme for Greece has increased. In the US, extreme weather, labour disputes at a number of ports and lower oil investment contributed to a decline in GDP in 2015 Q1. Growth is expected to pick up in the quarters ahead, although the appreciation of the US dollar since summer 2014 will have a dampening effect. In the UK, lower activity in construction and manufacturing contributed to weak growth in Q1. The slowdown is expected to be temporary. Higher household purchasing power, strong employment growth and increased exports to the euro area are expected to contribute to higher growth ahead. In Sweden, growth has been somewhat lower than projected in the *March Report*. Growth is nonetheless expected to gain momentum between 2014 and 2015, to a large extent fuelled by private consumption and housing investment.

In China, growth has slowed as a result of lower activity in the real estate sector. Monetary policy easing and increased infrastructure investment may push up the pace of growth in the coming quarters. Overall growth prospects have weakened for other emerging economies, primarily reflecting a severe downturn in Brazil. In India, higher investment is expected to boost growth ahead.

Little change in growth prospects for trading partners

GDP growth among Norway's trading partners is expected to be 2% in 2015, somewhat lower than projected in the *March Report* (see Chart 1.2 and Annex Table 3). The downward revision primarily reflects lower-than-expected growth in a number of countries in 2015 Q1. Growth prospects are broadly unchanged. Further ahead in the projection period, annual growth among trading partners is expected to be 2½%. The global economy is projected to grow by 2¾% in 2015, which is ¼ percentage point lower than in the *March Report* and slightly lower than the

Chart 1.1 GDP. Seasonally adjusted volume index. 2008 Q1=100. 2008 Q1 – 2015 Q1

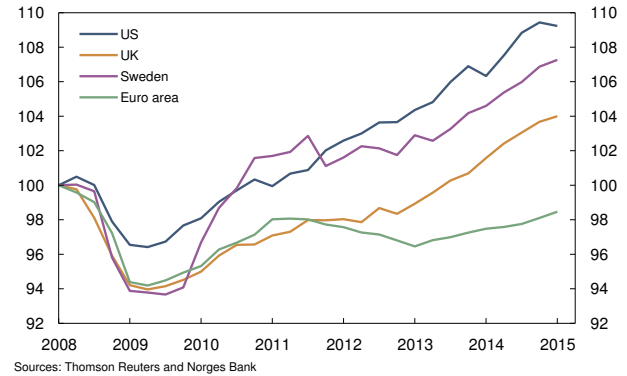


Chart 1.2 GDP for trading partners. Volume. Four-quarter change. Percent. 2010 Q1 – 2018 Q4¹⁾

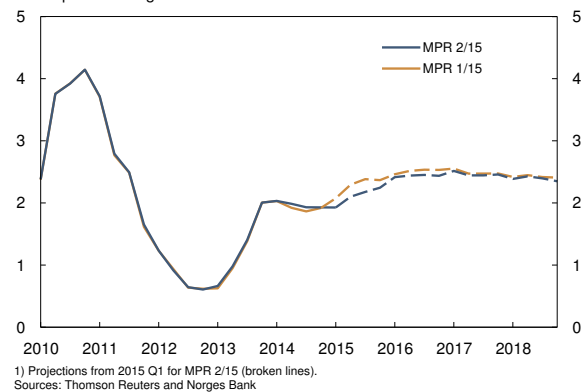


Chart 1.3 Consumer prices. Twelve-month change. Percent. January 2010 – May 2015¹⁾

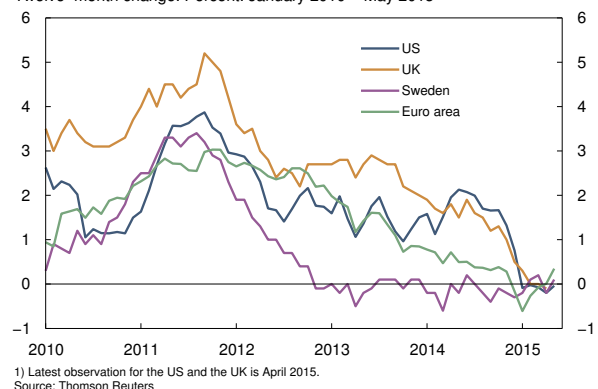
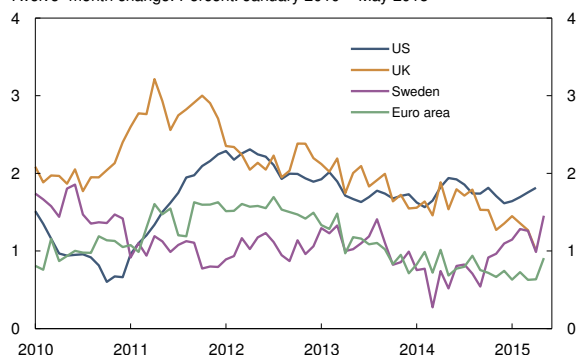
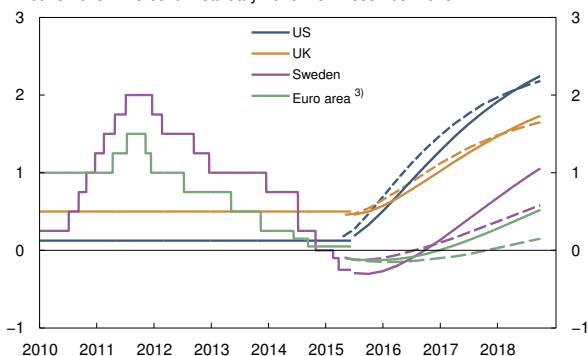


Chart 1.4 Consumer prices excluding food and energy.¹⁾
Twelve-month change. Percent. January 2010 – May 2015²⁾



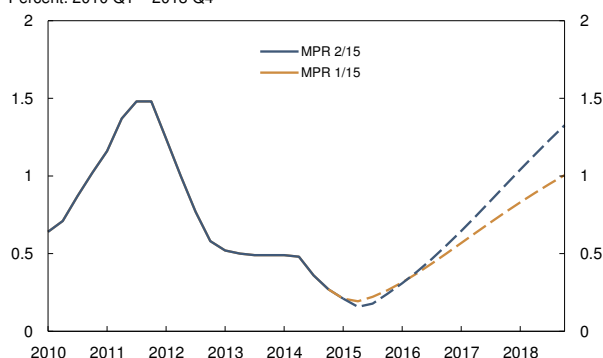
1) Time series for Sweden shows consumer prices excluded energy and with constant interest rate expenses.
2) Latest observation for the US and the UK is April 2015.
Source: Thomson Reuters

Chart 1.5 Policy rates and estimated forward rates at 12 March 2015 and 12 June 2015.¹⁾ Percent. 1 January 2010 – 31 December 2018²⁾



1) Broken lines show estimated forward rates at 12 March 2015. Solid lines show forward rates at 12 June 2015. Forward rates are based on Overnight Index Swap (OIS) rates.
2) Daily data from 1 January 2010 and quarterly data from 2015 Q2.
3) EONIA for the euro area from 2015 Q2.
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 1.6 Money market rates for trading partners.¹⁾
Percent. 2010 Q1 – 2018 Q4²⁾



1) For information about the trading partners aggregate see *Norges Bank Papers 2/2015*.
2) Blue and orange broken lines show forward rates for 12 June 2015 and 12 March 2015, respectively.
Sources: Thomson Reuters and Norges Bank

average for the past 30 years. (For more details on international developments, see Special Feature on page 44.)

Continued low inflation among trading partners

Consumer price inflation is low among most of Norway's trading partners and close to zero in many countries (see Chart 1.3). The decrease in energy prices in 2014 has pulled down consumer price inflation. The increase in oil prices since January will push up inflation, but low domestic cost inflation among Norway's main trading partners will keep consumer price inflation at a moderate pace ahead. Core inflation is somewhat higher than headline inflation (see Chart 1.4). Market-based measures of long-term inflation expectations in the US and the euro area have shown little change since March. Consumer price inflation among Norway's trading partners as a whole is expected to pick up from 1% in 2015 to 2¼% at the end of the projection period (see Annex Table 4).

Very low foreign interest rates

Policy rates are still close to zero in many countries and are expected to remain low for a long time (see Chart 1.5). In addition to keeping policy rates low, a number of central banks have implemented unconventional monetary policy measures. Since March, bond purchases by the European Central Bank (ECB) have amounted to EUR 60bn a month and are scheduled to continue until September 2016. Market interest rate expectations suggest that the ECB will keep the policy rate unchanged until autumn 2017. In March, Sveriges Riksbank reduced its policy rate to -0.25%. The Riksbank has since kept its policy rate unchanged, but decided at the end of April to increase its overall purchases of government bonds by SEK 40–50bn to a total of SEK 80–90bn. The purchases will be made in the period to September 2015. The Riksbank has signalled that further monetary policy measures may be implemented, also between ordinary monetary policy meetings. Market interest rate expectations suggest that the Riksbank will not raise the policy rate until the second half of 2016 at the earliest. This is in line with the Riksbank's own projections. In the US, market interest rate expectations suggest that the first policy rate increase will occur in the course of autumn 2015. The expected increase

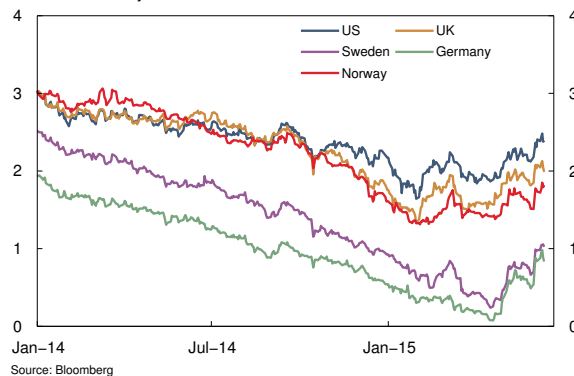
in the federal funds rate has been pushed somewhat further out in time, partly as a result of weaker key economic figures. In the UK, market interest rate expectations indicate that the first policy rate increase will occur in 2016 Q1. For our trading partners as a whole, short-term forward money market rates are little changed since the *March Report*, but these rates have risen further out (see Chart 1.6). The set of weights for trading partner interest rates has been revised as from the current *Report*. (See Special Feature on page 47 for further information).

Long-term government bond yields for Norway's main trading partners have varied considerably since the *March Report* (see Chart 1.7). Combined with weaker key economic figures for the US, central bank measures and communication contributed to a fall in long-term interest rates in the period to mid-April. Interest rates have risen noticeably since then. The rise in long-term interest rates may be partly attributable to a reversal in term premiums, which may have been particularly low over the past year owing to central banks' unconventional monetary policy measures. On the whole, long-term interest rates among Norway's main trading partners have risen since the *March Report*. (For more details on developments in long-term interest rates, see Special Feature on page 48).

Oil prices have edged up

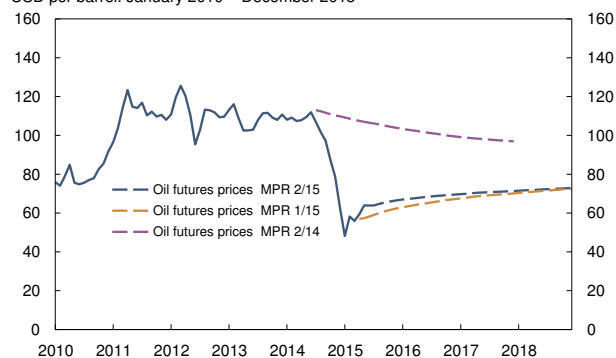
Oil prices have recently varied between USD 60 and USD 65 per barrel and are somewhat higher than projected in the *March Report*. Since bottoming out in January, oil prices have risen by about USD 15, although spot prices are more than USD 45 lower than the average for the first half of 2014 (see Chart 1.8). The increase in oil prices in recent months particularly reflects prospects for weaker growth in non-OPEC oil supply. In addition, there are signs that oil demand is on the rise. Continued unrest in the Middle East and North Africa also fuelled uncertainty about oil supply from major oil-producing countries. At the same time, OECD oil inventories are still at historically high levels and are expected to rise further in the short term. OPEC has increased production in recent months and decided at the meeting in June to leave its production quota unchanged. The projections in this *Report* are based on oil price developments that are in line with

Chart 1.7 Yields on 10-year government bonds. Percent. 1 January 2014 – 12 June 2015



Source: Bloomberg

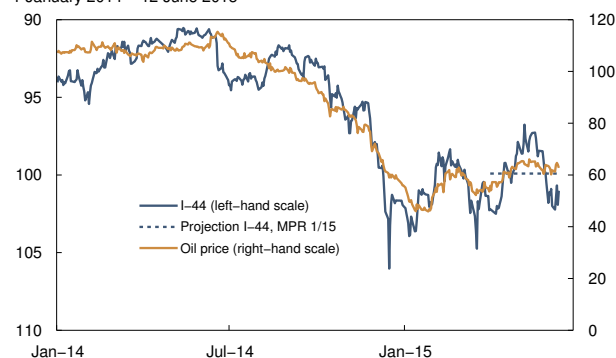
Chart 1.8 Crude oil prices. USD per barrel. January 2010 – December 2018 ^{1) 2)}



1) For the spot price the latest observation used is 12 June 2015.
2) Futures prices at different points in time (broken lines). Projections for MPR 2/15 are based on futures prices from 12 June 2015.

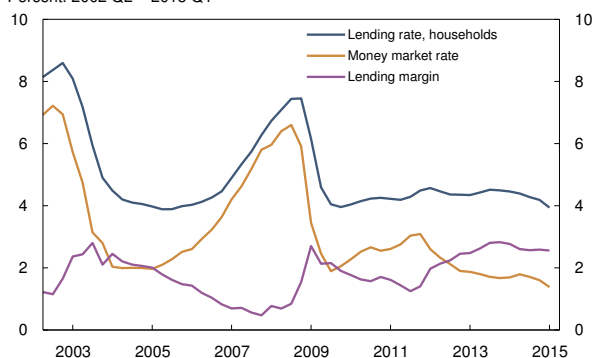
Source: Thomson Reuters

Chart 1.9 Oil price and import-weighted exchange rate index (I-44).¹⁾ 1 January 2014 – 12 June 2015



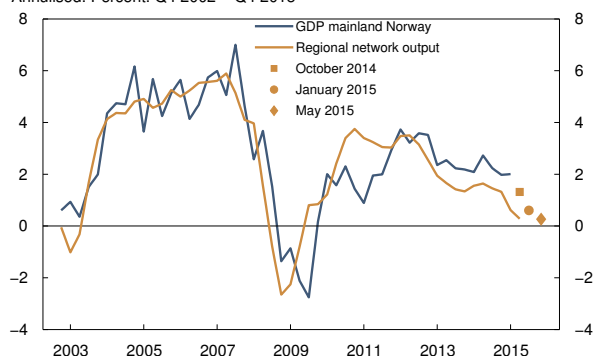
1) A positive slope denotes a stronger krone exchange rate.
Sources: Thomson Reuters and Norges Bank

Chart 1.10 Lending rate to households, money market rate and lending margin.¹⁾²⁾ Percent. 2002 Q2 – 2015 Q1



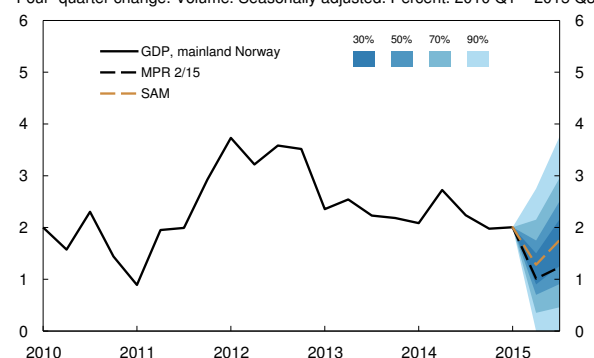
1) Average lending rate for banks and mortgage companies for all lending to households.
2) The rates are calculated by taking the average of the quarter.
Sources: Statistics Norway and Norges Bank

Chart 1.11 GDP for mainland Norway¹⁾ and Norges Bank's regional network's indicator for output growth past three months and expected growth next six months. Annualised. Percent. Q4 2002 – Q4 2015



1) Four-quarter change, Volume.
Sources: Statistics Norway and Norges Bank

Chart 1.12 GDP for mainland Norway. Actual figures, baseline scenario and projections from SAM¹⁾ with fan chart. Four-quarter change. Volume. Seasonally adjusted. Percent. 2010 Q1 – 2015 Q3²⁾



1) System for averaging short-term models.
2) Projections for 2015 Q2 – 2015 Q3 (broken lines).
Sources: Statistics Norway and Norges Bank

futures prices. These prices reflect expectations of some increase in oil prices over the next few years. Longer futures prices have shown little change since the *March Report*. (For a further discussion of the outlook for oil prices, see Special Feature on page 49.)

Considerable volatility in foreign exchange markets

Foreign exchange markets have shown considerable volatility since the *March Report*. The US dollar has depreciated against most currencies, reflecting weaker-than-expected economic developments in the US and the fact that the expected rise in policy rates has been deferred. The Swedish krona depreciated after the Riksbank lowered its policy rate in March and announced government bond purchases. The Swedish krona appreciated slightly when the central bank decided to keep the policy rate unchanged in April and after inflation increased in May. Despite considerable political uncertainty around the situation in Greece, the euro has appreciated in pace with the rise in German long-term bond yields and as a result of higher-than-expected inflation in the euro area.

So far in Q2, the krone has on average moved approximately in line with the projections in the *March Report* (see Chart 1.9). The krone appreciated following the publication of the *March Report* when the key policy rate was kept unchanged. Since mid-April, the rise in oil prices and a broad depreciation of the US dollar contributed to a further krone appreciation. The krone has depreciated again over the past month, most likely reflecting new information indicating a weaker economic outlook for Norway.

Lower bank lending rates, but higher money market premiums

Banks have reduced mortgage lending rates by an average of 0.35 percentage point since the turn of the year (see Chart 1.10), which is somewhat more than assumed in the *March Report*.

The premium in Norwegian three-month money market rates (NIBOR) has risen somewhat since the *March Report* and is now more than 0.30 percentage point. The premium is expected to lie around 0.30 percentage point in the period ahead, which is slightly

higher than in the *March Report*. The upward adjustment reflects international conditions affecting NIBOR (see Special Feature on page 51).

Since the *March Report*, risk premiums on new bonds issued by banks and mortgage companies have shown some increase, but new bonds are still issued with a lower risk premium than the average premium on outstanding bonds. Combined with higher premiums in the money market, this will result in somewhat higher market funding costs than previously assumed.

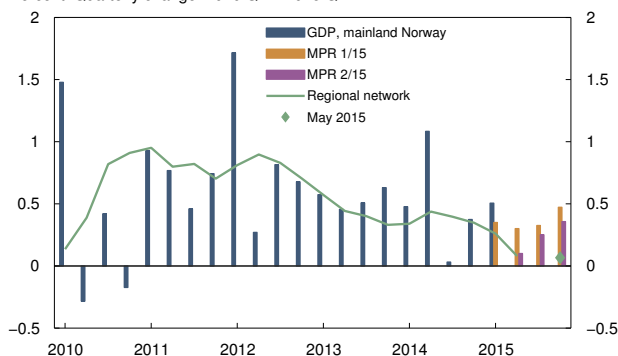
Weaker growth prospects for the Norwegian economy

Growth in the Norwegian economy is slowing (see Chart 1.11). Regional network contacts reported weaker output growth in May than in January. The oil service industry and firms supplying commercial services reported a fall in output, while other sectors reported positive, albeit weak, growth. According to the quarterly national accounts, quarterly growth in mainland GDP was 0.5% in Q1, somewhat higher than projected in the *March Report*. At the same time, growth in the preceding quarters was revised down, resulting in weaker developments through the second half of 2014 than projected earlier.

Overall, growth in the Norwegian economy appears to have been slightly weaker than expected and the outlook has weakened somewhat. Underlying growth in the mainland economy in the quarters ahead is projected at approximately ¼%, somewhat lower than in the *March Report*. Developments in Q2 are also expected to be weaker, with growth at 0.1%, as some of the growth in Q1 was probably driven by temporary factors that are expected reverse. Projections for the quarters ahead are slightly lower than the projections from Norges Bank's System for Averaging short-term Models (SAM) (see Chart 1.12), but somewhat higher than expected output growth as reported by Norges Bank's regional network (see Chart 1.13).

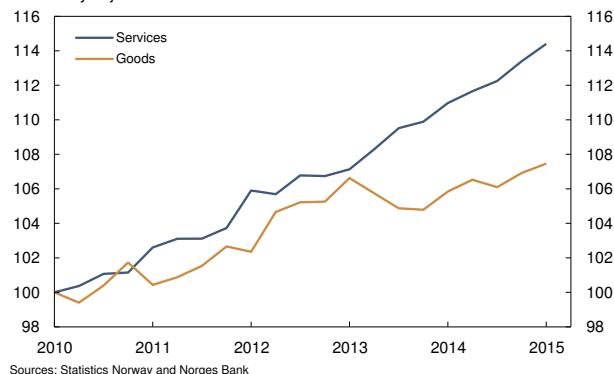
Household consumption is still growing at a moderate pace. In Q1, growth in private consumption was somewhat higher than projected in the *March Report*. Services consumption is still rising more rapidly than goods consumption (see Chart 1.14). Growth in goods consumption appears to have picked up into Q2.

Chart 1.13 GDP for mainland Norway¹⁾ and Norges Bank's regional network's indicator for output growth past three months and expected output growth next six months. Percent. Quarterly change. 2010 Q1 – 2015 Q4²⁾



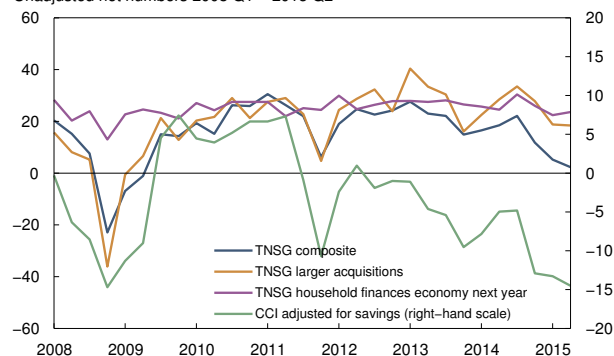
1) Seasonally adjusted. Volume.
2) Latest observation for regional network is May 2015. Latest observation for GDP growth is 2015 Q1.
Sources: Statistics Norway and Norges Bank

Chart 1.14 Household consumption of goods and services. Seasonally adjusted volume index. 2010 Q1=100. 2010 Q1 – 2015 Q1



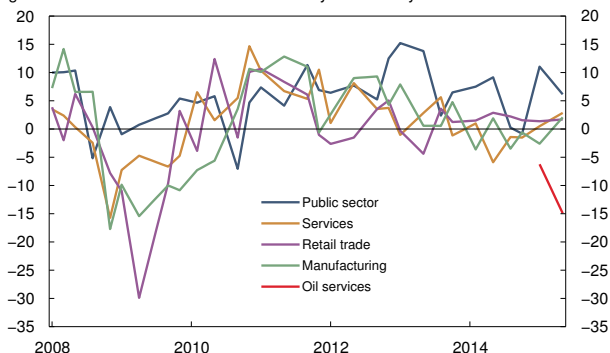
Sources: Statistics Norway and Norges Bank

Chart 1.15 Consumer confidence. CCI adjusted for savings (Opinion)¹⁾ and the Expectations barometer (TNSG) Unadjusted net numbers 2008 Q1 – 2015 Q2²⁾



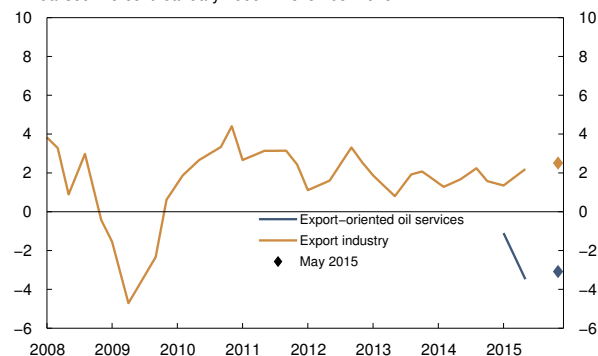
1) Average of subindices for household expectations as to their financial situation, the general economy and unemployment. For the CCI the average of monthly data is used as quarterly data.
2) To May 2015 for CCI.
Sources: TNS Gallup, Opinion and Norges Bank

Chart 1.16 Norges Bank's regional network's indicator for expected investment growth next twelve months. Percent. January 2008 – May 2015¹⁾



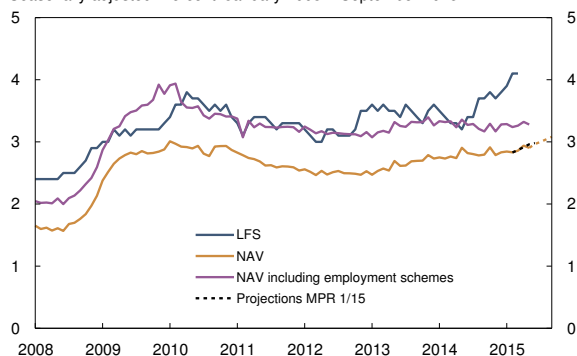
1) New sector classification results in a break in the series for manufacturing and services from 2015. For further information, see box on page 16. Source: Norges Bank

Chart 1.17 Norges Bank's regional network indicator for output growth past three months and expected growth in production next six months.¹⁾ Annualised. Percent. January 2008 – November 2015



1) New sector classification results in a break in the series for export industry from 2015. For further information, see box on page 16. Source: Norges Bank

Chart 1.18 Unemployment rate. LFS¹⁾ and NAV²⁾. Seasonally adjusted. Percent. January 2008 – September 2015³⁾



1) Labour Force Survey. 2) Norwegian Labour and Welfare Administration. To May 2015 for NAV. 3) Projections from June 2015 (broken lines). Sources: Statistics Norway, NAV and Norges Bank

Household-oriented enterprises in the regional network continue to report moderate output growth, but that somewhat lower output growth is expected in the period ahead. Consumer confidence has fallen further since the *March Report* (see Chart 1.15). Consumers' assessment of developments in the domestic economy has pulled down consumer confidence indicators to low levels, while confidence in their own financial situation has changed to a lesser extent. Lower wage and employment growth will in isolation dampen consumption growth ahead, while low interest rates contribute to sustaining the level of consumption. Private consumption is still projected to grow at a moderate pace in the period ahead.

After declining through 2014, housing investment increased in 2015 Q1, although growth was somewhat lower than expected in the *March Report*. Regional network enterprises reported in May that output growth had increased in the construction sector, and the outlook was revised up in relation to contacts' expectations in January. Activity in the housing market remains buoyant and turnover is high. New home sales have picked up since summer 2014 and housing starts have increased somewhat. Housing investment is expected to increase in the coming quarters, but the rate of increase is expected to be somewhat lower than projected in the *March Report*.

Business investment fell towards the end of 2014. The decline continued in 2015 Q1 and investment was lower than projected in the *March Report*. Weak growth prospects for the Norwegian economy are expected to continue to have a dampening impact on growth in business investment in the period ahead. Private enterprises in the regional network expect weak growth or a fall in investment in the year ahead (see Chart 1.16). Norges Bank expects growth in business investment to be lower in the quarters ahead than projected in the *March Report*. (For further discussion on developments in business investment, see Special Feature on page 53).

Petroleum investment is expected to decline by 15% in 2015 in line with that projected in the *March Report*. The projections for 2016 and 2017 are higher than in March. The decline in petroleum investment is now projected at 5% in 2016 and 2.5% in 2017. Petroleum

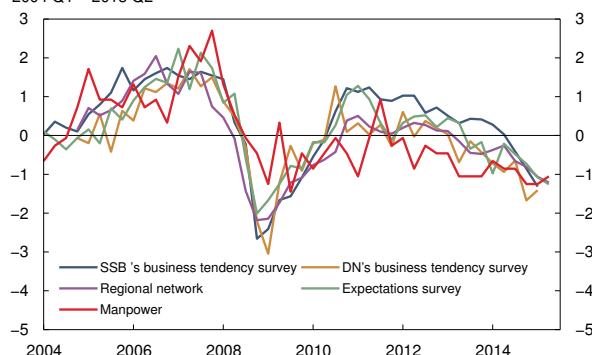
investment is expected to remain unchanged between 2017 and 2018. For the projection period as a whole, the projections are higher than in the March Report. (For a more detailed review of the projections, see box on page 17.)

After remaining firm in 2014, growth in exports of traditional goods fell in Q1 and was weaker than projected in the March Report. Imports showed solid growth in Q1 and the total growth contribution from net exports was negative. Manufacturing export firms in the regional network reported slightly higher output growth in May, and contacts also expected higher growth ahead than they had anticipated in January (see Chart 1.17). The depreciation of the krone is improving the cost competitiveness of Norwegian export firms. In May, export-oriented oil service firms in the regional network reported a clear decline in activity and expected the decline to continue in the period ahead. The fall in output among these firms is nonetheless less pronounced than the fall in activity in the domestically oriented oil service industry. Overall, exports of traditional goods and services are expected in the period ahead to be approximately in line with the projections in the March Report.

Unemployment edges up while capacity utilisation declines

Unemployment has increased somewhat recently, particularly for occupational groups and regions that are closely linked to the petroleum sector. Registered unemployment was 2.9% in May, in line with the projections in the March Report (see Chart 1.18). Unemployment as measured by the LFS has increased somewhat more. The supply of labour has so far remained solid in spite of some decline in immigration (see Special Feature on labour immigration on page 55). Employment growth has softened. In May, regional network contacts reported that employment had fallen in the previous three months. Several leading indicators, including employment expectations in the regional network, point to a decline in employment ahead (see Chart 1.19). Job vacancy rates have decreased. The increase in the ratio of unemployed to vacancies is an indication that the labour market has become less tight (see Chart 1.20). Unemployment is expected to rise somewhat in the period ahead.

Chart 1.19 Five indicators of expected employment.¹⁾ 2004 Q1 – 2015 Q2



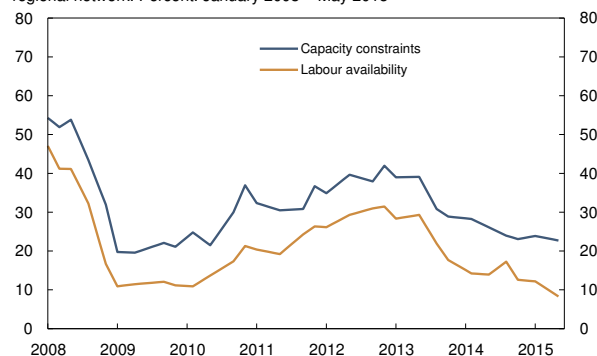
¹⁾ Number of standard deviations from the mean for each indicator. Sources: Statistics Norway, Manpower, Epinion, Dagens Næringsliv, Swedbank and Norges Bank

Chart 1.20 Number of vacancies and number of unemployed.¹⁾ 1000 persons. Seasonally adjusted. 2010 Q1 – 2015 Q1



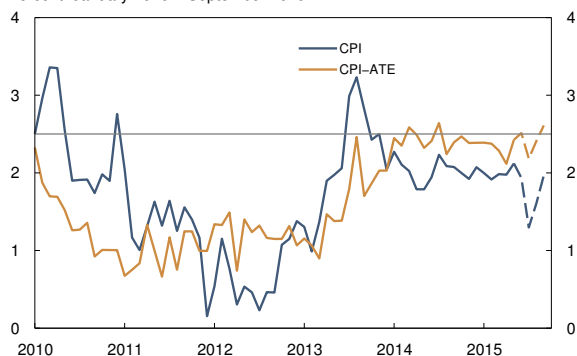
¹⁾ Registered unemployed. Sources: Statistics Norway, NAV and Norges Bank

Chart 1.21 Capacity constraints and labour availability¹⁾ as reported by Norges Bank's regional network. Percent. January 2008 – May 2015



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

Chart 1.22 CPI and CPI-ATE.¹⁾ Twelve-month change. Percent. January 2010 – September 2015²⁾



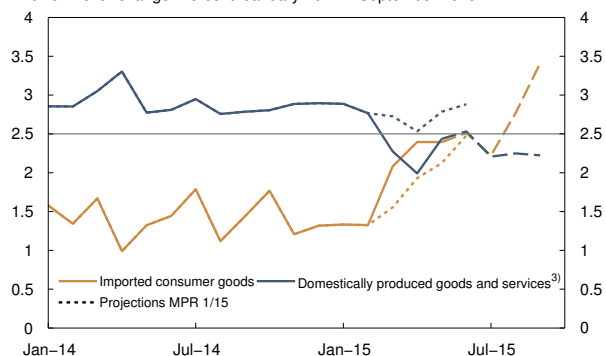
1) CPI adjusted for tax changes and excluding energy products.
2) Projections from June 2015 – September 2015 (broken lines).
Sources: Statistics Norway and Norges Bank

Capacity utilisation has continued to decline and is below the level regarded as normal. Few enterprises in the regional network report capacity problems, but capacity utilisation is reported to be little changed from January (see Chart 1.21). At the same time, the share of firms reporting that labour supply is a restraint on output growth was at its lowest since the series was started in 2005. Unemployment has increased approximately as expected in the *March Report* and is somewhat higher than the average for the past 15 years. Overall, it appears that capacity utilisation has declined approximately as projected in the *March Report*, but the projections for the quarters ahead have been revised down somewhat.

Lower wage growth

In the wage negotiations, the employee organisations the Norwegian Confederation of Trade Unions/Confederation of Vocational Unions (LO/YS) and the employer organisation the Confederation of Norwegian Enterprise (NHO) agreed to a reference rate for annual wage growth of 2.7% in manufacturing. Agreement has also been reached in several other areas of negotiation, in both the private and the public sector, in line with this limit. The moderate wage settlement likely reflects weaker developments in the Norwegian economy with a need for restructuring. Wage growth in 2015 is estimated at 2¾%, slightly lower than estimated in the *March Report*. The estimate is in line with the expectations of regional network contacts and the average of the expectations reported by the social partners in Epinion's expectations survey.

Chart 1.23 CPI-ATE¹⁾ by supplier sector. Twelve-month change. Percent. January 2014 – September 2015²⁾



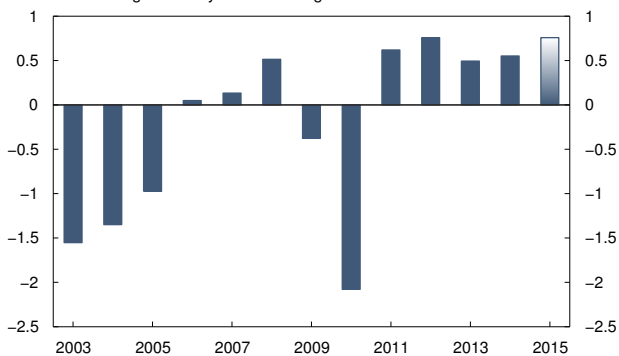
1) CPI adjusted for tax changes and excluding energy products.
2) Projections from June 2015 – September 2015 (broken lines).
3) Norges Bank's estimates.
Sources: Statistics Norway and Norges Bank

Higher imported consumer goods inflation, but lower domestic inflation

Overall consumer price inflation has been stable at around 2% for the past year (see Chart 1.22). The year-on-year rise in consumer prices (CPI) was 2.1% in May. Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) was 2.4% in May, up from 2.11% in April. Inflation has been somewhat lower than projected in the *March Report*.

The rise in prices for domestically produced goods and services in the CPI-ATE has decelerated in recent months (see Chart 1.23). The twelve-month rise was 2.4% in May, lower than projected in the *March Report*. The twelve-month rise in prices for domesti-

Chart 1.24 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Percent. 2003 – 2015¹⁾



1) Projections for 2015.
Source: Norges Bank

cally produced goods and services is projected to be around 2¼%–2½% in the period ahead, somewhat lower than projected in the *March Report*.

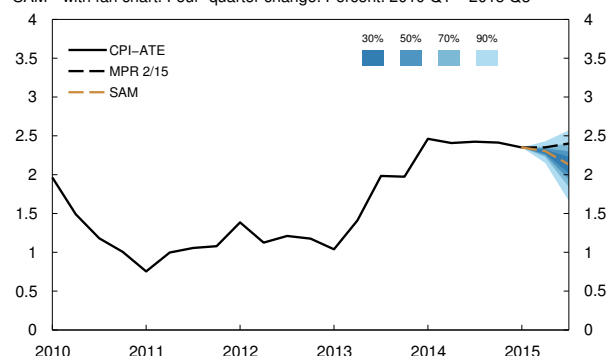
The year-on-year rise in prices for imported consumer goods was 2.4% in May, higher than projected in the *March Report*. For the first time in almost 20 years, prices for imported consumer goods are rising at the same pace as prices for domestically produced goods and services. Prices for imported consumer goods were expected to rise as a result of the krone appreciation in autumn 2014, but it appears that the pass-through from the krone depreciation has occurred slightly earlier than projected in the *March Report*. International price impulses to Norwegian consumer prices are estimated to be somewhat stronger than in 2014 (see Chart 1.24), and the estimate is higher than in the *March Report*. Imported consumer price inflation is projected to continue to rise through the year, and on the whole somewhat more than projected in the *March Report*.

The year-on-year rise in the CPI-ATE in the period ahead is projected to be somewhat lower than projected in the *March Report*, restrained by a lower rise in prices for domestically produced goods and services. The projections for the CPI-ATE are nonetheless somewhat higher than the projections from Norges Bank's System for Averaging short-term Models (SAM) (see Chart 1.25). The effect of the krone depreciation is expected to be somewhat more pronounced than captured by SAM.

Slower house price inflation

House price inflation has been somewhat lower than expected, and the twelve-month rise was 7.5% in May. The twelve-month rise has edged down in recent months, but there are considerable regional differences in house price developments. Household debt continues to rise faster than income and year-on-year growth in household credit was 6.2% in April. This is in line with the projections in the *March Report*. (For more details on house prices and household debt, see Section 3.)

Chart 1.25 CPI-ATE¹⁾. Actual figures, baseline scenario and projections from SAM²⁾ with fan chart. Four-quarter change. Percent. 2010 Q1 – 2015 Q3³⁾



1) CPI adjusted for tax changes and excluding energy prices.
 2) System for averaging short-term models.
 3) Projections for 2015 Q2 – 2015 Q3 (broken lines).
 Sources: Statistics Norway and Norges Bank

NEW SECTOR CLASSIFICATION FOR NORGES BANK'S REGIONAL NETWORK

The sector classification for Norges Bank's regional network was changed as from survey 2/2015. The oil service industry was previously classified as a subsector under the main sector of *manufacturing* and only comprised petroleum-related manufacturing enterprises supplying the Norwegian continental shelf. The supply of petroleum-related goods to other countries was previously classified as part of the *export industry* subsector, while petroleum-related services were included in the *commercial services* subsector. The oil service industry is now classified as a new main sector and comprises all firms delivering petroleum-related goods and services. The new main sector is divided into *domestically oriented oil services* and *export-oriented oil services*. The new classification results in a break in the series for the relevant sectors. In order to be able to compare the series in survey 2/2015 with survey 1/2015, the values for survey 1/2015 have been calculated using the new sector classification. (For more details on the new sector classification for the regional network, see *Regional network 2/2015*).

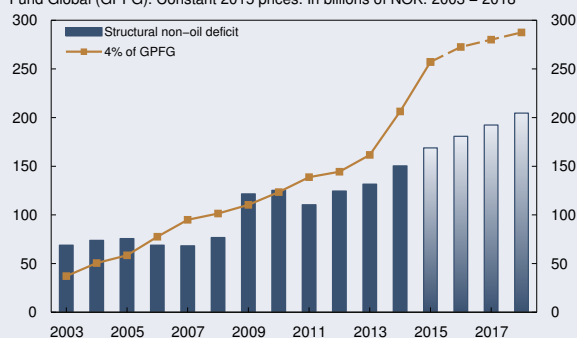
ASSUMPTIONS CONCERNING FISCAL POLICY

The fiscal policy assumptions are based on the final budget for 2015. The structural non-oil deficit is an indicator measuring underlying spending of petroleum revenues over the central government budget. For 2015, this deficit is estimated at NOK 169bn.

The change in the structural non-oil deficit as a percentage of trend GDP for mainland Norway is used as a simple measure of the effect of the central government budget on demand for goods and services. By this measure, the structural non-oil deficit is projected to increase by 0.6 percentage point between 2014 and 2015. The projected deficit in 2015 corresponds to 2.6% of the value of the Government Pension Fund Global (GPF) at the beginning of 2015, a lower share than previously projected. This is because the value of the GPF increased considerably through 2014, primarily as a result of a weaker krone.

The technical assumption is applied that petroleum revenue spending will increase in the years ahead at about the same pace as that recorded since the fiscal rule was introduced in 2001 (see Chart 1.26). This corresponds to an annual increase in the non-oil structural deficit of about 0.3 percentage point of trend GDP for mainland Norway. This implies a somewhat faster projected rise in petroleum revenue spending than the value of the GPF. At the end of the projection period, petroleum revenue spending may be close to 3% of the value of the GPF.

Chart 1.26 Structural non-oil deficit and 4% of the Government Pension Fund Global (GPF). Constant 2015 prices. In billions of NOK. 2003 – 2018¹⁾



¹⁾ Projections for 2015 – 2018.
Sources: Ministry of Finance and Norges Bank

ASSUMPTIONS CONCERNING PETROLEUM INVESTMENT

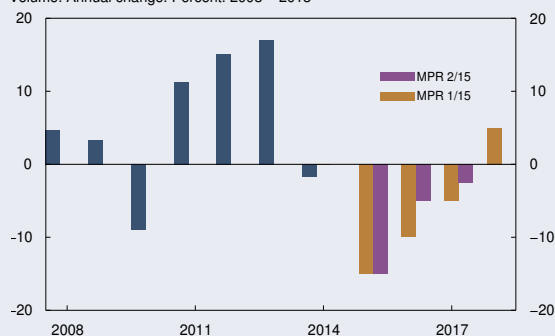
Investment on the Norwegian continental shelf expanded rapidly between 2002 and 2013, driven by a sharp rise in oil prices, several profitable discoveries and the need to upgrade older fields. The rapid growth in investment also led to a sharp rise in costs in the petroleum sector. The rise in costs and the fall in oil prices in the past year have considerably reduced oil company cash flows and the profitability of investments on the Norwegian continental shelf. Oil companies have therefore postponed or cancelled a number of projects and implemented a range of measures to reduce costs. These measures include reducing costs by increasing drilling efficiency, standardising projects, choosing simpler development solutions and negotiating lower prices in supplier markets.

Oil spot prices have varied between USD 60 and 65 recently. Prices are more than USD 45 lower than the average for the first half of 2014, but somewhat higher than assumed in the *March Report*. The effects of the decline in oil prices over the past year will depend on the expected persistence of the decline. The projections in this *Report* are based on the assumption that oil prices will move in line with futures prices and that oil companies apply the same assumption. Futures prices indicate that oil prices will move up to a little more than USD 70 in 2018 (see Chart 1.8). Futures prices for the next quarters are somewhat higher than in the *March Report*, but futures prices further ahead show little change. Futures prices for 2016–2019 have declined by an average of around USD 30 since summer 2014.

As in the *March Report*, petroleum investment is projected to fall by 15% between 2014 and 2015 (see Chart 1.27). The investment intentions survey for Q2 indicates that the decline in petroleum investment will be less pronounced in 2016 than projected in the *March 2015 Report*, and Norges Bank's investment projections for 2016 and 2017 have been revised up. It is particularly investments in exploration and fields in production that are expected to be higher than projected. Petroleum investment is projected to flatten out in 2018. For the projection period as a whole, the projections are higher than in the *March Report*.

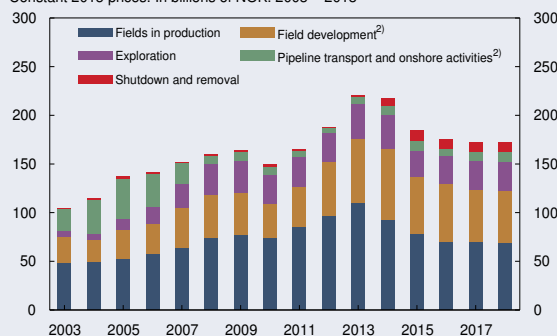
Lower investment in fields in production is the most important factor behind the projected decline in investment between 2014 and 2018 (see Chart 1.28). Upgrading of older fields has fuelled investment in recent years. The need for upgrading will not be as high ahead. Savings measures undertaken by oil companies also contribute to lower investment spending on fields in production during the projection

Chart 1.27 Petroleum investment.
Volume. Annual change. Percent. 2008 – 2018¹⁾



1) Projections for 2015 – 2018.
Sources: Statistics Norway and Norges Bank

Chart 1.28 Petroleum investment.
Constant 2015 prices. In billions of NOK. 2003 – 2018¹⁾



1) Projections for 2015 – 2018. The figures for 2003 – 2014 from the investment intentions survey are deflated by the price index for petroleum investment in the national accounts. The index is projected to increase with 1.5 percent from 2014 to 2015.
2) Pipeline expenditure on the Johan Sverdrup development are included in the estimates for pipeline transport and onshore activities.
Sources: Statistics Norway and Norges Bank

period. Investment in these fields is projected to fall by NOK 13bn in 2015 and by a further NOK 10bn between 2015 and 2018.

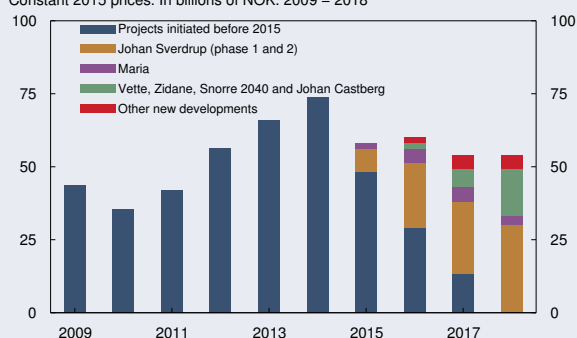
Spending on field development has increased markedly in recent years and was higher than NOK 70bn in 2014. The high level of investment in 2014 reflected a number of large-scale field development projects on the Norwegian shelf. A number of these projects have now been completed. The remaining projects are expected to be completed in the period 2015–2017. Petroleum investment will therefore in isolation fall markedly as a result of lower investment in projects started before 2015 (see Chart 1.29). The decline is restrained by the development of the Johan Sverdrup and Maria field in the coming years, with investment estimated at a total of NOK 90–100bn in the period 2015–2018. The estimates are also based on the assumption that development of the Vette and Zidane fields will commence in the course of 2016.

The Snorre 2040 project and development of the Johan Castberg field are the largest development projects planned on the Norwegian shelf. Both projects have been postponed several times on account of weak profitability. The licence partners in the Snorre and the Johan Castberg projects are working to reduce investment costs in order to make the projects sufficiently profitable. Snorre 2040 is assumed to start towards the end of 2017 and Johan Castberg towards the end of 2018.¹ Overall spending on field development is projected to fall by NOK 16bn in 2015 and by a further NOK 4bn between 2015 and 2018.

Exploration activity is expected to fall markedly between 2014 and 2015. Lower demand for drilling rigs has resulted in a substantial fall in rig rates. This will in turn lead to lower drilling costs, which may lead to some rebound in exploration activity towards the end of the projection period.

Chart 1.29 Field development.

Constant 2015 prices. In billions of NOK. 2009 – 2018¹⁾



1) Projections for 2015 – 2018. The figures for 2009 – 2014 from the investment intentions survey by Statistics Norway are deflated by the price index for petroleum investment in the national accounts. The projections are based on the investment intentions survey for 2015 Q2, the projections in *The Shelf 2014* from the Norwegian Petroleum Directorate, Storting Propositions relating to projects commenced prior to 2015, impact assessments of new projects and current information on deferrals and assumed project commencements. Pipeline expenditure on the Johan Sverdrup development are included in the estimates for pipeline transport and onshore activities. Sources: Statistics Norway and Norges Bank

1 Snorre 2040 is a large development project involving a field in production. Norges Bank classifies this project as a field development project, in line with the classification of similar projects (such as Ekofisk Sør and Eldfisk II) in Statistics Norway's investment intentions survey.

2 MONETARY POLICY OUTLOOK

Monetary policy trade-offs

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 15 years, average inflation has been somewhat below, but close to, 2.5% (see Chart 2.1). Inflation expectations, as implied by expectations surveys, also remain close to 2.5% (see Chart 2.2).

The key policy rate is set with a view to maintaining inflation close to 2.5% over time without causing excessive fluctuations in output and employment. The monetary policy assessment takes into account that there is uncertainty concerning the current situation, economic driving forces and the functioning of the economy. This normally suggests a gradual approach in interest rate setting. Monetary policy seeks to be robust. Among other things, monetary policy should therefore seek to mitigate the risk of a build-up of financial imbalances. In the event of major and abrupt changes in the balance of risks, the consideration of robustness may also imply a more active monetary policy than normal.

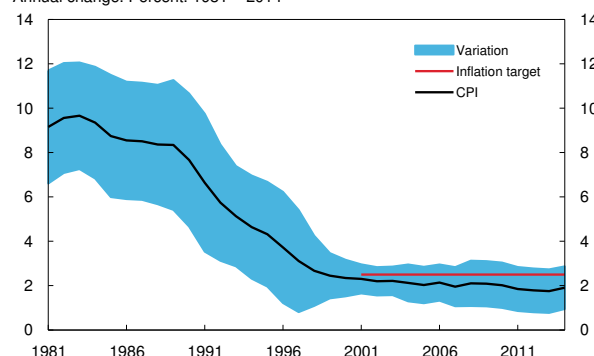
The analysis in the March Report

In the March 2015 *Monetary Policy Report*, the key policy rate was projected to lie around 1% in the coming years, and to increase gradually thereafter. With this path for the key policy rate, there were prospects that inflation would increase somewhat in the coming quarters before falling again to a little more than 2% where it would remain to the end of the projection period. Capacity utilisation was expected to decline further in the coming period, but rise to a normal level towards the end of the projection period.

Weaker driving forces behind inflation and output

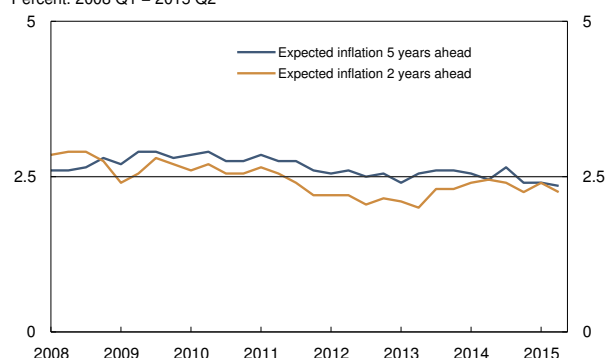
New information indicates that growth in the Norwegian economy has slowed and that the outlook ahead is somewhat weaker than previously projected. Consumption remains firm, but private investment appears to be moving on a weaker path than expected (see Chart 2.3). In May, Norges Bank's regional network contacts reported slackening output growth. Contacts expected continued sluggish growth ahead and the outlook was weaker than in January. Expectations have declined in particular in the oil service industry and commercial services sector (see Chart 2.4). The effects of lower oil prices and lower oil industry demand appear to be somewhat more pronounced

Chart 2.1 10-year moving average¹⁾ and variation²⁾ in the CPI. Annual change. Percent. 1981 – 2014



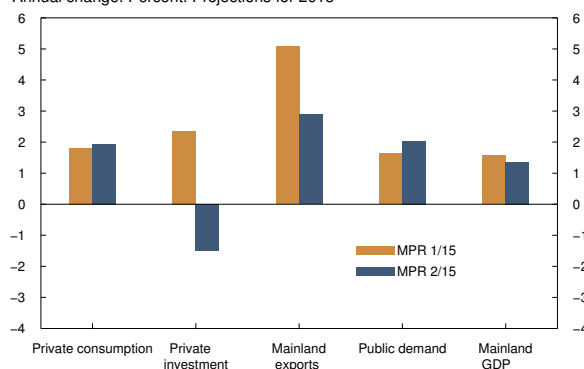
1) The moving average is calculated 10 years back.
2) The band around the CPI is the variation in the CPI in the average period, measured by +/- one standard deviation.
Sources: Statistics Norway and Norges Bank

Chart 2.2 Expected consumer price inflation 2 and 5 years ahead.¹⁾ Percent. 2008 Q1 – 2015 Q2



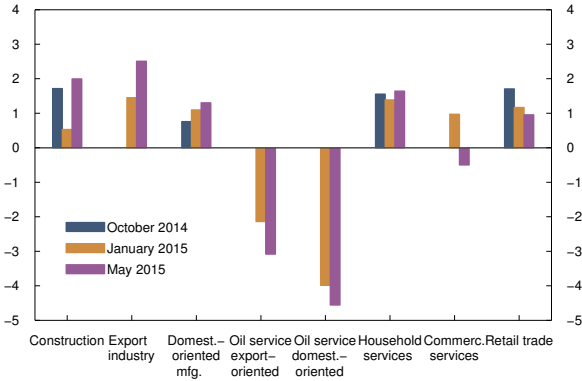
1) Average of expectations of employer/employee organisations and economists in the financial industry and academia.
Sources: Epinion, Opinion, TNS Gallup and Norges Bank

Chart 2.3 Mainland GDP with demand components. Annual change. Percent. Projections for 2015



Source: Norges Bank

Chart 2.4 Expected output growth next six months in Norges Bank's regional network.¹⁾ Annualised. Percent

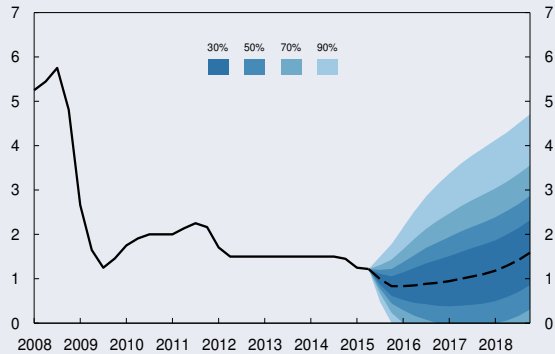


¹⁾ New sector classification results in a break in the series for export, oil services and commercial services from 2015. For further information, see box on page 16. Source: Norges Bank

than previously assumed. On the other hand, it now seems that petroleum investment will show a smaller decline in 2016 and 2017 than projected in March. This may entail some improvement in the growth outlook ahead. On the whole, unemployment is expected to increase a little more and capacity utilisation to edge down further for a period, compared with the projections in the March Report.

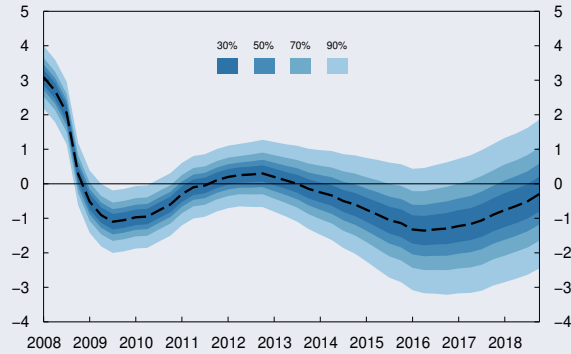
Consumer price inflation has been lower than projected in the March Report. The results from this year's wage settlement indicate lower-than-expected wage growth in 2015. There are prospects that wage growth ahead will also be lower than previously projected. This weakens the forces driving inflation further ahead. At the same time, the considerable

Chart 2.5a Projected key policy rate in the baseline scenario with fan chart. Percent. 2008 Q1 – 2018 Q4¹⁾



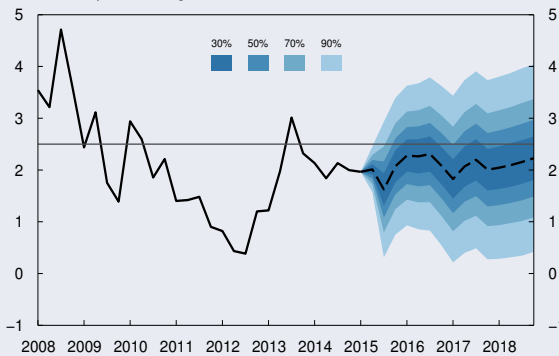
¹⁾ Projections for 2015 Q2 – 2018 Q4 (broken line). Source: Norges Bank

Chart 2.5b Projected output gap¹⁾ in the baseline scenario with fan chart. Percent. 2008 Q1 – 2018 Q4



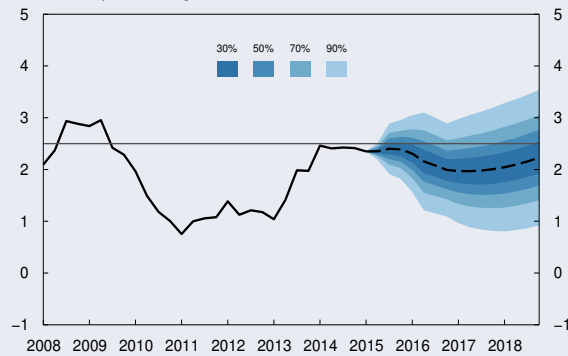
¹⁾ The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP. Source: Norges Bank

Chart 2.5c Projected CPI in the baseline scenario with fan chart. Four-quarter change. Percent. 2008 Q1 – 2018 Q4¹⁾



¹⁾ Projections for 2015 Q2 – 2018 Q4 (broken line). Sources: Statistics Norway and Norges Bank

Chart 2.5d Projected CPI-ATE¹⁾ in the baseline scenario with fan chart. Four-quarter change. Percent. 2008 Q1 – 2018 Q4²⁾



¹⁾ CPI adjusted for tax changes and excluding energy products. ²⁾ Projections for 2015 Q2 – 2018 Q4 (broken line). Sources: Statistics Norway and Norges Bank

depreciation of the krone through 2014 will underpin inflation in the coming period.

Slightly lower key policy rate forecast in the coming years

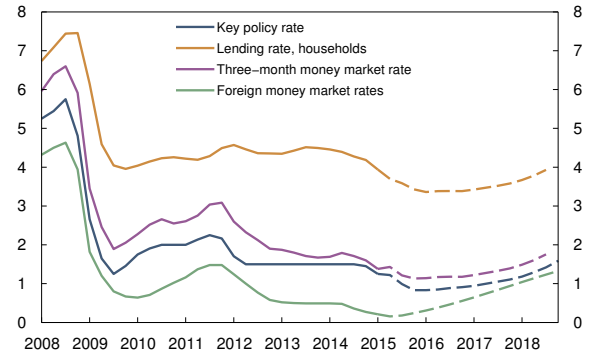
The projections in this *Report* imply a key policy rate of just above ¾% in the coming year, followed by a gradual increase (see Charts 2.5 a–d). In the period to mid-2017, the projected path for the key policy rate is somewhat lower than in the *March Report*. Towards the end of the projection period, the path is slightly higher than in March. Both the aim of keeping inflation close to 2.5% and the aim of underpinning capacity utilisation in the coming years suggest in isolation a lower key policy rate path. On the other hand, an even lower key policy rate may increase the risk of further fuelling house price inflation and debt growth. Therefore, the path for the key policy rate is somewhat higher than if weight had not been given to the robustness consideration (see box on monetary policy trade-offs and the criteria for an appropriate interest rate path on page 26). A further description of the factors behind the change in the key policy rate forecast is provided in the box on page 28. Bank lending rates are expected to follow developments in money market rates (see Chart 2.6).

With a path for the key policy rate in line with that projected in this *Report*, the analyses in this *Report* suggest that inflation will remain slightly below 2.5% at the beginning of the projection period before gradually declining to around 2% in 2017. Further out, inflation is projected to move up somewhat (see Chart 2.7). Capacity utilisation in the mainland economy is assessed to be lower than what may be regarded as a normal level and is projected to decline further. Towards the end of the projection period, capacity utilisation is expected to move up towards a more normal level.

Growth picks up gradually from a low level

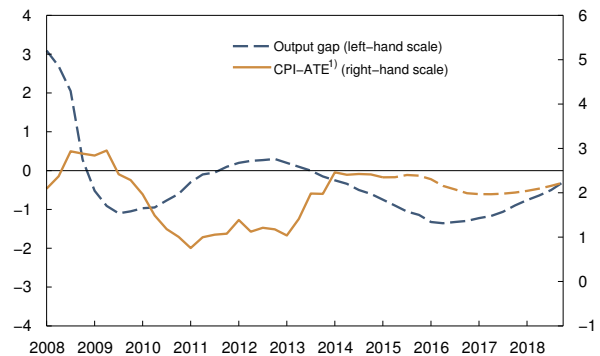
Growth in the Norwegian economy is projected at 1¼% in 2015 and 1½% in 2016. Growth is projected to rise gradually thereafter to around 2½% annually towards the end of the projection period (see Chart 2.8). Low employment growth is also expected as output growth declines. Labour immigration has been high in recent years and the size of the labour force has historically varied according to the demand for labour. Labour immigration has edged down recently. It is assumed that this tendency will continue and that a flexible labour supply will curb the rise in unemployment. Registered

Chart 2.6 Key policy rate, three-month money market rate,¹⁾ interest rate on loans to households²⁾ and foreign money market rates in the baseline scenario. Percent. 2008 Q1 – 2018 Q4³⁾



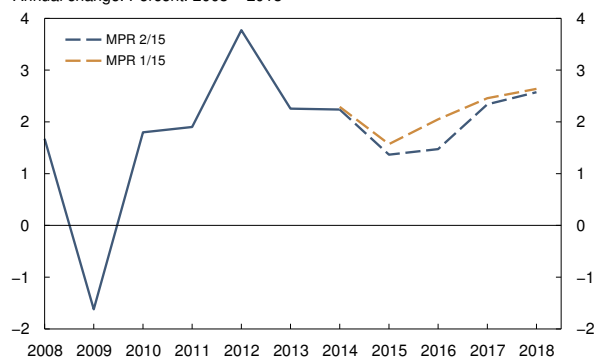
1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that announced interest rate changes are priced into the money market.
2) Average interest rate on all loans to households from banks and mortgage companies.
3) Projections for 2015 Q2 – 2018 Q4 (broken lines).
Sources: Thomson Reuters, Statistics Norway and Norges Bank

Chart 2.7 Inflation and output gap in the baseline scenario. Percent. 2008 Q1 – 2018 Q4



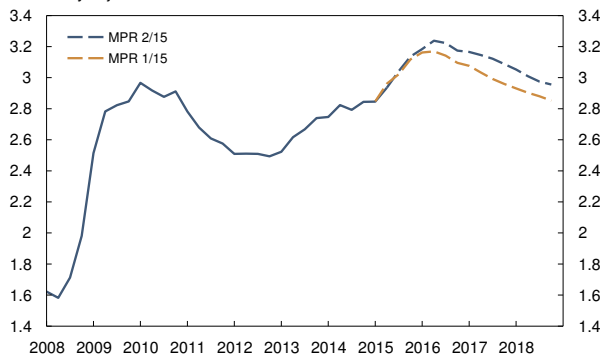
1) CPI adjusted for tax changes and excluding energy products. Projections for 2015 Q2 – 2018 Q4 (broken line).
Sources: Statistics Norway and Norges Bank

Chart 2.8 Mainland GDP Annual change. Percent. 2008 – 2018¹⁾



1) Projections for 2015 – 2018.
Sources: Statistics Norway and Norges Bank

Chart 2.9 Unemployment in percent of labour force, NAV. Seasonally adjusted. Percent. 2008 Q1 – 2018 Q4¹⁾



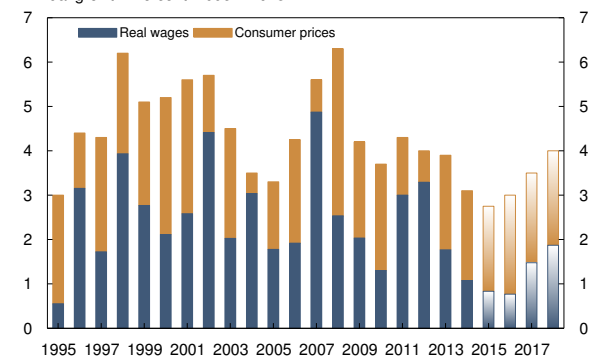
1) Projections for 2015 Q2 – 2018 Q4 (broken lines). Sources: NAV, Statistics Norway and Norges Bank

unemployment is projected to increase from 3% in 2015 to 3¼% in 2016 and 2017 (see Chart 2.9), followed by some decline towards the end of the projection period as growth in the mainland economy edges up.

Moderate wage growth

Lower activity in the oil service industry is pushing down demand for labour and restraining wage growth both in that industry and in the wider economy. Wage growth in 2015 appears to be at its lowest level in over 20 years (see Chart 2.10). For 2016, wage growth is projected at 3%. Further out in the projection period, wage growth is projected to increase as capacity utilisation rises and productivity growth moves up.

Chart 2.10 Wages. Annual growth. Percent. 1995 – 2018¹⁾

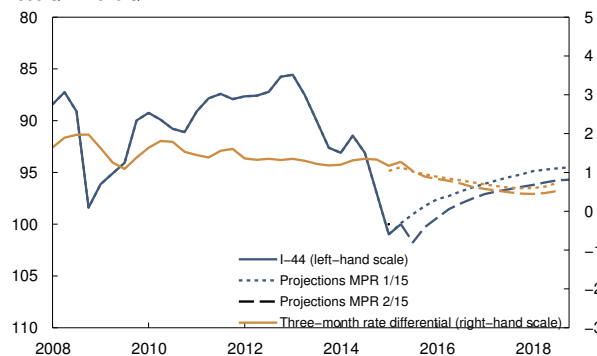


1) Projections for 2015 – 2018. Sources: TBU, Statistics Norway and Norges Bank

The krone remains weaker than previously assumed

The krone depreciated sharply through autumn 2014 and remains weaker than the average for recent years. Historical experience suggests that the krone is weaker than implied by the interest rate differential and oil prices. This may imply some appreciation of the krone ahead. It is nevertheless assumed that the krone will remain somewhat weaker through the entire projection period than envisaged in the March Report (see Chart 2.11), against the background of a narrower interest rate differential against other countries and the risk premium on NOK which appears to have increased.

Chart 2.11 Three-month money market rate differential between Norway¹⁾ and trading partners²⁾ and import-weighted exchange rate index I-44.³⁾ 2008 Q1 – 2018 Q4⁴⁾



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 for trading partners from 12 June 2015.
3) A positive slope denotes a stronger krone exchange rate.
4) Projections in MPR 2/15 for 2015 Q2 – 2018 Q4 (broken lines). Sources: Thomson Reuters and Norges Bank

Consumer price inflation edges down to around 2%

Consumer price inflation is projected to remain at just below 2.5% at the beginning of the projection period. The depreciation of the krone through autumn 2014 lifts prices for imported consumer goods. Later in the projection period, the effect of the krone depreciation will diminish. Wage growth in 2015 appears to be lower than projected earlier. Combined with prospects for lower wage growth ahead, this will push down the rise in prices for domestically produced goods and services over the coming year. Further out in the projection period, domestic inflation will move up as wage growth increases. Overall consumer price inflation is projected to drift down to around 2% 2017, before edging up further out.

Productivity growth edges up from a low level

Mainland productivity has grown by around 1% over the past year, a noticeably lower rate than pre-crisis.

Later in the projection period productivity growth is projected to increase somewhat as capacity utilisation picks up. Labour immigration is expected to continue to make a positive contribution to growth in potential output in the years ahead, but weaker prospects for the Norwegian economy will likely curb immigration to some extent.

Continued moderate growth in consumption and high saving

Consumption growth is expected to remain moderate ahead, but somewhat lower in the coming years than projected in the *March Report*. Prospects for lower real wage growth and higher unemployment will weigh down on household purchasing power, while lower interest rates may boost consumption growth. Growth in private consumption is projected at 2% in 2015 and 1¾% in 2016. Towards the end of the projection period, annual growth of 3% is expected (see Chart 2.12). The saving ratio is expected to remain at a high level (see Chart 2.13).

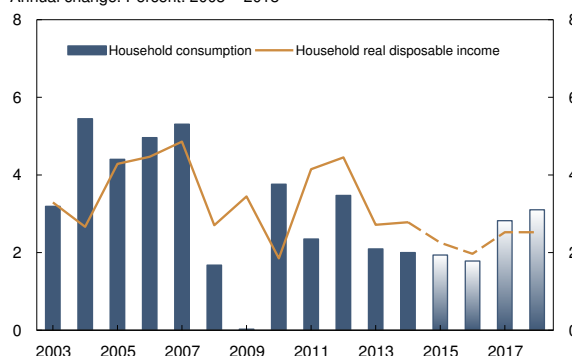
Investment picks up gradually from low levels

Growth in business investment is expected to be subdued in the coming year, partly reflecting the slow-down in growth in the Norwegian economy and weak growth prospects (see Chart 2.14). Further out in the projection period, low interest rates and higher demand are likely to push up growth in business investment. Housing investment is also expected to pick up in the coming years, partly owing to a sustained rise in population.

Exports remain high, but petroleum-related exports fall

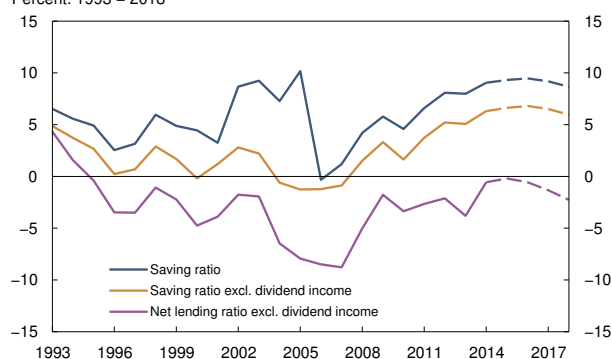
Growth in mainland exports is projected to increase gradually from approximately 3% in 2015 to around 4% in 2018 (see Chart 2.15). Improved competitiveness over the past two years due to a weaker krone put export firms in a better position to maintain market share (see Chart 2.16). Further out in the projection period, higher growth among trading partners will contribute to somewhat higher export growth. Petroleum-related exports, which account for about a quarter of mainland exports, are likely to shrink owing to the decline in global petroleum investment (see Special Feature on page 57). At the same time, a weaker krone makes it easier for Norwegian oil service firms to win contracts in a falling market for deliveries to both the Norwegian and international petroleum industry.

Chart 2.12 Household consumption¹⁾ and real disposable income.²⁾ Annual change. Percent. 2003 – 2018³⁾



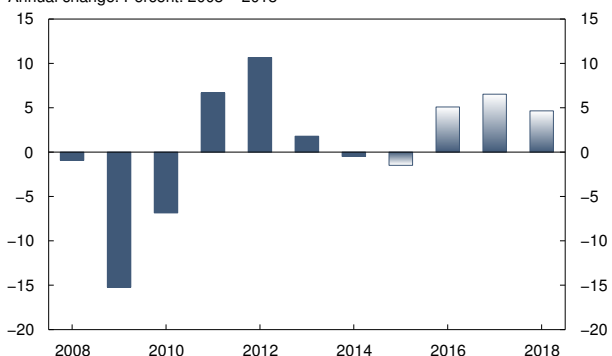
1) Includes consumption for non-profit organisations. Volume.
2) Excluding dividend income. Including income for non-profit organisations.
3) Projections for 2015 – 2018.
Sources: Statistics Norway and Norges Bank

Chart 2.13 Household saving and net lending as a share of disposable income. Percent. 1993 – 2018¹⁾



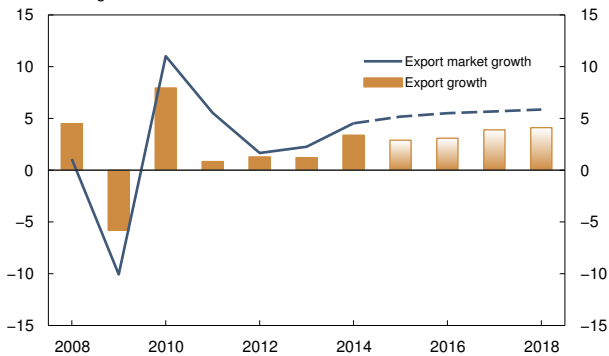
1) Projections for 2015 – 2018 (broken lines).
Sources: Statistics Norway and Norges Bank

Chart 2.14 Private investment. Annual change. Percent. 2008 – 2018¹⁾



1) Projections for 2015 – 2018.
Sources: Statistics Norway and Norges Bank

Chart 2.15 Export market growth¹⁾ and growth in Norwegian mainland exports. Annual change. Percent. 2008 – 2018²⁾

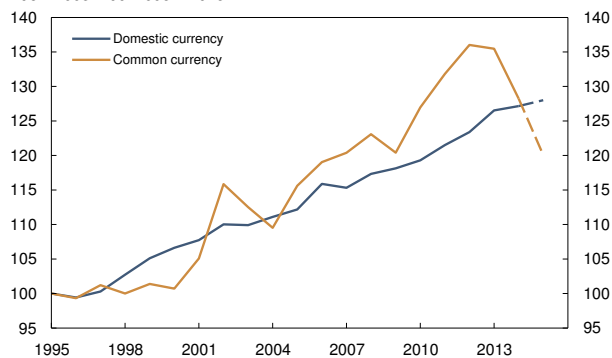


1) Export market growth is calculated as import growth among 25 trading partners.
2) Projections for 2015 – 2018.
Sources: Thomson Reuters and Norges Bank

House price inflation slows gradually from a high level

House price inflation is expected to slow gradually through 2015 and 2016 (see Chart 2.17). Low interest rates will underpin house price inflation, while low wage growth and somewhat higher unemployment will have a dampening effect further ahead. Growth in household debt is projected to edge up in the coming year, reflecting the projected rise in house prices, and to edge down thereafter. Household debt ratios are thus likely to continue to increase ahead (see Chart 2.18). The household interest payment burden is projected to fall slightly in the coming year, followed by a moderate increase. The recently presented government measures aimed at the housing market may curb house price inflation and household debt accumulation.

Chart 2.16 Labour costs¹⁾ relative to trading partners. Index. 1995=100. 1995 – 2015²⁾

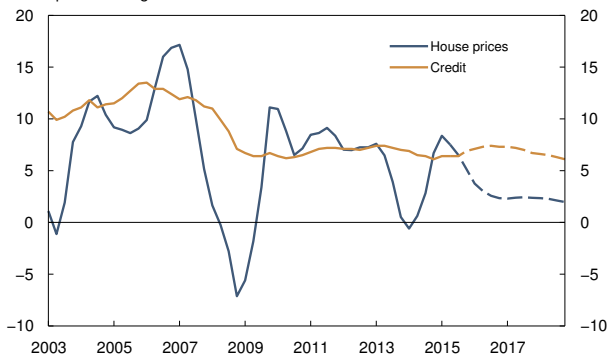


1) Hourly labour costs in manufacturing.
2) Projections for 2015 (broken lines).
Sources: TBU, Statistics Norway and Norges Bank

The projections are uncertain

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 the functioning of the economy and monetary policy. The projections express Norges Bank's expectations concerning developments ahead, but they are uncertain. If economic developments are broadly in line with projections, economic agents can also expect the key policy rate path to be approximately as projected. Hence, the interest rate path is a conditional forecast. Monetary policy may respond to changes in the economic outlook, or if the relationships between the interest rate level, inflation, output and employment differ from those assumed. The uncertainty surrounding Norges Bank's projections is illustrated using fan charts (see Charts 2.5 a-d). The width of the fans reflects historical uncertainty.

Chart 2.17 Household debt¹⁾ and house prices. Four-quarter change. Percent. 2003 Q1 – 2018 Q4²⁾



1) Domestic credit to households (C2).
2) Projections for 2015 Q2 – 2018 Q4 (broken lines).
Sources: Statistics Norway, Eiendom Norge, Eiendomsverdi, Finn.no and Norges Bank

Growth in the Norwegian economy may prove to be weaker than projected in this *Report*. Considerable uncertainty remains regarding oil market developments ahead. The past year has shown that prices can move quickly, and therefore the possibility that oil prices fall further or stabilise at current levels cannot be ruled out. Should the decline in petroleum investment prove to be considerably more pronounced than currently projected, growth prospects for the Norwegian economy may weaken further and lead to a higher-than-projected rise in unemployment. Lower global oil investment may also pull down oil-related exports to a greater extent than projected. If consumer uncertainty increases at the same time, the effects on house prices and private consumption may be substantial.

Movements in the foreign exchange market, especially the NOK market, have been substantial over the past six months. If the krone appreciates more than projected, both growth in the Norwegian economy and inflation may be lower than projected. If inflation proves to be lower than projected, or developments in output and employment are weaker than projected in this *Report*, the key policy rate may be lowered to a greater extent than implied by the baseline scenario.

If oil prices increase faster and more than implied by futures prices, petroleum investment may be higher than projected. Reduced uncertainty concerning developments in the Norwegian economy may boost business and consumer confidence, contributing to a faster upswing in investment and private consumption than projected in the current *Report*.

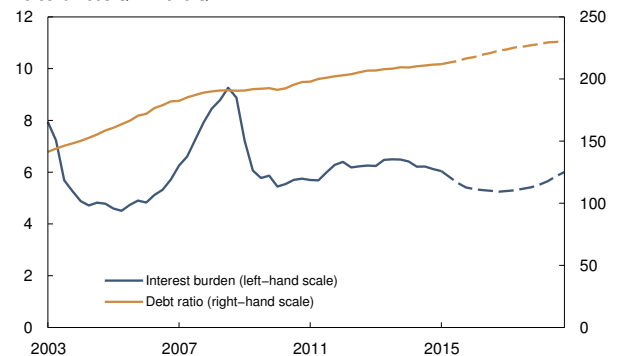
Growth among many of Norway's trading partners is picking up, and the possibility of higher-than-projected growth cannot be ruled out. As a result, demand for goods and services from traditional export-oriented industries in Norway may increase more than currently assumed. Should growth in the Norwegian economy prove to be stronger than currently projected, the key policy rate may be raised more quickly than indicated by the baseline scenario.

Cross-checks in line with the interest rate forecast

Forward rates in the money and bond markets can function as a cross-check for the interest rate forecast. Estimated forward rates are close to Norges Bank's forecast for the money market rate in this *Report* throughout the projection period (see Chart 2.19).

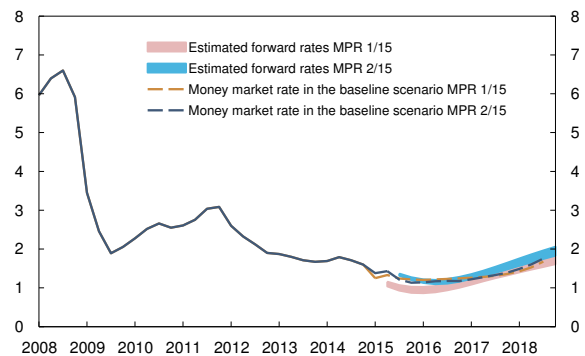
A simple rule based on Norges Bank's previous interest rate setting can also serve as a cross-check for the baseline key policy rate. Chart 2.20 shows such a rule, where the key policy rate is determined by developments in inflation, wage growth, mainland GDP and external interest rates. The interest rate in the previous period is also taken into account. The model parameters are estimated on historical relationships. The projections are based on the estimates for the variables included in this *Report*. The model uncertainty is expressed by the blue band. The chart shows that the baseline key policy rate is close to the middle of this band.

Chart 2.18 Household debt ratio¹⁾ and interest burden.²⁾ Percent. 2003 Q1 – 2018 Q4³⁾



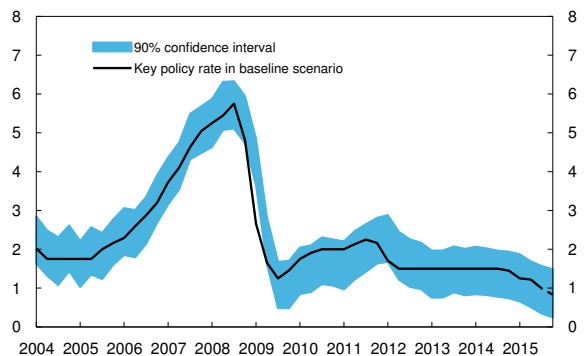
1) Loan debt as a percentage of disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3.
 2) Interest expenses as a percentage of disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and redemption/reduction of equity capital for 2006 – 2012 Q3 plus interest expenses.
 3) Projections for 2015 Q1 – 2018 Q4 (broken lines).
 Sources: Statistics Norway and Norges Bank

Chart 2.19 Three-month money market rate in the baseline scenario¹⁾ and estimated forward rates.²⁾ Percent. 2008 Q1 – 2018 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 red and blue bands show the highest and lowest rates in the period 27 February – 12 March 2015 and 30 May – 12 June 2015.
 Sources: Thomson Reuters and Norges Bank

Chart 2.20 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.¹⁾ Percent. 2004 Q1 – 2015 Q4



1) Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and three-month money market rates among trading partners, as well as the interest rate in the preceding period. The equation is estimated over the period 1999 Q1 – 2015 Q1. See *Norges Bank Staff Memo 3/2008* for further discussion.
 Source: Norges Bank

MONETARY POLICY TRADE-OFFS

Norges Bank seeks to maintain inflation close to 2.5% over time. 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. The following set of criteria can serve as a guideline for an appropriate interest rate path:

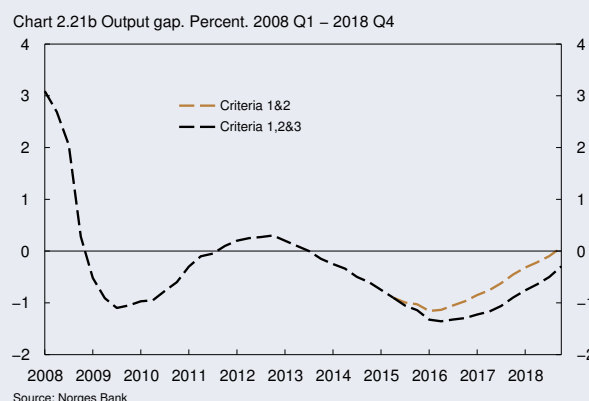
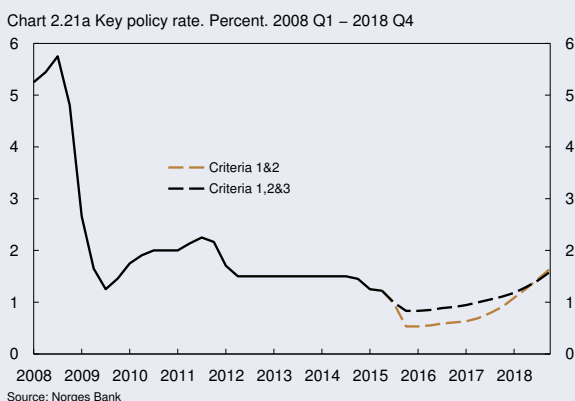
1. **The inflation target is achieved:**
The interest rate path should stabilise inflation at target or bring inflation back to target after a deviation has occurred.
2. **The inflation targeting regime is flexible:**
The interest rate path should provide a reasonable balance between the path for inflation and the path for overall capacity utilisation in the economy.

The assessment takes into account that the state of the economy and its functioning are not fully known. This normally suggests a gradual approach in interest rate setting. In addition, the following criterion is given weight:

3. **Monetary policy is robust:**
Conditions that imply increased risk of particularly adverse economic outcomes should be taken into account when setting the key policy rate. Among other things, monetary policy should therefore seek to mitigate the risk of a build-up of financial imbalances. In the event of major and abrupt changes in the balance of risks, the consideration of robustness may also imply a more active monetary policy than normal.

The various considerations expressed in the criteria are weighed against each other. The consideration of robustness is not an objective in itself but is included because it may yield improved performance in terms of inflation, output and employment over time.

The trade-off between the criteria is difficult to quantify. The Executive Board provides a qualitative account of the reasoning behind its judgement in the "Executive Board's assessment" at the beginning of the Report.



Charts 2.21 ac illustrate how different monetary policy strategies could affect the outcome for the key policy rate, the output gap and inflation. The paths for the key policy rate that follow from the different strategies provide an illustration of the trade-offs between the different monetary policy considerations.

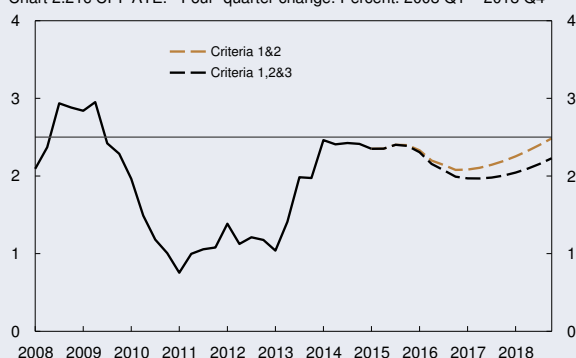
The projections in this *Report* imply a key policy rate of just above ¾% in the coming year, followed by a gradual increase. With this path for the key policy rate, there are prospects that consumer price inflation eventually declines to around 2% in 2017. Towards the end of the projection period, inflation is expected to move up somewhat. Capacity utilisation in the mainland economy is projected to decline further, first moving up to a more normal level towards the end of the projection period.

Both the objective of keeping inflation close to target and the objective of sustaining capacity utilisation in the years ahead may imply a lower key policy rate path than in the baseline scenario. Such a path for the key policy rate is illustrated with the aid of a technical model-based analysis (see orange line in Chart 2.21 a).

A lower path for the key policy rate will increase the likelihood of higher house price inflation and household debt. House prices and household debt growth have long risen faster than household income, and continued high growth may make households more vulnerable. This suggests allowing somewhat more time to bring inflation up to 2.5% and capacity utilisation closer to a normal level. A somewhat less pronounced monetary policy response than implied by short-term inflation and output considerations may reduce the likelihood that financial imbalances build up and trigger or amplify an economic downturn further ahead. With a robust monetary policy, there is reason to believe that the paths for inflation and output over time will be more stable.

In the event of major and abrupt changes in the balance of risks, the consideration of robustness may also imply a more active monetary policy than normal. In December 2014, the key policy rate was reduced to counteract the risk of a sudden and pronounced downturn in the Norwegian economy on account of the fall in oil prices through autumn. So far, the decline in the Norwegian economy has been moderate. Oil prices have moved up somewhat since this winter and consumption remains firm. Even though growth and growth prospects are somewhat diminished, the risk of a sudden and pronounced decline in the economy has receded over the past six months. This robustness consideration is no longer pulling down the key policy rate path to the same extent.

Chart 2.21c CPI-ATE.¹⁾ Four-quarter change. Percent. 2008 Q1 – 2018 Q4



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

CHANGES IN THE PROJECTIONS SINCE MONETARY POLICY REPORT 1/15

The interest rate forecast in this *Monetary Policy Report* is somewhat lower than in the March 2015 *Report* in the period to mid-2017 (see Chart 2.22). Towards the end of the projection period the forecast is a little higher than in March. The projections are based on the criteria for an appropriate interest rate path (see box on monetary policy trade-offs on page 28), an overall assessment of the situation in the Norwegian and global economy and Norges Bank's perception of the functioning of the economy.

Chart 2.23 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 from the March *Report* is shown by the black line.

Policy rates are still close to zero in many countries and are expected to be low for a long time. Market expectations concerning foreign money market rates in the coming period are little changed since the March *Report*, but interest rate expectations further ahead have risen. This suggests a somewhat higher key

policy rate later in the forecast period (see orange bars). The composition of the interest rate aggregate for trading partners has been changed as from this *Report* (see Special Feature on page 47). This change has also pushed up the interest rate path somewhat slightly further ahead.

The krone has depreciated recently and is now weaker than assumed in the March *Report*. The krone has been somewhat weaker than developments in the interest rate differential against other countries alone would imply. This may indicate that the risk premium for NOK is now somewhat higher than expected in March. A weaker krone contributes, in isolation, to slightly higher inflation and slightly higher economic activity. This pushes up the path for the key policy rate (see red bars).

Banks have reduced interest rates on loans to households and enterprises by a little more than assumed in the March *Report*. There are prospects that banks' lending margins, i.e. the difference between lending rates and money market rates, will lie somewhat lower ahead than anticipated earlier. This lifts the path for the key policy rate (see light blue bars). At the same time, Norwegian money market premiums have risen and have been somewhat higher than expected. This

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

Chart 2.22 Key policy rate in the baseline scenario in MPR 1/15 with fan chart and key policy rate in the baseline scenario in MPR 2/15 (orange line). Percent. 2008 Q1 – 2018 Q4

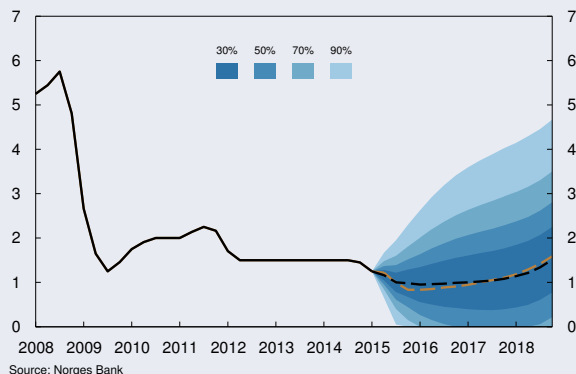
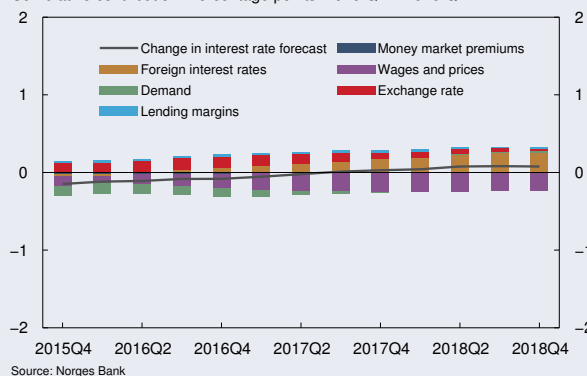


Chart 2.23 Factors behind changes in the interest rate forecast since MPR 1/15. Cumulative contribution. Percentage points. 2015 Q4 – 2018 Q4



suggests a lower key policy rate, because a higher premium, all else being equal, means a higher money market rate (see dark blue bars).

Growth in the Norwegian economy appears to have been slightly lower than projected and the economic outlook has weakened somewhat since March. In May, Norges Bank's regional network contacts reported slowing output growth. Contacts expected continued weak growth ahead and prospects were weaker than in January. Oil investment is still expected to show a sharp fall in 2015, but the decline in 2016 and 2017 is now expected to be more moderate than envisaged in March. Overall, weaker demand prospects, and hence the outlook for output and employment in

Norway, result in a lower path for the key policy rate in the coming years (see green bars).

This year's wage settlement indicate that wage growth may turn out somewhat lower than previously assumed. The projections for wage growth in the years ahead have been revised down compared with the projections in the *March Report*. Consumer price inflation has been slightly lower than expected and the drivers of inflation have weakened. The purple bars show the downward revision of the path for the key policy rate that follows from lower inflation and lower wage growth.

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

TABLE 1 Projections for macroeconomic aggregates in *Monetary Policy Report 2/15*. Percentage change from previous year (unless otherwise stated). Change from projections in *Monetary Policy Report 1/15* in brackets

	2015	2016	2017	2018
CPI	2 (-1/4)	2 1/4 (0)	2 (-1/4)	2 1/4 (1/4)
CPI-ATE ¹	2 1/4 (-1/4)	2 1/4 (0)	2 (-1/4)	2 1/4 (1/4)
Annual wages ²	2 3/4 (-1/4)	3 (-1/4)	3 1/2 (-1/4)	4 (0)
Mainland demand ³	1 1/2 (-1/4)	2 1/2 (-3/4)	3 1/4 (0)	3 (1/4)
GDP, mainland Norway	1 1/4 (-1/4)	1 1/2 (-1/2)	2 1/4 (-1/4)	2 1/2 (-1/4)
Output gap, mainland Norway (level) ⁴	-1 (0)	-1 1/4 (-1/4)	-1 (-1/4)	-1/2 (-1/4)
Employment, persons, QNA	1/4 (-1/4)	1/4 (-1/4)	1 (-1/4)	1 (0)
Registered unemployment (rate, level)	3 (0)	3 1/4 (0)	3 1/4 (1/4)	3 (0)
Level				
Key policy rate ⁵	1 (0)	3/4 (-1/4)	1 (0)	1 1/4 (0)
Import-weighted exchange rate (I-44) ⁶	100 3/4 (1 1/4)	98 1/4 (1 1/4)	96 3/4 (1)	96 (1 1/4)
Money market rates, trading partners ⁷	1/4 (0)	1/2 (0)	3/4 (0)	1 1/4 (1/4)

1 CPI-ATE: CPI adjusted for tax changes and excluding energy products.

2 Annual wage growth is based on the Technical Reporting Committee on Income Settlements' definitions and calculations.

3 Private and public consumption and mainland gross fixed investment.

4 The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP.

5 The key policy rate is the interest rate on banks' deposits in Norges Bank.

6 The weights are estimated on the basis of imports from 44 countries, which comprise 97% of total imports.

7 Market rates are based on money market rates and interest rate swaps.

Source: Norges Bank

3 DECISION BASIS FOR THE COUNTERCYCLICAL CAPITAL BUFFER

Norges Bank is responsible for preparing a decision basis and providing advice to the Ministry of Finance regarding the level of the countercyclical capital buffer four times a year. The buffer rate is set at 1%, effective from 30 June 2015 (see box below).

Norges Bank has formulated three criteria for an appropriate countercyclical capital buffer (see box on page 42). Banks should build and hold a countercyclical capital buffer when financial imbalances are building up or have built up. The buffer rate should be considered in the light of other requirements applying to banks, particularly when new requirements are introduced. In the event of an economic downturn and large bank losses, the buffer rate can be reduced to mitigate the procyclical effects of tighter bank lending.

Household debt is rising faster than income

From the mid-1990s to 2008, total household and corporate debt in the mainland economy grew markedly faster than GDP (see Charts 3.1 and 3.2). Since the financial crisis, credit growth has slowed. The credit indicator has increased somewhat in recent years.

Overall household debt growth has been fairly stable over the past six months (see Chart 3.3). Growth in bank credit to households has recently picked up. At the same time, growth in credit from state lending institutions has fallen somewhat. Banks have reduced residential mortgage lending rates.

Household debt has continued to rise faster than disposable income (see Chart 3.4). The debt-to-income ratio has increased for all age groups in recent years (see Chart 3.5). High and rising debt ratios increase household vulnerability to a loss of income, interest rate increases and a fall in house prices. All total, household assets are considerable (see Chart 3.6), the bulk of which is linked to housing wealth.

Banks' credit risk on loans to households is linked to households with a high debt level, low debt-servicing capacity and poor collateral. The share of debt held by households with debt over five times disposable income has increased in recent years, while the share of debt held by households with poor debt-servicing capacity has fallen (see Chart 3.7). The share of debt

DECISION ON THE COUNTERCYCLICAL CAPITAL BUFFER

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

Section 1

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

Section 2

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

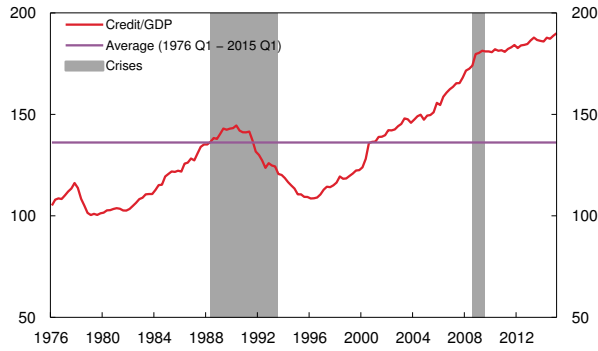
Section 3

This regulation enters into force immediately."

In its letter to the Ministry of Finance of 18 March 2015, Norges Bank concluded that the decision basis did not warrant a change in the buffer rate.¹ The Ministry of Finance decided on 27 March to keep the buffer rate unchanged.

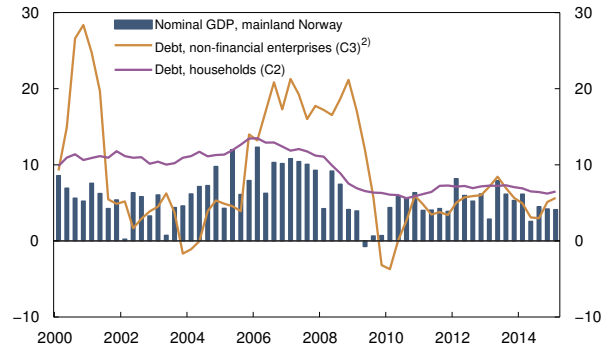
¹ See "Advice on the countercyclical capital buffer, 2015 Q1", Norges Bank

Chart 3.1 Total credit¹⁾ mainland Norway as a share of mainland GDP. Percent. 1976 Q1 – 2015 Q1



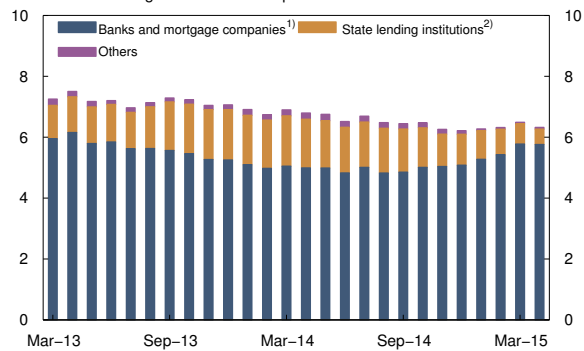
1) The sum of C2 households and C3 non-financial enterprises for mainland Norway (all non-financial enterprises pre-1995). C3 non-financial enterprises comprises C2 non-financial enterprises and foreign debt for mainland Norway.
Sources: Statistics Norway, IMF and Norges Bank

Chart 3.2 Debt held by households and non-financial enterprises and mainland GDP. Four-quarter growth.¹⁾ Percent. 2000 Q1 – 2015 Q1



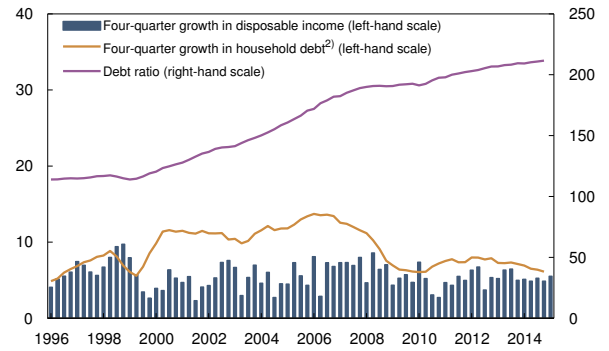
1) Change in stock of debt at the end of the quarter.
2) Sum of C2 non-financial enterprises and foreign debt for mainland Norway.
Sources: Statistics Norway and Norges Bank

Chart 3.3 Credit to households (C2) by source. Twelve-month change. March 2013 – April 2015



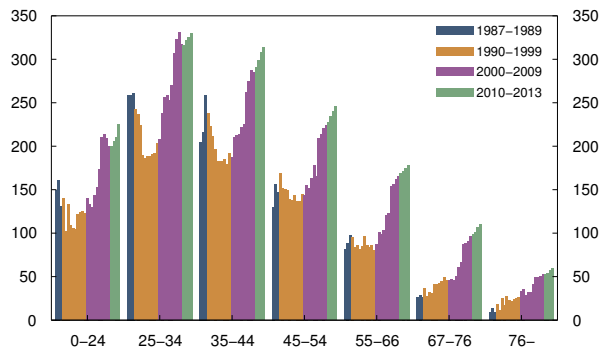
1) The series has been break-adjusted for the start of OBOSbanken AS in December 2013.
2) Including the Norwegian Public Service Pension Fund.
Source: Statistics Norway

Chart 3.4 Ratio of household debt to disposable income.¹⁾ Percent. 1996 Q1 – 2015 Q1



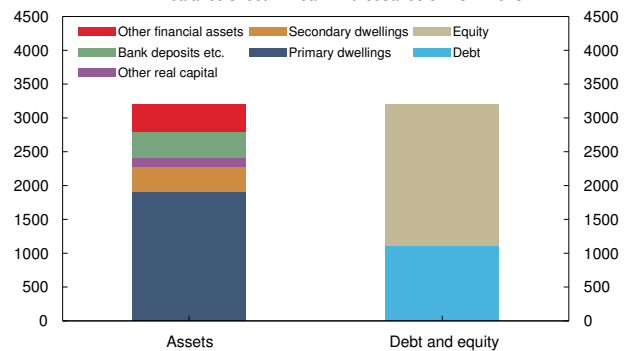
1) Loan debt for households and non-profit organisations as a percentage of disposable income, adjusted for estimated reinvested dividend income for 2000 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3.
2) Change in stock of debt at the end of the quarter. Last observation 2014 Q4.
Sources: Statistics Norway and Norges Bank

Chart 3.5 Ratio of household¹⁾ debt to disposable income by age of main income earner.²⁾ Percent. 1987 – 2013



1) Wage earners and benefit recipients, excluding self-employed.
2) Income and wealth statistics for households.
Sources: Statistics Norway and Norges Bank

Chart 3.6 Household¹⁾ balance sheet.²⁾ Mean. In thousands of NOK. 2013



1) Wage earners and benefit recipients, excluding self-employed.
2) Income and wealth statistics for households.
Sources: Statistics Norway and Norges Bank

for households with net debt higher than the value of the dwelling has fallen slightly since 2010. About 1% of households have a high debt level, low debt-servicing capacity and poor collateral. Those households hold about 2% of debt (see Chart 3.8).

Slightly lower house price inflation

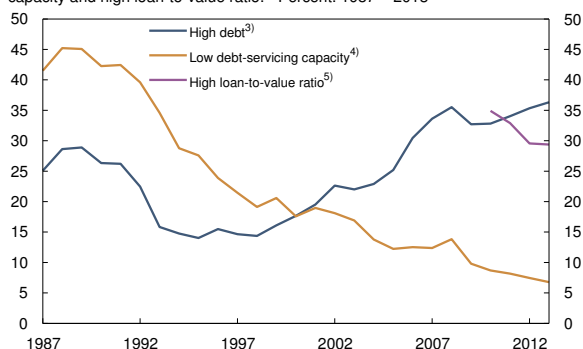
The rate of increase in house prices has edged down since autumn 2014. In May, house prices were 7.5% higher than one year earlier (see Chart 3.9). The house price indicator has risen slightly in recent quarters, but is still lower than before house prices started to drift down in 2013 (see Chart 3.10). Sales of existing homes have picked up over the past year and selling times have continued to fall (see Chart 3.11). New home sales have risen sharply.

Housing market developments vary across regions (see Chart 3.12 and Chart 3.13). Developments are particularly weak in Stavanger, with low growth in prices, a relatively large stock of unsold homes and long selling times. House prices in Tromsø have shown the sharpest rise. In Oslo and Bergen, house prices rose sharply in the latter half of 2014 and have remained high into 2015.

Measures relating to bank lending practices

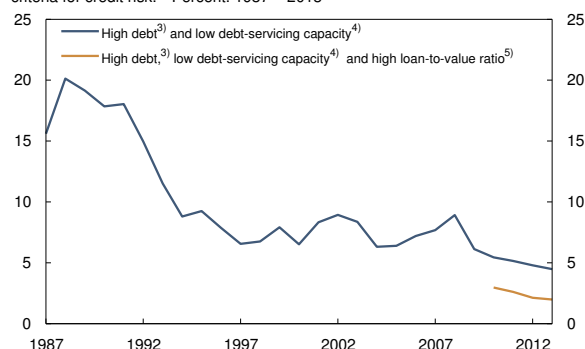
On 15 June, the Government announced a new interim regulation on requirements for new loans secured on dwellings, which implements many of the current guidelines for prudent lending as regulatory requirements. The regulation requires that the borrower must have the capacity to service debt in the event of a 5 percentage point increase in interest rates

Chart 3.7 Share of debt in households¹⁾ with high debt, low debt-servicing capacity and high loan-to-value ratio.²⁾ Percent. 1987 – 2013



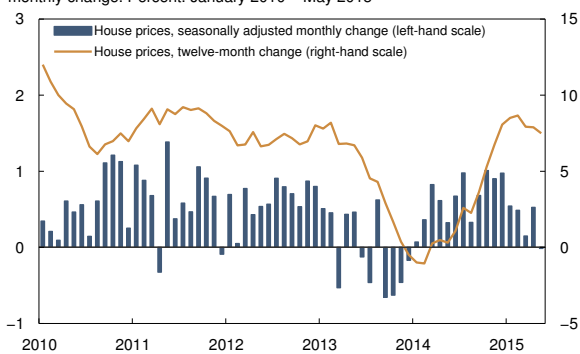
- 1) Wage earners and benefit recipients, excluding self-employed.
 - 2) Income and wealth statistics for households.
 - 3) Debt exceeding 5 times disposable income. Percent.
 - 4) Margin of less than one month's after-tax income. Margin refers to income after taxes, interest expenses and ordinary consumption expenditures.
 - 5) Debt less bank deposits higher than the market value of the dwelling.
- Sources: Statistics Norway and Norges Bank

Chart 3.8 Share of debt held by households¹⁾ that meets combinations of criteria for credit risk.²⁾ Percent. 1987 – 2013



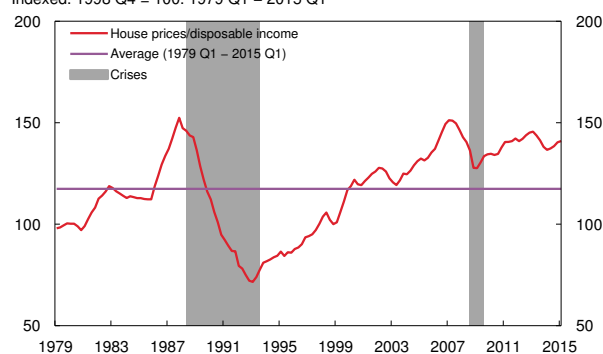
- 1) Wage earners and benefit recipients, excluding self-employed.
 - 2) Income and wealth statistics for households.
 - 3) Debt exceeding 5 times disposable income.
 - 4) Margin less than one month's after-tax income. See Chart 3.7.
 - 5) Debt less bank deposits higher than the market value of the dwelling.
- Sources: Statistics Norway and Norges Bank

Chart 3.9 House prices. Twelve-month change and seasonally adjusted monthly change. Percent. January 2010 – May 2015



Sources: Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.10 House prices relative to disposable income. Indexed. 1998 Q4 = 100. 1979 Q1 – 2015 Q1



Sources: Statistics Norway, Eiendom Norge, Eiendomsverdi, Finn.no, Norwegian Association of Real Estate Agents (NEF) and Norges Bank

and that repayment loans do not exceed 85% of the dwelling's value. Moreover, annual principal repayments of 2.5% are required for loans granted with a loan-to-value ratio above 70%. The requirements can be satisfied by means of additional collateral in the form of security on other real property, unconditional guarantees or other guarantees. Up to 10% of the value of loans granted each quarter can be loans that do not satisfy one or more of these conditions. The regulation enters into force on 1 July 2015 and will apply in the period to 31 December 2016. The effect of the new requirements is uncertain. Finanstilsynet's residential mortgage loan survey and Norges Bank's analyses of tax assessment data for households¹

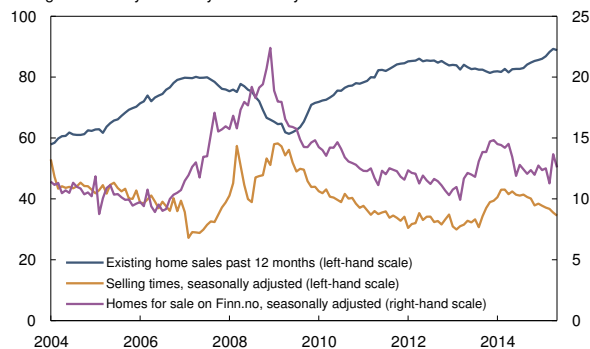
¹ See Norges Bank's letter of 4 May 2015 to the Ministry of Finance, Norges Bank.

indicate that the requirements may limit some households' debt accumulation.

Moderate growth in corporate debt

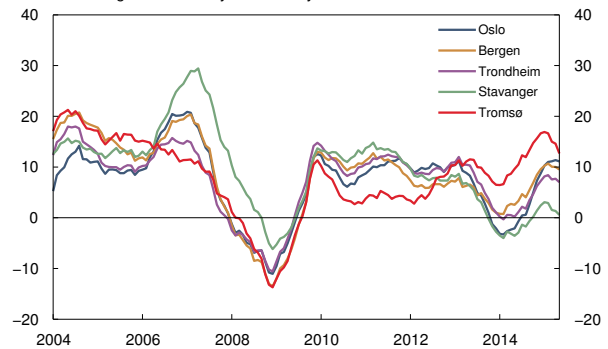
Debt growth for non-financial enterprises has been moderate since the financial crisis (see Chart 3.2). Growth in bank lending, which is the primary credit source for enterprises, has been weak in recent years (see Chart 3.14). In recent months, growth in bank lending has increased, particularly to enterprises in the commercial property sector and the construction industry (see Chart 3.15). A considerable share of the increase in total bank lending is in foreign currency (see Chart 3.16). To some extent, the increase in foreign currency loans reflects the depreciation of the krone.

Chart 3.11 Sales of existing homes and homes for sale in thousands of dwellings. Selling times in days. January 2004 – May 2015



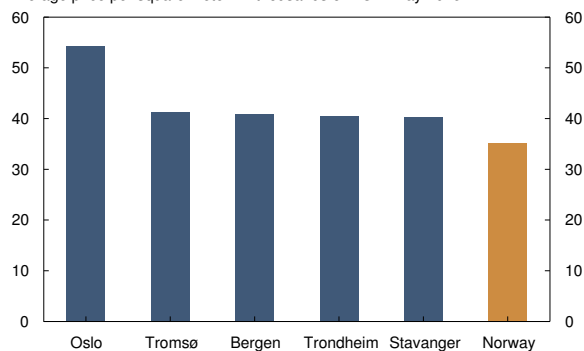
Sources: Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.12 House prices in selected cities. Twelve-month growth. January 2004 – May 2015



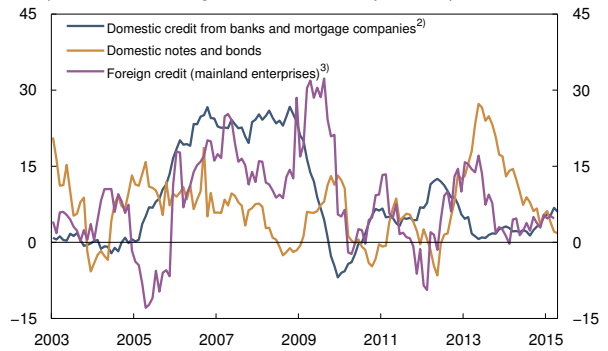
Sources: Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.13 House prices in selected cities. Average price per square meter. In thousands of NOK. May 2015¹⁾



¹⁾ Based on observations for the last six months. Sources: Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.14 Credit from selected funding sources to Norwegian non-financial enterprises. Twelve-month growth.¹⁾ Percent. January 2003 – April 2015



¹⁾ Change in stock of debt.
²⁾ In Statistics Norway's statistics, Export Credit Norway is classified under "other sources" and Eksportfinans under "mortgage companies". The classification has been changed in the chart to include both Eksportfinans and Export Credit Norway as mortgage companies.
³⁾ Growth based on transactions. To end-March 2015. Sources: Statistics Norway and Norges Bank

Bonds and notes account for close to 14% of domestic credit to Norwegian non-financial enterprises (see Chart 3.17). The rapid increase in the stock of bonds fuelled growth in corporate credit in 2012 and 2013. Over the past year, growth in the volume of bond issues has decelerated markedly. The volume of issues from Norwegian non-financial enterprises was low earlier this year, especially from enterprises with a low credit rating (see Chart 3.18). Recently, issue activity has picked up.

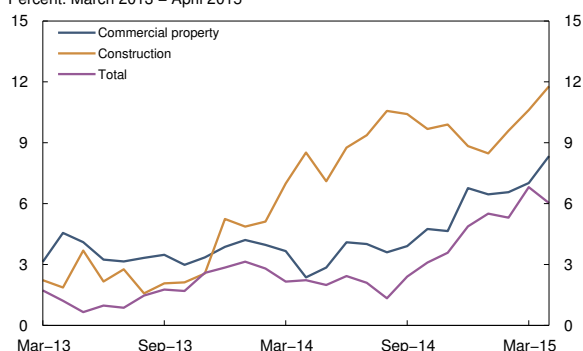
The enterprises in Norges Bank's regional network expect weak investment growth in the coming period. Low investment growth may contribute to continued moderate debt growth in the corporate sector ahead.

Debt-servicing capacity for listed companies was high pre-crisis and has since been at a lower level (see Chart 3.19). Debt-servicing capacity fell through 2014. The depreciation of the krone towards year-end may have contributed to an increase in debt in NOK terms. Enterprises' equity ratios have been fairly stable in recent years, but have recently fallen a little.

Higher sales prices for commercial property

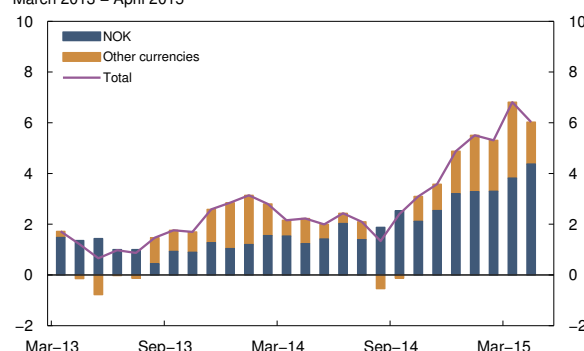
Commercial property values are partly dependent on net rental income and investors' required rate of return. The commercial property price indicator is based on OPAK's estimated sales prices for centrally located high-standard office premises in Oslo (see Chart 3.20). The estimated sales price for such office premises rose considerably through 2014. Rental prices in Oslo were stable in 2014, but fell slightly in

Chart 3.15 Domestic credit to Norwegian non-financial enterprises in selected industries from banks and mortgage companies¹⁾. Twelve-month growth.²⁾ Percent. March 2013 – April 2015



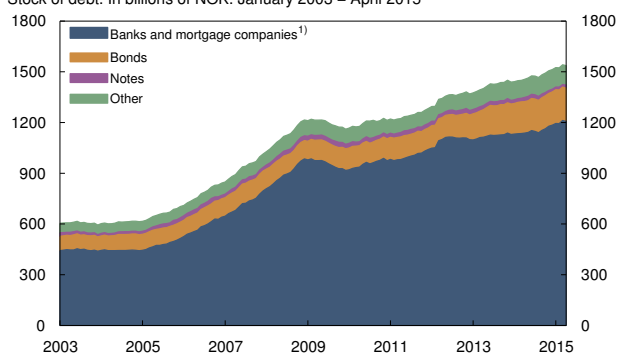
1) The classification has been changed in the chart to include both Eksportfinans and Export Credit Norway as mortgage companies. See Chart 3.14.
2) Change in stock of debt.
Sources: Statistics Norway and Norges Bank

Chart 3.16 Domestic credit to Norwegian non-financial enterprises from banks and mortgage companies¹⁾ in NOK and other currencies. Twelve-month growth.²⁾ March 2013 – April 2015



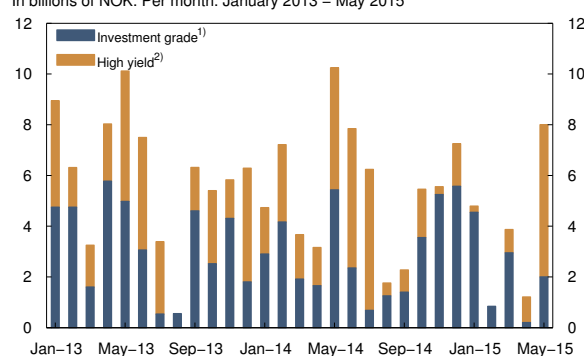
1) The classification has been changed in the chart to include both Eksportfinans and Export Credit Norway as mortgage companies. See Chart 3.14.
2) Change in stock of debt.
Source: Statistics Norway

Chart 3.17 Domestic credit to Norwegian non-financial enterprises. Stock of debt. In billions of NOK. January 2003 – April 2015



1) The classification has been changed in the chart to include both Eksportfinans and Export Credit Norway as mortgage companies. See Chart 3.14.
Sources: Statistics Norway and Norges Bank

Chart 3.18 Volume of bond issues from Norwegian registered non-financial enterprises in the Norwegian bond market. In billions of NOK. Per month. January 2013 – May 2015



1) Enterprises with credit rating equal to or higher than BBB-.
2) Enterprises with credit rating lower than BBB-.
Source: Stamdata

some segments in the first six months of 2015 (see Chart 3.21). In the same period, the estimated required rate of return for the most attractive office premises in Oslo fell (see Chart 3.22). Lower financing costs may have contributed to reducing the required rate of return.

Office rental prices and sales prices are influenced by vacancy rates. Several market participants forecast higher office vacancy rates in Oslo and Bærum in 2015 (see Chart 3.23). Higher vacancy rates may lead to low growth or a further decline in rental prices.

Office rental prices remained stable in central Stavanger, Bergen and Trondheim in the first six months of 2015 (see Chart 3.24). Rental prices continued to fall in areas outside Stavanger where there is considerable

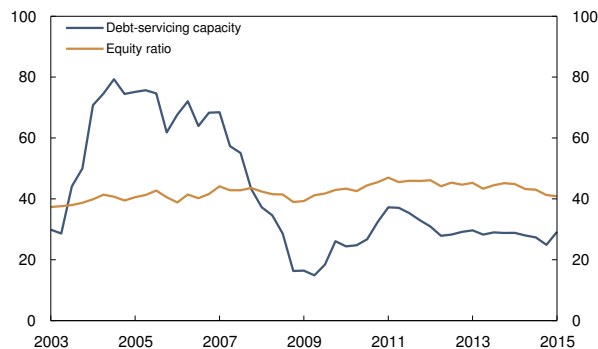
oil-related activity. There are signs that office vacancy rates increased slightly in most regions.

According to many market operators, the volume of commercial property transactions was record-high in 2014. Foreign investors accounted for a large share of purchases and a small share of sales.

Banks report good profitability and increased CET1 capital ratios

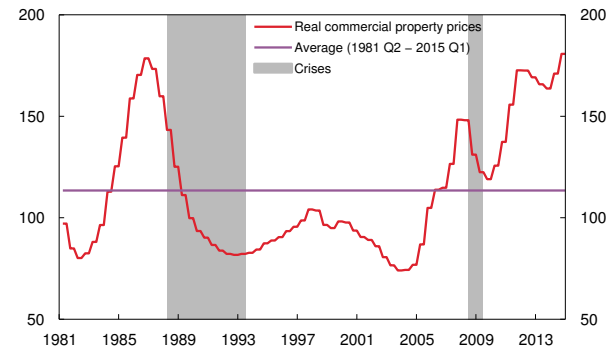
The largest Norwegian banks² reported good profitability in 2015 Q1. The return on equity capital was 15.1%. The average return for the past 20 years has

Chart 3.19 Debt-servicing capacity¹⁾ and equity ratio²⁾ for listed companies. Percent. 2003 Q1 – 2015 Q1



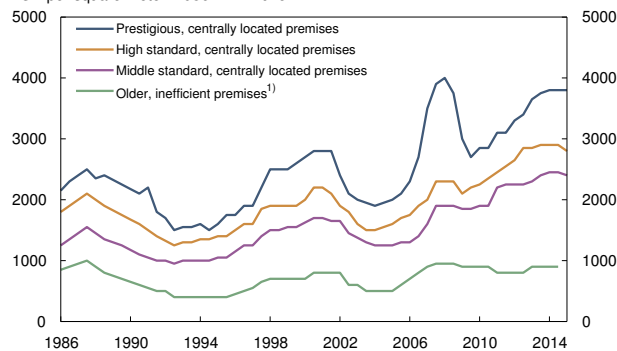
1) Pre-tax profit plus depreciation and amortisation for the previous four quarters as a percentage of interest-bearing debt for Norwegian non-financial companies listed on Oslo Børs (excluding Statoil). Figures for 2015 Q1 are preliminary.
2) Equity as a percentage of assets for Norwegian non-financial companies listed on Oslo Børs (excluding Statoil).
Sources: Bloomberg, Statistics Norway and Norges Bank

Chart 3.20 Real commercial property prices.¹⁾ Indexed. 1998 = 100. 1981 Q2 – 2015 Q1



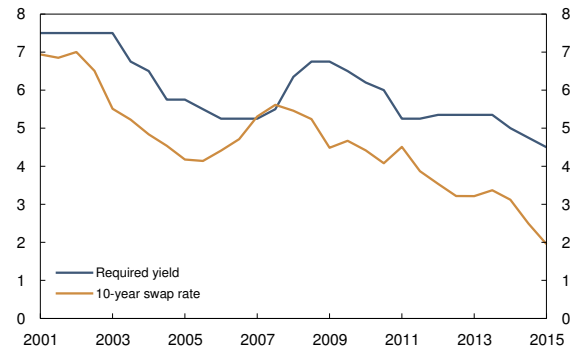
1) Estimated sales prices for centrally located high-standard office premises in Oslo deflated by the GDP deflator for mainland Norway.
Sources: Dagens Næringsliv, OPAK, Statistics Norway and Norges Bank

Chart 3.21 Annual rental prices for office premises in Oslo. NOK per square meter. 1986 H1 – 2015 H1



1) Last observation 2014 H2.
Sources: OPAK and Dagens Næringsliv

Chart 3.22 Required yield¹⁾ for prime office space in Oslo and 10-year swap rate²⁾. Percent. 2001 H1 – 2015 H1



1) The required yield is based on assessments by Dagens Næringsliv's expert panel for commercial property.
2) Semi-annual swap rate is calculated as an average of daily rates. The swap rate for 2015 H1 is the average of the daily rates in the period 1 January – 12 June 2015.
Sources: Dagens Næringsliv and Thomson Reuters

been around 13%.³ Earnings on cross-currency basis swaps,⁴ high net interest income and low losses contributed to the positive profit performance in Q1.

Banks have strengthened their capital adequacy over the past year (see Chart 3.25). The Common Equity Tier 1 (CET1) ratio for the largest Norwegian banks came to 12.8% at the end of 2015 Q1, when adding the entire Q1 result to CET1 capital. The depreciation of the krone contributed, in isolation, to reducing CET1 capital somewhat in Q1 as a result of higher risk-weighted assets. Capital adequacy is also affected

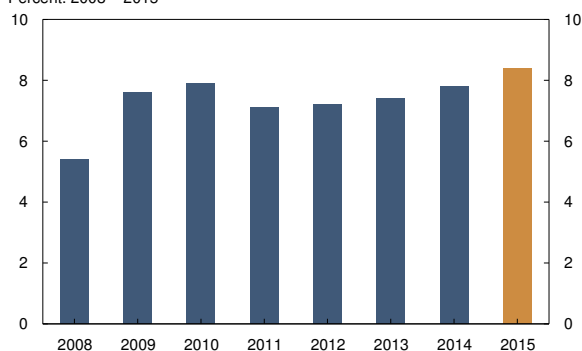
by the recent approval for several banks to use the advanced IRB approach⁵ for corporate exposures and increased risk weights for residential mortgage loans (see box on page 38). Overall, the changes in risk models helped to increase capital ratios for the largest banks.

As from 1 July 2014, the CET1 capital requirement for Norwegian financial institutions was 10%. Banks must also hold a countercyclical capital buffer of 1 percentage point as from 1 July 2015. The systemically important banks must hold an additional 1 percentage point CET1 capital from 1 July 2015 and a further 1 percentage point from 1 July 2016. Most of the

3 See "Norwegian banks' adjustment to stricter capital and liquidity regulation", Norges Bank Staff Memo 18/2014.
 4 Cross-currency basis swaps are combined interest rate and currency swaps. The value of cross-currency basis swaps fluctuates widely and can be both positive and negative, but the value is zero over the duration of the swap.

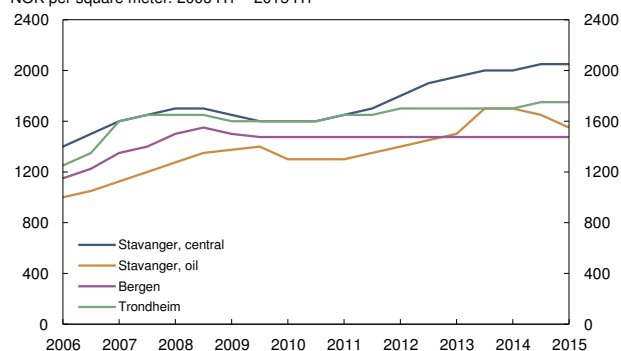
5 The IRB approach involves the use of internal models for calculating the required capital for credit risk at banks in accordance with the Basel regulatory framework.

Chart 3.23 Office vacancy rates in Oslo and Bærum.¹⁾ Year-end. Percent. 2008 – 2015²⁾



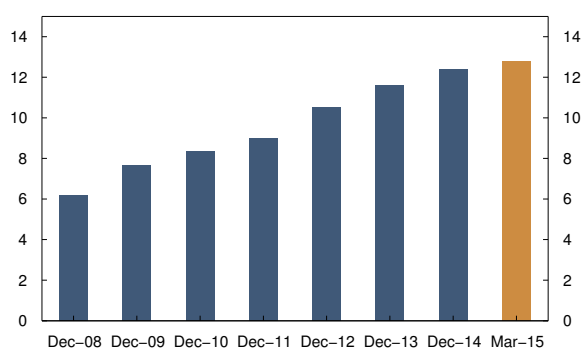
1) Calculated as average of different market specialists' estimates.
 2) Preliminary figures for 2014. Forecasts for 2015.
 Source: Entra's Consensus report

Chart 3.24 Annual rental prices for office premises in selected cities. NOK per square meter. 2006 H1 – 2015 H1¹⁾



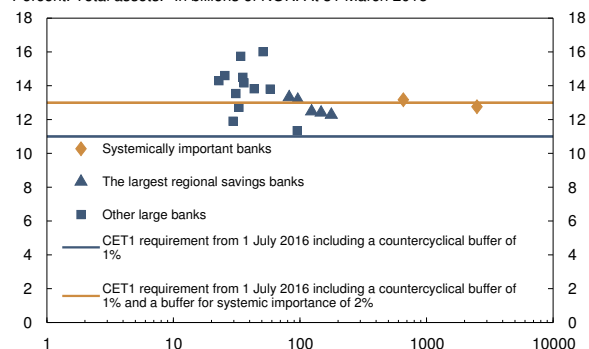
1) The statistics previously comprised one rental price segment per area. In the latter half of 2013, prices were divided into the segments "middle standard" and "high standard" per area. For the series "Stavanger, central" and "Stavanger, oil" the segment "high standard" was continued, while "middle standard" was continued for "Bergen" and "Trondheim".
 Sources: OPAK and Dagens Næringsliv

Chart 3.25 Common Equity Tier 1 (CET1) capital ratios in banks.¹⁾ Percent. December 2008 – March 2015



1) Calculated as weighted average of the seven largest banks in Norway (excluding Sparebank Ser to end-December 2013).
 Sources: Banking groups' quarterly and annual reports and Norges Bank

Chart 3.26 Banking groups¹⁾ Common Equity Tier 1 (CET1) capital ratios. Percent. Total assets.²⁾ In billions of NOK. At 31 March 2015³⁾



1) Banking groups with total assets in excess of NOK 20bn, excluding branches of foreign banks in Norway.
 2) Logarithmic scale.
 3) Assuming that the entire profit for 2015 Q1 is added to CET1 capital.
 Sources: Banking groups' quarterly reports and Norges Bank

elements in the new capital adequacy regulation are now in place (see box on page 38). At the end of 2015 Q1, all the large Norwegian banking groups satisfied the CET1 requirements by a good margin (see Chart 3.26).

Banks' wholesale funding ratios rose markedly in pre-crisis years, when growth in bank lending was high (see Chart 3.27). In recent years, wholesale funding ratios have been fairly stable. Lending growth has been more moderate, and deposit growth has been high. Bonds, primarily in the form of covered bonds, have accounted for a growing share of wholesale funding. Recently, ratios have risen somewhat, owing to increased foreign currency deposits from credit institutions (see Chart 3.28).

The risk premium on banks' long-term wholesale funding has fallen in recent years, but has risen somewhat in 2015 (see Chart 3.29). Norges Bank's liquidity survey indicates that banks have ample access to wholesale funding.

Financial imbalances

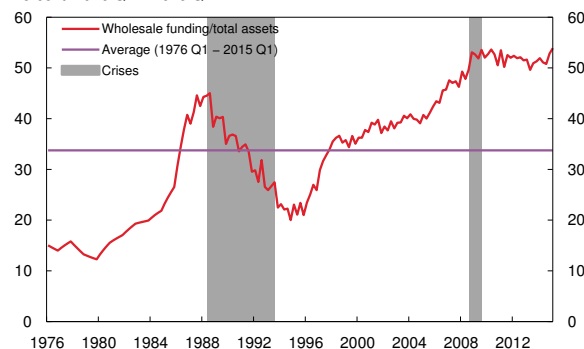
The four indicators of developments in credit and property prices have risen to high levels (see Charts 3.1, 3.10, 3.20 and 3.27). They are also higher than several of the estimated long-term trends (see box on page 40). This indicates that financial imbalances have built up.

The credit indicator continued to rise in 2015 Q1. The persistent increase in household debt suggests that household sector financial imbalances are on the rise. Corporate debt growth overall remains moderate, but growth in bank lending to the commercial property sector and construction industry has picked up.

Measured as a deviation from estimated trends, the credit indicator has been fairly stable in recent quarters. The benchmark buffer rate was 1% in 2015 Q1, when the trend is calculated using Norges Bank's preferred method (see box on page 40).

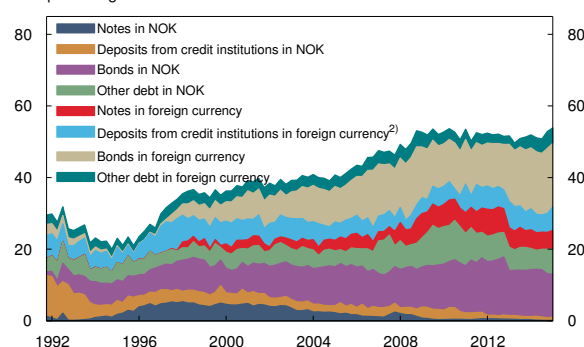
The indicators for property prices and the wholesale funding ratio have increased in recent quarters, also measured as deviations from different trends.

Chart 3.27 Banks¹⁾ wholesale funding as a share of total assets. Percent. 1976 Q1 – 2015 Q1



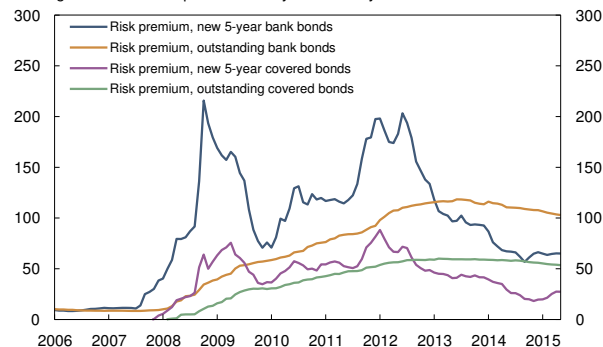
1) All banks and covered bond mortgage companies in Norway, excluding branches and subsidiaries of foreign banks.
Source: Norges Bank

Chart 3.28 Decomposition of banks¹⁾ wholesale funding. As a percentage of total assets. 1991 Q4 – 2015 Q1



1) All banks and covered bond mortgage companies in Norway excluding branches and subsidiaries of foreign banks.
2) Deposits from credit institutions include deposits from central banks.
Source: Norges Bank

Chart 3.29 Average risk premiums¹⁾ on new and outstanding bond debt for Norwegian banks. Basis points. January 2006 – May 2015



1) Difference against 3-month NIBOR.
Sources: Bloomberg, Stamdata, DNB Markets and Norges Bank

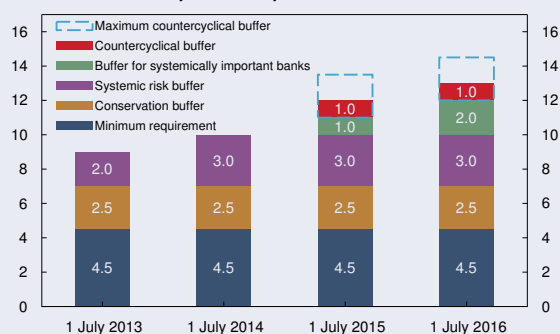
CHANGES TO NORWEGIAN CAPITAL ADEQUACY REGULATIONS

EU capital adequacy legislation (CRD IV/CRR) entered into force on 1 January 2014. The legislation will eventually apply in Norway through the EEA Agreement. The capital and buffer requirements in the legislation entered into force in Norway on 1 July 2013 (see the timetable for the phasing-in of the requirements in Chart 3.30). A number of clarifications have subsequently been issued regarding the capital adequacy regulations Norwegian banks are facing.

On 12 May 2014, the Ministry of Finance designated DNB ASA, Nordea Bank Norge ASA and Kommunalbanken AS¹ as systemically important. Systemically important financial institutions will be subject to an additional requirement, whereby the required Common Equity Tier 1 (CET1) ratio will be raised by 1 percentage point as from 1 July 2015 and 2 percentage points as from 1 July 2016. Finanstilsynet (Financial Supervisory Authority of Norway) will by the end of the first quarter each year provide advice to the Ministry of Finance as to which banks should be designated as systemically important. Financial institutions with total assets of at least 10% of mainland GDP and/or at least a 5% market share of the lending market in Norway are, as a main rule, to be designated as systemically important.² On 25 March 2015, Finanstilsynet issued advice recommending that the same institutions previously designated as systemically important should remain so.

New rules were introduced in 2014 for calculating residential mortgage risk weights. Banks using the Internal Ratings Based (IRB) approach were required as from 1 January 2014 to use a minimum loss-given-default (LGD) rate of 20%. This resulted in an increase in residential mortgage risk weights for all Norwegian

Chart 3.30 Common Equity Tier 1 capital requirements in the new regulatory framework. Percent. 1 July 2013 – 1 July 2016



¹ Kommunalbanken AS is a wholly state-owned limited company that provides loans to the municipal sector in Norway.

² See *Forskrift om identifisering av systemviktige finansinstitusjoner* [Regulation on the designation of systemically important financial institutions], Ministry of Finance 2014 (Norwegian only).

IRB banks. New requirements for calculating probability of default (PD) for residential mortgages entered into force in 2015 Q1.³ These changes must be reflected in banks' reported capital ratios for 2015 Q1. IRB banks report average residential mortgage weights from 20% to 30%, compared with risk weights of 10%-15% at end-2013. The impact on banks' capital ratios will depend on the extent to which they are bound by the transitional rule.⁴ For IRB banks that are still bound by the rule, the increase in residential mortgage weights will not entail a change in capital ratios. For banks that are not bound by the transitional rule, the increase in residential mortgage weights will result in higher risk-weighted assets and hence lower capital ratios.

On 22 August 2014, the Ministry of Finance issued interim regulations for the implementation of several of the remaining provisions of the EU capital adequacy legislation pending their incorporation into the EEA Agreement. At the same time, the Ministry of Finance decided that the SME discount, whereby banks are not required to hold a capital conservation buffer for loans to small and medium-sized enterprises, will not be included in Norwegian regulations. It was also decided that the systemic risk buffer requirement will apply to both the domestic and foreign exposures of Norwegian systemically important banks. The regulations will be reassessed before being incorporated into the EEA Agreement.

The Basel Committee on Banking Supervision has issued consultative documents on revisions to the standardised approach for credit risk, and on changes in capital floors for IRB-banks based on revised standardised approaches for credit, market and operational risk. The proposed revisions increase the risk sensitivity of the standardised approach and delink the capital floor from Basel I. Finanstilsynet and Norges Bank have submitted joint comments that broadly support the recommendations of the Basel Committee.

Finanstilsynet has presented a draft regulation on minimum liquidity reserve requirements to the Ministry of Finance, which will be subject to a forthcoming consultation round.

³ See *Krav til IRB-modeller for boliglån* [Requirements for IRB models for residential mortgages], Finanstilsynet 2014 (Norwegian only).

⁴ Under the transitional rule, the sum of risk-weighted assets for IRB banks must be at least 80% of the level that would have applied under Basel I. Under CRD IV, the transitional rule will continue to apply until 2017.

MEASURING FINANCIAL IMBALANCES AND BUFFER GUIDE¹

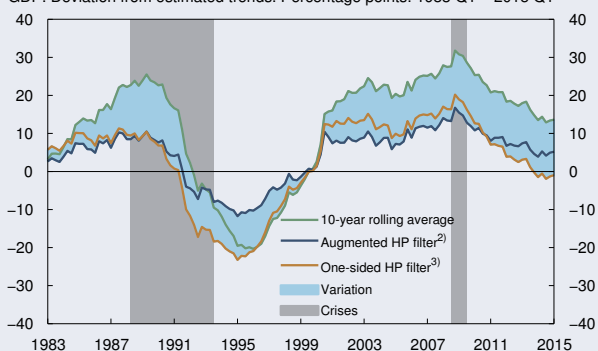
Norges Bank analyses developments in four key indicators and compares the current situation with long-term trends. There is considerable uncertainty related to trend calculations and hence to measures of financial imbalances. Given this uncertainty, different methods of calculating trends have been considered.

Norges Bank has so far used three methods to calculate trends²: a one-sided Hodrick-Prescott (HP) filter as applied by the Basel Committee on Banking Supervision, a one-sided HP filter estimated on data augmented with a simple projection, and historical averages. For house prices relative to disposable income and real commercial property prices, the average is calculated recursively throughout the period. For

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

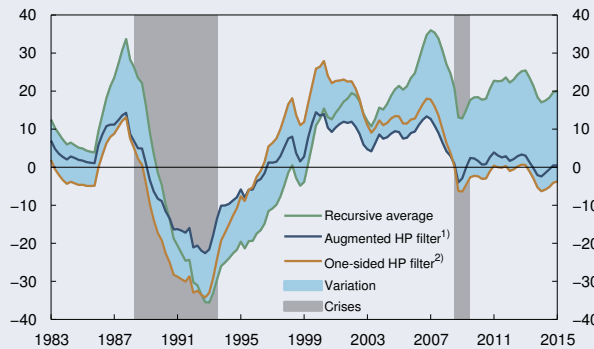
2 For further details, see box on measuring financial imbalances on page 30 in *Monetary Policy Report* 2/13.

Chart 3.31a Credit gap. Total credit¹⁾ mainland Norway as a share of mainland GDP. Deviation from estimated trends. Percentage points. 1983 Q1 – 2015 Q1



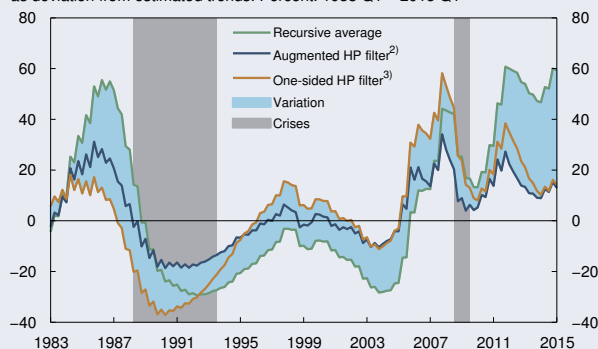
1) The sum of C2 households and C3 non-financial enterprises for mainland Norway (all non-financial enterprises pre-1995). C3 non-financial enterprises comprises C2 non-financial enterprises and foreign debt for mainland Norway.
2) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
3) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Sources: Statistics Norway, IMF and Norges Bank

Chart 3.31b House price gap. House prices relative to disposable income. Deviation from estimated trends. Percent. 1983 Q1 – 2015 Q1



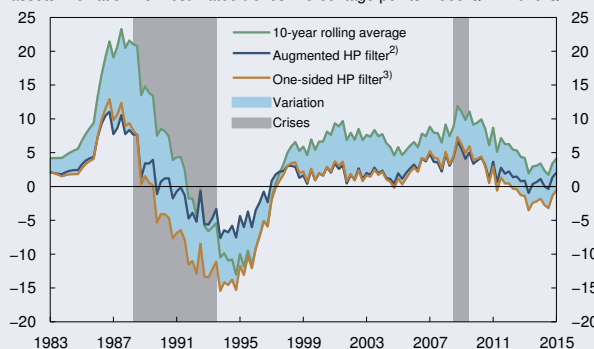
1) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
2) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Sources: Statistics Norway, Eiendom Norge, Norwegian Association of Real Estate Agents (NEF), Finn.no, Eiendomsverdi and Norges Bank

Chart 3.31c Commercial property price gap. Real commercial property prices¹⁾ as deviation from estimated trends. Percent. 1983 Q1 – 2015 Q1



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

Chart 3.31d Wholesale funding gap. Banks¹⁾ wholesale funding as a share of total assets. Deviation from estimated trends. Percentage points. 1983 Q1 – 2015 Q1



1) All banks and covered bond mortgage companies in Norway excluding branches and subsidiaries of foreign banks.
2) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.
3) One-sided Hodrick-Prescott filter. Lambda = 400 000.
Source: Norges Bank

credit relative to GDP and banks' share of wholesale funding, a 10-year rolling average is used.

Chart 3.31a shows the credit indicator as deviation from the estimated trends. The gaps between indicator and trends have narrowed in recent years, but the indicator is still higher than two out of three trends. The credit indicator has shown a modest increase post-crisis, but the trend estimated using the one-sided HP filter has continued to rise rapidly. If the rate of growth prevailing prior to the financial crisis is not sustainable, this method may underestimate financial imbalances. Experience shows that the credit gap is a better leading indicator of crises when the trend is based on an augmented HP filter. Charts 3.31 b–d show developments in the three other key indicators, measured as deviation from estimated trends. The gaps have recently increased a little.

Norges Bank has developed early warning models for financial crises based on the indicators for developments in credit and property prices.³ The blue area in

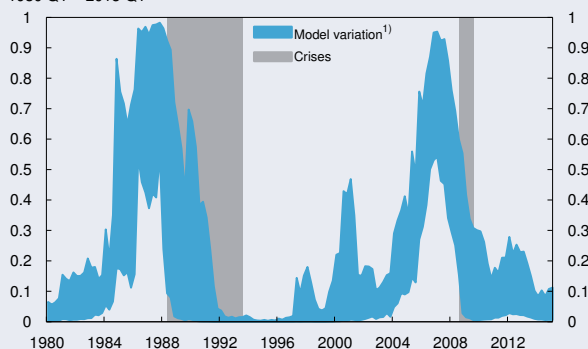
Chart 3.32 shows estimated crisis probabilities based on a large number of combinations of explanatory variables and trend estimation methods. The chart shows that estimated crisis probabilities have declined since the financial crisis, but that there is some spread between the predictions from the different models.

The Basel Committee has proposed a simple rule for calculating a benchmark rate for the countercyclical capital buffer based on the credit-to-GDP ratio.⁴ Under the rule, the buffer will be activated when the credit gap exceeds 2 percentage points. When the credit gap is between 2 and 10 percentage points, the benchmark rate will vary linearly between 0% and 2.5%. When the credit gap is 10 percentage points or more, the benchmark rate will be 2.5%. The benchmark buffer rate is 0% in 2015 Q1 when the trend is calculated using a one-sided HP filter. When the trend calculation is based on an augmented HP filter, the benchmark rate is 1% (see Chart 3.33).

3 See box on page 40 of the September 2014 *Monetary Policy Report* 3/14 and "Bubbles and crises: The role of house prices and credit", Working Papers 14/2014, Norges Bank.

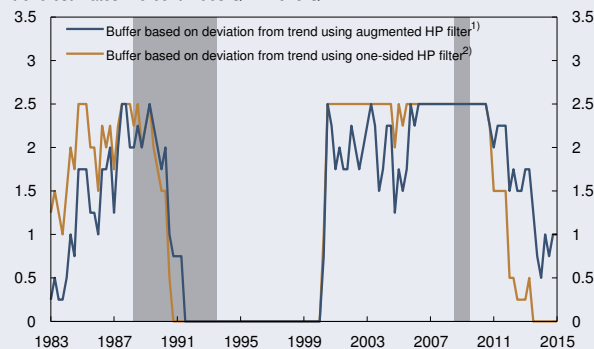
4 See Guidance for national authorities operating the countercyclical capital buffer, Basel Committee on Banking Supervision (2010), Bank for International Settlements.

Chart 3.32 Estimated crisis probabilities from various model specifications. 1980 Q1 – 2015 Q1



1) Model variation is represented by the highest and lowest crisis probability based on different model specifications and trend calculations. Source: Norges Bank

Chart 3.33 Benchmark rates for the countercyclical capital buffer under alternative trend estimates. Percent. 1983 Q1 – 2015 Q1



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

CRITERIA FOR AN APPROPRIATE COUNTERCYCLICAL CAPITAL BUFFER¹

The countercyclical capital buffer requirement 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. 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.

Experience from previous financial crises in Norway and other countries shows that both banks and borrowers often take on considerable risk in periods of strong credit growth. In an upturn, credit that rises faster than GDP can signal a build-up of imbalances. Rising house and property prices tend to go hand in hand with increasing debt growth. When banks grow rapidly and fund new loans directly in the financial market, systemic risk may increase.

Norges Bank's advice to increase the countercyclical capital buffer will primarily be based on four key indicators: i) the ratio of total credit (C2 households and C3 mainland non-financial enterprises) to mainland GDP, ii) the ratio of house prices to household disposable income, iii) commercial property prices and iv) the wholesale funding ratio of Norwegian credit institutions.² The four indicators have historically risen ahead of periods of financial instability.

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

² As experience and insights are gained, the set of indicators can be developed further.

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 (see box on page 40). Norges Bank's advice will also build on recommendations from the European Systemic Risk Board (ESRB). Under the EU Capital Requirements Directive (CRD IV), national authorities shall calculate a benchmark buffer rate (a buffer guide) for the countercyclical buffer on a quarterly basis.

There will not be a mechanical relationship between the indicators, the gaps or recommendations from the ESRB³ 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 other factors into account. Other requirements applying to banks will be a part of the assessment, particularly when new requirements are introduced.

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

The buffer rate can be reduced in the event of an economic downturn and large bank losses. If the buffer functions as intended, banks will tighten lending to a lesser extent in a downturn than would otherwise be the case. This may mitigate the procyclical effects of tighter bank lending. The buffer rate will not be reduced to alleviate isolated problems in individual banks.

The key indicators are not well suited to signalling when the buffer rate should be reduced. Other information, such as market turbulence and loss prospects for the banking sector, will then be more relevant.

³ See *Recommendation on guidance for setting countercyclical buffer rates*, European Systemic Risk Board (ESRB), 2014.

SPECIAL FEATURES

International economy – developments in different regions and countries

New set of weights for trading partner interest rates

Volatile long-term interest rates

Oil price prospects

What explains the increase in the money market premium?

What explains developments in business investment?

Lower growth and labour immigration

Lower exports from the oil service industry ahead

Countercyclical capital buffers in other countries

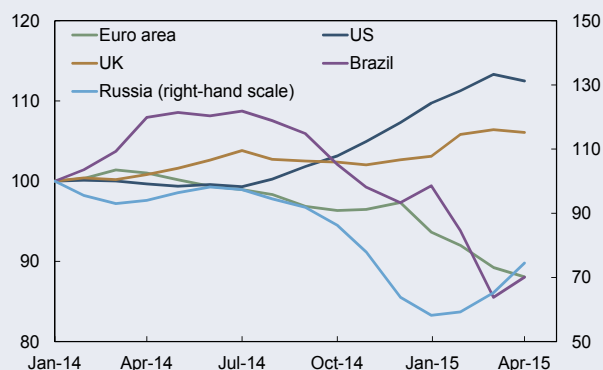
INTERNATIONAL ECONOMY – DEVELOPMENTS IN DIFFERENT REGIONS AND COUNTRIES

US economic growth weakened markedly in Q1 and was weaker than projected in the March 2015 *Monetary Policy Report*. GDP fell 0.2% from Q4 after another winter of extreme weather and a relatively rapid decline in oil investment in response to the drop in oil prices since summer 2014. Consumption growth was slower than in the second half of 2014, and the positive effect of lower oil prices has so far been weaker than expected. Net exports were pulled down by the dollar's appreciation since July 2014 (see Chart 1). Data for Q1 were also affected by labour disputes at a number of key ports. Although some of these factors were only temporary, the latest data point to a further fall in oil and gas-related investment in Q2 (see Chart 2). As the effects of temporary factors fade, and trade picks up after the strikes, growth is expected to improve somewhat. The labour market has tightened further, and the housing market is continuing to improve. The stronger dollar will, however, entail somewhat slower growth ahead than previously projected (see Annex Table 3).

The euro area is continuing its tentative recovery (see Chart 3). Growth in Q1 was as projected in the March

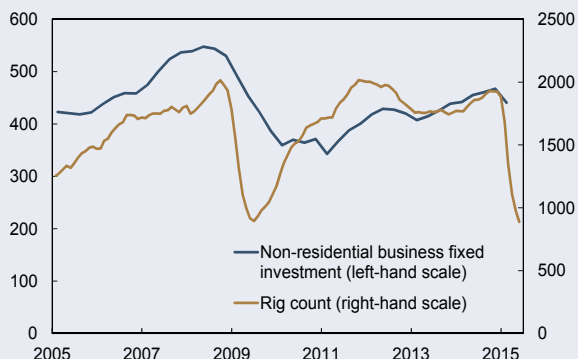
Report, with GDP up 0.4% on Q4. Activity was higher than expected in France, Italy and Spain, but lower than expected in Germany. On balance, new information since the March *Report* supports unchanged growth projections for the euro area of 1¼% in 2015 and 1½% in 2016. Confidence indicators for both firms and households fell somewhat from March to May but remain higher than the average for Q1. Mounting fears about the extension of the Greek loan programme have led to growing outflows of deposits from Greek banks. The volume of Emergency Liquidity Assistance (ELA) from the central bank to the Greek banks has therefore also risen. The largest contribution to growth in the euro area this year is expected to come from household consumption, buoyed by increased employment and higher real wage growth. The positive contribution from lower oil prices is diminishing, but domestic demand is still being boosted by less contractionary fiscal policy and loose monetary policy. Business investment is expected to rise as demand growth, both within and outside the euro area, business sentiment and profit margins improve. Stronger household credit demand also points to an improvement in housing investment. Net

Chart 1 Nominal effective exchange rates¹⁾. Index. January 2014 = 100. January 2014 – April 2015



1) A positive slope denotes a stronger krone exchange rate.
Source: Thomson Reuters

Chart 2 US. Non-residential business fixed investment (including rigs). In billions of USD. Annualised. Seasonally adjusted. Number of active oil and gas rigs. January 2005 – May 2015



Source: Thomson Reuters

exports are expected to make a neutral contribution to growth both this year and next.

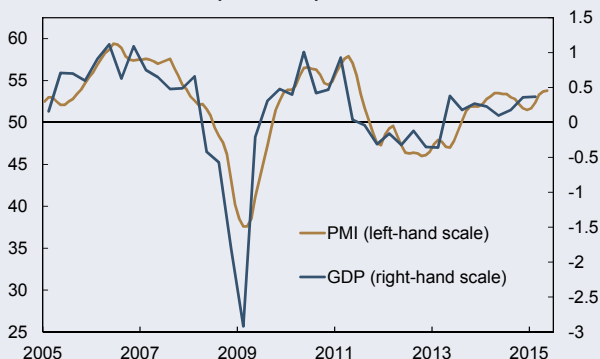
The UK made a weak start to the year, partly due to lower activity in the oil and gas sector, construction and parts of the service sector. The appreciation of pound sterling may also have played a role. The slowdown is expected to be temporary, with high employment and a brighter outlook for exports to the euro area bringing a somewhat higher rate of growth ahead. The longer-term growth projections have been revised down slightly following a reassessment of potential growth.

There was a clear slowdown in Sweden in Q1, with unexpectedly weak growth in domestic demand. Inflation also remains very low (see Chart 4). The Riksbank has announced further purchases of government bonds in a bid to lift inflation and inflation expectations. Growth has been revised down to 2¾% in 2015 due to the weak conditions at the turn of the year, but revised up to 3¼% in 2016 in light of more expansionary monetary policy and slightly higher growth in public consumption. The recovery will continue to

be driven mainly by growth in private consumption and housing investment, while persistent low growth among Sweden's main trading partners has brought weak growth in industrial production and business investment. We expect the weaker Swedish krona and stronger export demand to fuel a recovery in business investment in the coming years. Net exports are nevertheless expected to make a slight negative contribution to growth both this year and next.

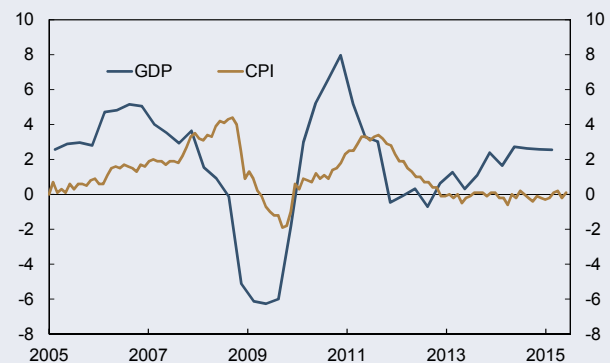
Four-quarter GDP growth in China slowed to 7% in Q1, slightly less than projected in the *March Report*. The decline in the housing market is continuing, with falling prices and starts having spillover effects on both industry and households. Lower retail growth indicates that consumption is decelerating somewhat (see Chart 5). Infrastructure investment, on the other hand, is rising fast and helping offset the lower growth in investment in real estate and industry. The central bank has cut interest rates three times since November and lowered the reserve requirement for banks by 150 basis points. This easing of monetary policy has helped prop up growth in bank lending. The stock market has performed far better in China than in other

Chart 3 Euro area. Quarterly GDP growth. Percent. 2005 Q1 – 2015 Q1. Composite output PMI. Three-month moving average. Diffusion index centred around 50. January 2005 – May 2015



Source: Thomson Reuters

Chart 4 Sweden. GDP. Four-quarter change. Percent. 2005 Q1 – 2015 Q1. CPI. Twelve-month change. Percent. January 2005 – May 2015



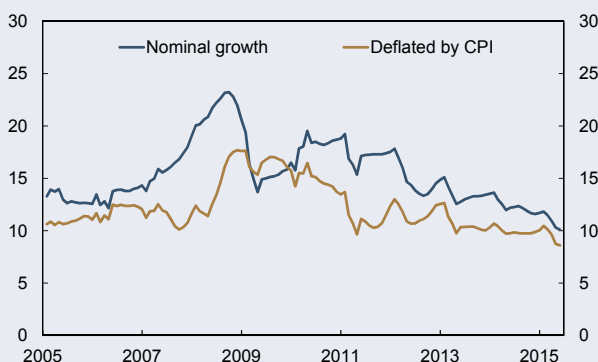
Source: Thomson Reuters

emerging markets. Expansionary monetary policy and higher infrastructure investment are expected to push up the rate of growth in the coming quarters. Growth in 2015 has been revised down by $\frac{1}{4}$ percentage point to $6\frac{3}{4}\%$. The longer-term projections have also been revised down by $\frac{1}{4}$ percentage point each year following a reassessment of potential growth. The growth contribution from capital and employment growth is expected to shrink, while productivity growth is forecast to rise as a result of market-friendly reforms and deregulation.

The growth outlook for other emerging markets is dominated by the weak prospects for large commodity producers such as Brazil and Russia. Brazil is being hit by reduced demand from China and recent years' decline in the terms of trade on the back of lower commodities prices. Growth has slowed, while inflation is high due to previous expansionary monetary and fiscal policy. The central bank has raised the policy rate by 6.5 percentage points since the start of 2013 in an attempt to anchor inflation expectations. Fiscal policy is also now being tightened. The growth outlook for India has improved somewhat. There is

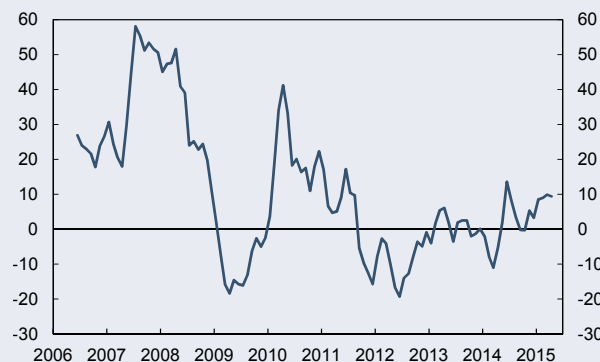
the prospect of higher investment growth in both the private and public sector, and capital goods production is rising (see Chart 6). We expect growth in emerging markets, excluding China, to climb from $1\frac{3}{4}\%$ this year to $3\frac{1}{4}\%$ next year, supported by stronger growth in India in conjunction with an improved growth outlook for Russia and Brazil as a result of an expected stabilisation of commodity prices, exchange rates and inflation. A gradual increase in demand from the advanced countries will also lead to stronger growth in exports from emerging markets. Capital inflows into many emerging markets have picked up again on signals that an interest rate increase in the US will be deferred. A sudden reversal of capital inflows presents a risk to the growth outlook for emerging economies ahead.

Chart 5 China. Retail trade. Twelve-month change. Three-month moving average. Percent. January 2005 – May 2015



Source: Thomson Reuters

Chart 6 India. Capital goods production. Twelve-month change. Three-month moving average. Percent. June 2006 – April 2015



Source: Thomson Reuters

NEW SET OF WEIGHTS FOR TRADING PARTNER INTEREST RATES

Foreign interest rates influence interest rates in Norway, partly via the effect of interest rate differentials on movements in the krone exchange rate. Norges Bank's monetary policy analysis uses an aggregate for trading partner interest rates as a representation of foreign interest rates. The weights used for the import-weighted krone exchange rate index (I-44) are used in weighting the interest rate of the different countries. The composition of the interest rate aggregate has been revised as from this *Report* to better reflect the composition and the relative weights between the main countries/currency areas in the I-44.¹

Trading partner interest rates were previously estimated as a weighted average of interest rates in the euro area, Sweden, UK, US and Japan, where the weights of the different countries/currency areas were the respective I-44 weights scaled up proportionally.² Using this calculation method, the interest rates of

the euro area and Sweden combined made up around 80% of the aggregate (see Table 1).

The new aggregate includes interest rates for two additional countries – Poland and Canada. Moreover, the interest rates of omitted countries are now represented by US and euro area interest rates with a 50/50 distribution.³ The change results in a higher weight share for US interest rates in the aggregate at the expense of the weight shares for Swedish and euro area interest rates.

The switch to the new weights entails a somewhat higher interest rate level for trading partners' estimated forwards rates, but the difference is limited. For the coming quarters, the difference is just below 0.15 percentage point, while it is just above 0.20 percentage point three years ahead (see Chart 1).

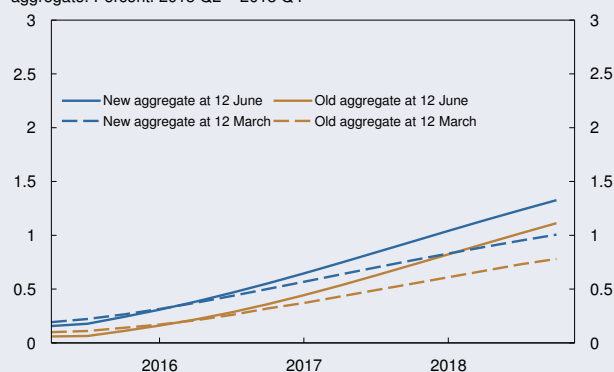
1 See *Norges Bank Paper 2/2015*: «Calculation of the aggregate for trading partner interest rates» for further information.
2 In addition, Denmark's I-44 weight is added to the euro area weight.

3 As before, Denmark's I-44 weight is added to the euro area weight.

TABLE 1 Weights in Norges Bank's old and new aggregate for trading partner interest rates. Percentage points

Country/ Currency area	Old aggregate	New aggregate
Euro area	0.59	0.53
Sweden	0.20	0.14
UK	0.10	0.07
US	0.08	0.18
Poland	-	0.03
Canada	-	0.02
Japan	0.03	0.02

Chart 1 Estimated forward interest rates for trading partners. Old and new interest rate aggregate. Percent. 2015 Q2 – 2018 Q4



Sources: Thomson Reuters and Norges Bank

VOLATILE LONG-TERM INTEREST RATES

Norwegian and foreign interest rates are very low in a historical context (see Charts 1 and 2). The decline in interest rates has been particularly pronounced since the financial crisis in 2008, when many central banks sharply reduced policy rates. In the initial post-crisis period, the market priced in a relatively quick rebound in interest rates, resulting in a less pronounced decline in long-term rates than in short-term rates. However, policy rates have remained low considerably longer than market participants envisaged. In a number of countries they have also been reduced further to levels close to zero. In addition, the US Federal Reserve, the Bank of England, the Bank of Japan, the Riksbank and the European Central Bank (ECB) have purchased bonds in order to push down longer-term rates. These purchases partly have an effect by sending the signal that policy rates will be low for a long time ahead. In addition, central banks' demand for government bonds may push long-term interest rates down further than expectations of short-term rates would imply. The difference between long-term interest rates and average expected short-term rates in the same period is called the term premium. An investor will normally require a positive term premium to invest in a long-term bond rather than in a series of short-term bonds covering the same period. When long-term interest rates are lower than the average of expected short-term interest rates over the same time horizon, the term premium in long-term interest rates is said to be negative.

The ECB announced its government bond purchase programme in January 2015 and began purchasing bonds in March. Long-term interest rates in the euro area fell markedly up until mid-April. There is reason

to believe that the decline in interest rates is largely attributable to falling term premiums. At their lowest, German 10-year rates on government bonds traded at 0.05%. Developments in the euro area affected Norwegian rates. In Norway, the 10-year government bond yield was at its lowest close to the key policy rate of 1.25%. It seems very unlikely that these levels expressed the expected average policy rate over the next ten years. That would imply a negative term premium in Norwegian long-term interest rates.

Since mid-April, foreign and Norwegian long-term interest rates have shown a pronounced rise again. Daily movements have at times been considerable. In Germany, ten-year government bond yields have risen by around 0.8 percentage point since mid-April. Interest rates at the shorter end of the maturity spectrum have also risen. There are few signals from the ECB since mid-April to indicate a substantial reassessment of policy rate expectations in the euro area. The sudden impact on the bond market must be viewed in the context of the initially very low term premiums and interest rates. With low and decreasing interest rates, the likelihood of a further fall in interest rates and profits from higher bond prices may eventually appear small compared with that of an increase in interest rates and lower bond prices. This may motivate investors to sell and secure profits, even in the absence of any substantial news. Once interest rates begin to rise, selling activity in the market may increase in order to limit losses or secure profits. The impact may be considerable before anyone wants to buy. Even though interest rates have risen somewhat since reaching their lowest levels in April, there is reason to believe that term premiums remain low.

Chart 1 Yields on 2-year government bonds. Percent. 1 January 2000 – 12 June 2015

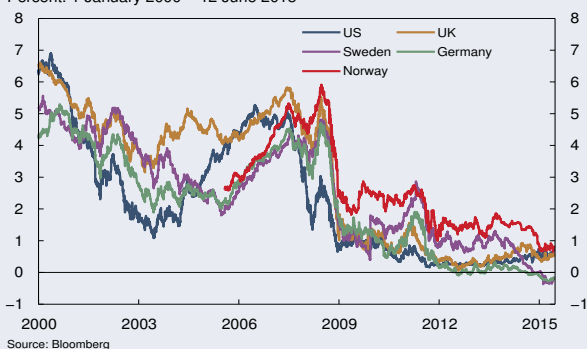
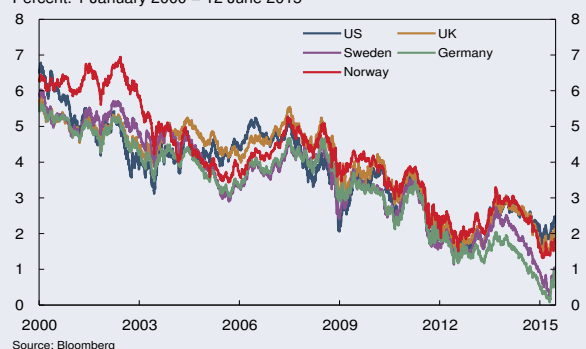


Chart 2 Yields on 10-year government bonds. Percent. 1 January 2000 – 12 June 2015



OIL PRICE PROSPECTS

Oil prices moved up from just over USD 45 dollars in the second half of January to between USD 60 and USD 65 at the beginning of June. Some increase had been expected as oil supply and demand typically adjust following a sudden shift in oil prices, such as the pronounced fall in 2014. The increase has nevertheless come faster than implied by futures prices in January. Prices are also higher than anticipated in the March 2015 *Monetary Policy Report*. Longer futures prices have shown little change.

The fall in prices in 2014 appears to have had a relatively rapid impact on oil production in several non-OPEC countries. The US Energy Information Administration (EIA) estimates that US shale oil production, which has been the dominant driver of recent years' growth in oil supply, began to fall already in May this year. The sharp reduction in the number of active rigs is expected to result in a further fall in production in the coming period (see Chart 1). The International Energy Agency (IEA) estimates that non-OPEC oil production will increase at a markedly slower annual rate in the coming quarters, with a pronounced fall in 2015 Q4 (see Chart 2).

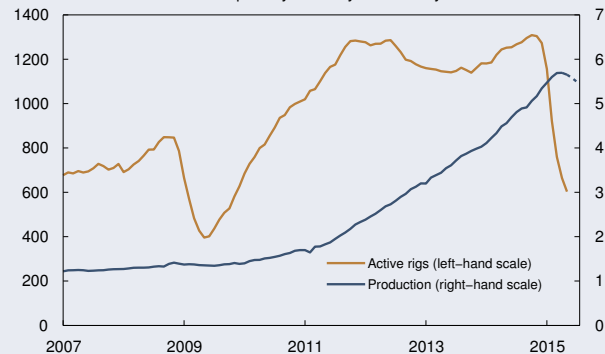
Growth in non-OPEC oil supply may remain low further ahead. The energy consultancy Wood Mackenzie estimates that international oil companies may cut oil investment by 25% between 2014 and 2015. The

consultancy Rystad Energy envisages a fall in investment in the interval of 25%-30%. The decline in investment may thus be twice as steep as the one following the 2009 oil price decline, even if the path of the price decline is largely the same. Cost savings and cash flow considerations have become more prominent drivers of investment decisions.

Prospects for production in existing oil fields are important for future oil supply. Estimates of the annual fall in production in such fields vary between 2% and 6% of total global oil production. The estimates depend on investment assumptions for fields in production, including the drilling of new wells to maintain production. A sharp decline in those investments may have a considerable impact on the balance between supply and demand.

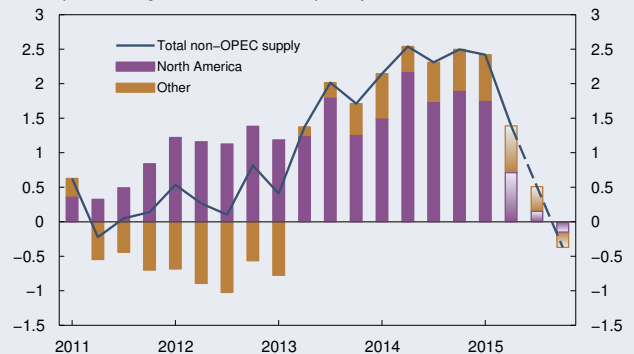
The International Monetary Fund (IMF) estimates in a new analysis that reduced oil investment may result in a fall in global oil production of nearly 4½% over a three-year period and of more than 10% over a five-year period compared with a scenario with no price decline.¹ However, production may fall more quickly

Chart 1.1 Active rigs and oil production in the US¹⁾
Production in millions of barrels per day. January 2007 – July 2015²⁾



1) For the seven production fields that accounted for 95% of growth in oil and gas production 2011 – 2013.
2) Monthly production as from June 2015 is estimated.
Source: EIA

Chart 1.2 Non-OPEC supply.
Four-quarter change in millions of barrels per day. 2011 Q1 – 2015 Q4¹⁾



1) Estimates for 2015 Q2 – 2015 Q4.
Source: IEA

and to a greater extent than these calculations indicate. There appears to be a relatively substantial reduction in investment in US shale oil production, which now represents a larger share of global production than before.

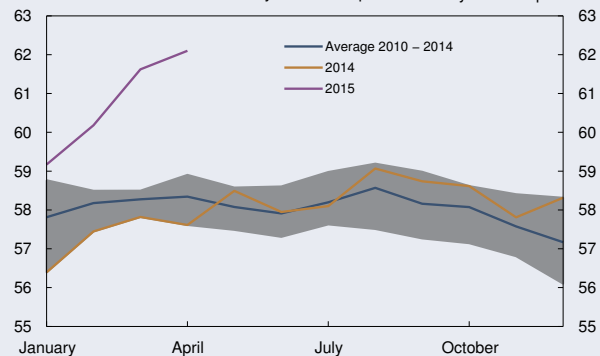
At the same time, lower oil prices than in previous years and rising growth in the global economy may contribute to higher oil demand. Nevertheless, growth in demand over time may be moderate owing to reduced energy subsidies and downward revisions of the growth outlook in several emerging economies. Moreover, increased production of renewable energy, further substitution away from oil and continued energy efficiency improvements may result in weak demand for oil ahead. The IEA projects global oil demand growth of around 1.2% annually in the medium term, which is slightly lower than the average for the period 2000–2014.²

The increase in oil prices in recent months may also be related to renewed unrest in important oil-producing countries in the Middle East and North Africa. The loss of oil production from several of these countries was one of the reasons that oil prices remained high until summer 2014. At the same time, the increase has been dampened by the somewhat stronger US

2 See the IEA's *Medium-Term Oil Market Outlook 2015*. Growth in global oil demand averaged 1.3% in the period 2000–2014.

Chart 1.3 OECD oil inventories

Total oil inventories in number of days of consumption.¹⁾ January 2014 – April 2015



1) Number of days of consumption is calculated using average demand over next three months. The grey band shows the interval between the highest and lowest level in the period 2010 – 2014. Source: IEA

dollar and expectations of higher interest rates since mid-May.³

Futures prices indicate some further increase in oil prices. This may suggest that the ongoing rebalancing between supply and demand is expected to continue. Nevertheless, the rebalancing so far has not prevented a continued rapid increase in OECD oil inventories, which are expected to reach new record levels in the coming months (see Chart 3). This would suggest, all else being equal, that oil prices may remain low longer.

Oil prices may fall again, for example, if oil exports from Iran increase as a consequence of a nuclear agreement with the five permanent members of the Security Council and Germany. According to the EIA, such an agreement may result in a decline in oil prices of between USD 5 and USD 15 in 2016.⁴

In addition, OPEC has boosted production in recent months and decided *not* to cut production at its meeting on 5 June, which the cartel ordinarily would have done given a similar inventory outlook.

Futures prices for oil with maturity in 2020 and beyond are now at around USD 75 per barrel, approximately USD 20 lower than they were in summer 2014. This decline may reflect broad-based cost cutting measures by international oil companies so that the “marginal barrel of oil” in the future will be less costly to produce than what was commonly assumed a year ago. In particular, costs have come down considerably among US shale oil producers. New growth in US shale oil production may restrain a further increase in oil prices.

3 Higher interest rates make it more expensive to maintain oil inventories and more profitable to invest in financial assets. A stronger US dollar results in higher oil prices in terms of the currencies of oil-exporting and oil-importing countries (excluding the US), increasing oil supply and/or reducing oil demand on the world market. See e.g. Akram (2009): “Commodity prices, interest rates and the dollar”, *Energy Economics*, 2009, Vol. 31, Issue 6, pages 838–851.

4 See the EIA's *Short-Term Energy and Summer Fuels Outlook, April 2015*. Nevertheless, it is uncertain whether a final agreement will be signed on 30 June and when the current sanctions that restrict oil exports will be lifted.

WHAT EXPLAINS THE INCREASE IN THE MONEY MARKET PREMIUM?

The spread between the three-month money market rate (NIBOR) and the expected key policy rate, also called the money market premium, has widened somewhat since the March 2015 *Monetary Policy Report*. The premium, which has averaged approximately 0.25 percentage points in recent years, increased in April to over 0.40 percentage point. Some of this increase has recently reversed (see Chart 1).¹

Increased euro liquidity as a result of the European Central Bank (ECB) asset purchase programme may explain a considerable portion of the increase in the money market premium observed in 2015. Such external factors can influence NIBOR given the method used to construct the Norwegian money market rate.

NIBOR panel banks² base their daily NIBOR quoting on a USD interest rate intended to reflect the banks' cost of borrowing USD in the unsecured interbank market. This USD interest rate is adjusted for the

difference between the spot and forward exchange rate between USD and NOK in the foreign exchange market. NIBOR can thus be expressed as

$$(1 + i_{NIBOR}) = \frac{F}{S} (1 + i_{USD})$$

where S is the spot exchange rate and F is the three-month forward exchange rate, both in NOK per USD. i_{USD} is the USD interest rate on which NIBOR banks base their quotations.

Since 2008, the NIBOR panel banks have chosen to base their quotes on a USD interest rate close to the one published by the interbank broker Carl Kliem. The Kliem rate is intended to express the cost for European banks of borrowing USD in the unsecured interbank market. In practice, it is equal to EURIBOR swapped from EUR to USD.³ Factors affecting the Kliem rate will also affect NIBOR, unless they are neutralised by a corresponding change in the difference between

1 Owing to the lack of instruments in the Norwegian money market, the premium cannot be observed directly from market prices and must therefore be regarded as an estimate.

2 The NIBOR panel currently comprises DNB, Nordea, Skandinaviska Enskilda Banken, Danske Bank, Swedbank and Handelsbanken.

3 Therefore, analogous to the construction of NIBOR, $(1 + i_{Kliem}) = F^*/S^* (1 + i_{Euribor})$, where S^* and F^* are the spot exchange rate and forward exchange rate, respectively, both in USD per EUR.

Chart 1 Three-month NIBOR spread. ¹⁾ 5-day moving average. Percentage points. January 2010–December 2018²⁾



1) Norges Bank projections
2) Projections for 2015 Q3–2018 Q4
Sources: Thomson Reuters and Norges Bank

the spot and forward exchange rate between NOK and USD in the foreign exchange market.⁴

The ECB's provision of euro liquidity affects prices in the foreign exchange forward market, which can be used to swap reserves in one currency for another for an agreed period of time. EUR is becoming *relatively* cheaper than other currencies owing to an increase in the supply, with a *relative* "scarcity premium" arising on other currencies relative to EUR. Thus, it becomes more expensive to swap EUR for USD in the foreign exchange forward market than implied by the interest rate differential between the US and the euro area. All else being equal, this results in a higher Kliem rate. When panel banks base their NIBOR quoting on the Kliem rate, this also results in a higher Norwegian money market rate.

Low structural liquidity in the Norwegian banking system may also have contributed to some of the increase observed in the Norwegian money market premium. Low structural liquidity may make banks

⁴ For example, a change in the federal funds rate will have an impact on the Kliem rate, but usually not on NIBOR. The reason is that the forward premium between USD and NOK adjusts accordingly.

more uncertain of their own NOK liquidity situation, influencing the relative supply of USD and NOK in the foreign exchange forward market. This may affect NIBOR through the difference between the spot and forward exchange rate between USD and NOK in the foreign exchange market. This effect has recently diminished somewhat in pace with the increase in structural liquidity, which has likely pressed down the NIBOR premium to a somewhat lower level than in April.

The ECB plans to continue its asset purchases up to and including September 2016. As explained above, this suggests, all else being equal, a higher Norwegian money market premium. In view of this, the three-month NIBOR premium is assumed in this *Report* to be approximately 0.30 percentage points in the period to autumn 2016. In the *March Report*, the premium was assumed to remain at 0.25 percentage points in that period.

For a more detailed description of the construction of NIBOR and the relationships described above, see *Economic Commentaries 3/2015*.

WHAT EXPLAINS DEVELOPMENTS IN BUSINESS INVESTMENT?

Business investment plays a crucial role in cyclical developments in the Norwegian economy. Historically, investment has fluctuated widely, with business investment often accounting for a large portion of cyclical fluctuations. Mainland business investment has been relatively weak since the financial crisis erupted in autumn 2008, even though policy interest rates have been reduced to historically low levels. Sluggish business investment has restrained growth in the Norwegian economy and weakened the growth capacity of the economy ahead. This box analyses developments in business investment using an empirical model and assesses which factors that have kept business investment low in the post-crisis period.

Over the past decades, there have been wide and persistent fluctuations in business investment in Norway (see Chart 1). Business investment as a share of mainland GDP fell from over 12% in 2008 to around 9% in 2014. Since 2008, developments in mainland business investment has also been weak compared with other countries (see Chart 2). While the investment share has picked up in a number of countries, the Norwegian investment share was still over 3 percentage points lower in 2014 than in 2008. In the pre-crisis years, there was a more pronounced rise in the investment share in Norway than in other countries. This may have resulted in lower investment demand in Norway than in other countries post-crisis. Another explanation for the relative weakness in Norway may be that high levels of oil investment crowded out business investment.

Developments in business investment are determined by firms' expected return on investment and uncertainty regarding developments ahead. In isolation, a lower interest rate level boosts investment because it improves business profitability and reduces the required rate of return on future investment. Investment demand is also influenced by the volume of goods and services to be produced and the rate at which the capital stock depreciates. In addition, reduced access to funding will pull down investment, especially among firms with limited equity financing. Interest rates, output levels, the economic outlook and financial market developments therefore have a bearing on business investment.

In the empirical literature, business investment demand is usually measured by using historical output growth and depreciation.¹ Historical production growth may also influence firms' expectations of future profitability, but in the literature, other measures are also used to explain changes in expectations. In an analysis from the BIS², equity prices are used as a measure of the profitability of future investment. Results from the analyses show a strong, positive correlation between equity prices and business investment in the G7 countries.³ Moreover, in recent years, several studies have shown that greater uncertainty about economic

Chart 1 Business investment as a share of mainland GDP. Percent. Quarterly. 1978 Q1 – 2014 Q4

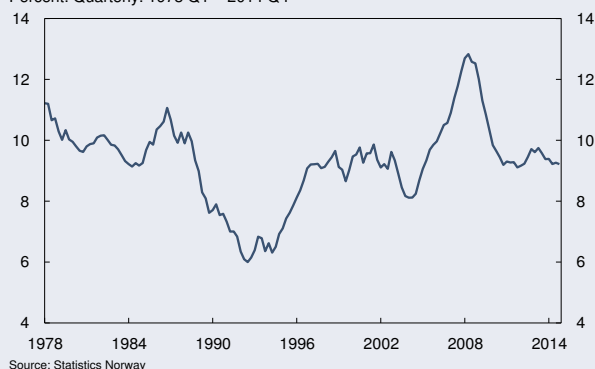
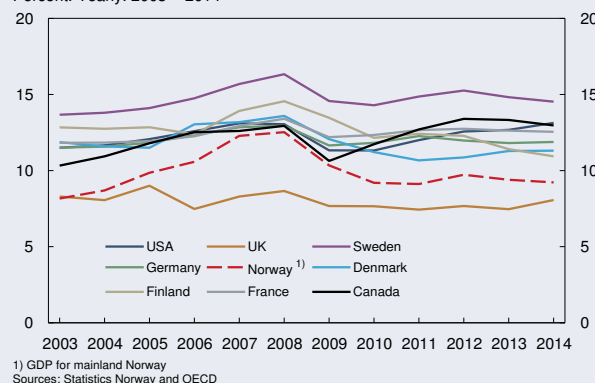


Chart 2 Business investment as a share of GDP. Percent. Yearly. 2003 – 2014



1 Barkbu, B., P. Berkmen, P. Lukyantsau, S. Saksonovs and H. Schoelermann (2015), "Investment in the Euro Area: Why Has It Been Weak?", IMF Working Paper, WP/15/32.
2 Bank for International Settlements.
3 Banerjee, R., J. Kearns and M. J. Lombardi (2015), "(Why) Is investment weak?" *BIS Quarterly Review*, March 2015. pp. 67–82.

developments and economic policy may have a dampening effect on business investment.⁴

To investigate the importance of these relationships we have estimated a model of business investment using quarterly data for the period 2003–2014.⁵ The model suggests that the most important drivers of business investment are future prospects, the interest rate level and access to funding. Future prospects are measured by comparing the equity prices of Norwegian firms with their book value per share (price-to-book ratio), while access to funding is approximated by the margin on corporate loans.

The model explains developments in business investment well (see Chart 3). The model shows that the decline in the interest rate level in isolation has supported investment in the post-crisis period (see Chart 4).

According to the model, weak future prospects weighed on investment. To the extent that the margin on corporate loans captures changes in access to funding, somewhat reduced access to bank funding post-crisis also had a dampening effect on investment growth. Since the financial crisis, equity prices of Norwegian firms have been weak compared with firms' book value per share (price-to-book), which may indicate weak future prospects. In addition, moderate GDP growth and falling profitability in Norwegian

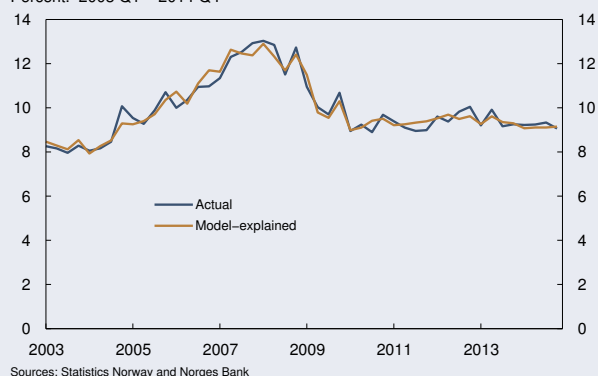
firms, measured by the return on equity, pulled down investment. Both moderate GDP growth and low profitability may lower firms' expectations of future developments. Low profitability may also increase firms' reliance on ample access to external funding. Post-crisis, the margin on corporate loans has been higher than the average since 2003, which may indicate more moderate availability of external funding.

In the period ahead, the model projects a slight increase in business investment through 2015. The low interest rate level pushes up the projections for 2015, while moderate GDP growth and falling return on equity through 2014 pull in the opposite direction. In addition, the margin on corporate loans remains above its average level, even though it has fallen somewhat through 2014. A price-to-book ratio below the average level also pulls down the model projections for 2015.

When future prospects improve, investment may rise considerably faster than mainland GDP. Norwegian export firms' improved profitability owing to a weaker krone may contribute to business investment growth. In the model, the investment share trends towards a long-term equilibrium level of around 10% when the explanatory variables are set equal to their average values. Other calculations based on theoretical correlations and historical averages indicate that the long-term equilibrium level of the investment share may be higher than 10%. Overall, this suggests that the investment share may rise by approximately 1 percentage point from the current level when fundamental factors normalise.

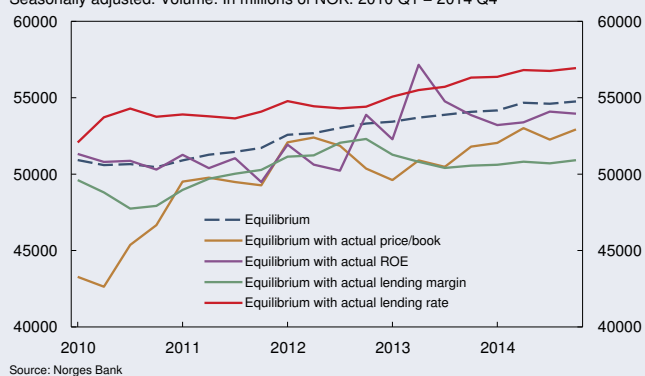
4 Baker, S., N. Bloom and S. Davis (2013), "Measuring Economic Policy Uncertainty", Chicago Booth Research Paper, No 13-02.
5 For a detailed account of the analysis, see Andersen and Aasgaard Walle (2015): "What explains developments in business investment?" Norges Bank Staff Memo, 2/2015.

Chart 3 Actual and model-explained change in investment share. Percent. 2003 Q1 – 2014 Q4



Sources: Statistics Norway and Norges Bank

Chart 4 Equilibrium paths for business investment. Seasonally adjusted. Volume. In millions of NOK. 2010 Q1 – 2014 Q4



Source: Norges Bank

LOWER GROWTH AND LABOUR IMMIGRATION

Over the past ten years, economic developments in Norway have been marked by high labour immigration. The EU enlargement in 2004 opened the Norwegian labour market to workers from a number of new countries. Combined with high labour demand and solid wage growth, this contributed to a pronounced rise in immigration.

The increase in the supply of foreign labour has pulled up the level of potential output in the Norwegian economy. Despite clearly lower productivity growth, mainland economic activity over the past ten years has risen at nearly the same pace as in the previous decade (see Chart 1). According to Statistics Norway register-based statistics, employment in Norway rose by 400 000 persons between 2004 Q4 and 2013 Q4, around two-thirds of whom had a foreign background.¹

Labour immigration has pushed up population growth in the age group 20–66, which makes up the bulk of the labour force (see Chart 2). Without these inflows, growth for this age group would now be slightly negative. Population growth for that age group provides

a good indication of the expected rate of increase in the labour force over time. In 2015, growth for that age group is expected to be around 1%. Growth has slowed in recent years, primarily reflecting lower immigration.

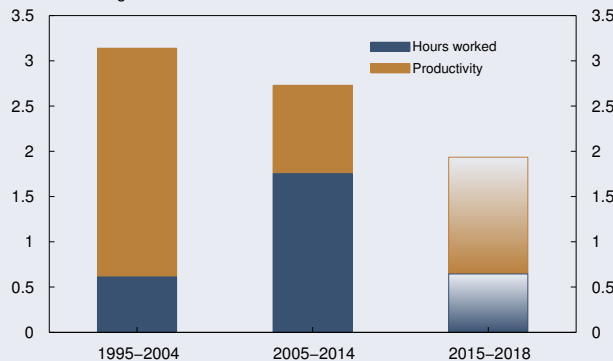
In 2014, net migration to Norway was 38 000, down from 47 000 in 2011 and 2012. Data for 2015 Q1 suggest that net migration will decline further in 2015 and be lower than assumed in the main scenario in Statistics Norway's population projections from summer 2014. Net migration is projected to decline to 33 500 in 2015 and gradually decrease further to 30 000 in 2018, reflecting a decline immigration flows from EU countries in recent years, a trend that is expected to continue (see Chart 3).²

The projections are based on an updated version of the empirical immigration model in Grangård and Nordbø (2012).³ In the model, much of the variation in migration streams to Norway from European

1 These figures also include employed persons who are not registered as residents in the national population register and hence are not captured in the population statistics.

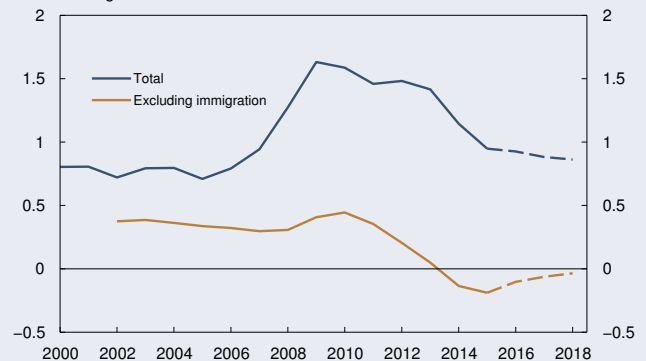
2 Net migration from non-EU countries is assumed to lie around the average for the past five years.
3 Grangård, H. and E. Nordbø (2012): Høy innvandring til Norge: Hvem kommer, og hvorfor kommer de? [High immigration to Norway: Who is coming and why are they coming?] *Norges Bank Staff Memo 25/2012*.

Chart 1 Annual change in Mainland GDP by source. Percent. Average. 1995–2018¹⁾



1) Projections for 2015–2018
Sources: Bloomberg and Norges Bank

Chart 2 Population aged 20 – 66. Annual change. Percent. 2000 – 2018¹⁾



1) Projections for 2015 – 2018
Sources: Statistics Norway and Norges Bank

countries is explained by cyclical developments in Norway and in out-migration countries.⁴

The decline in immigration in recent years partly reflects improved economic conditions in several nearby countries, not least the Baltic countries. Net migration to Norway from these countries has fallen by more than half since 2011 (see Chart 4).

The unemployment rate in Norway has been more stable in recent years (see Chart 4), but according to the estimated effects in the model, immigration is relatively more sensitive to changes in unemployment in Norway than in the country of origin. Somewhat weaker economic developments in Norway have thus also played a role.

4 The estimated model is as follows:

$$\ln\left(\frac{imm_{i,t}}{pop_{i,t}}\right) = -9,57 - 0,44u_{No,t} + 0,09u_{i,t} + 1,27\frac{imm_pop_{i,t} * 100}{pop_{i,t}}$$

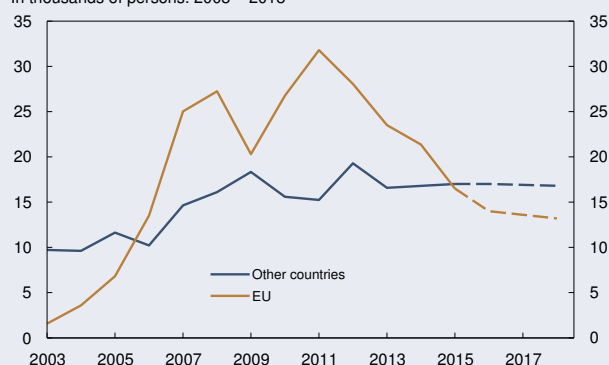
(0,13) (0,04) (0,01) (0,21)

The values in brackets are the estimates' standard errors. The model is estimated on the basis of data for 30 European countries in the period between 2004 and 2014. Fixed country effects are corrected for in the estimates. $imm_{i,t}$ is immigration to Norway from country i in year t , $pop_{i,t}$ is the population of the same country at the beginning of the year, $u_{No,t}$ is the unemployment rate (percent) in Norway in year t , $u_{i,t}$ is the unemployment rate (percent) in country i in year t and $imm_pop_{i,t}$ is the immigrant population residing in Norway from country i at the beginning of year t .

If developments in the Norwegian economy should prove to be weaker than currently projected, there is reason to believe that immigration will turn out lower too. In a situation where registered unemployment rises to around 4%, which in a Norwegian context can be characterised as a marked setback, the empirical model indicates that net migration from EU countries may come to a halt. This illustrates the considerable uncertainty surrounding net migration ahead. Because immigration has been the primary driver of labour force growth in recent years, potential output will also be more uncertain.

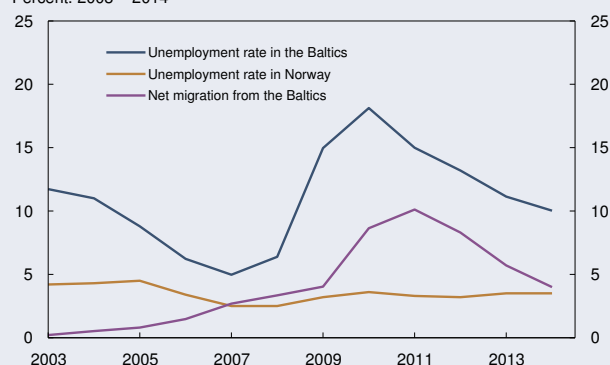
Over time, lower labour inflows from other countries will reduce the economy's growth potential. In a downturn, lower labour immigration may also dampen the rise in unemployment and the fall in capacity utilisation. On the other hand, demand for goods and services is also reduced if fewer persons migrate to Norway from other countries. In the longer run, there will be less need for housing and other infrastructure investment. The overall effect of lower immigration on unemployment and capacity utilisation is therefore not straightforward. Nevertheless, in the short term, there is reason to believe that lower labour migration will reduce total supply more than demand, thereby softening the decline in capacity utilisation.

Chart 3 Net migration by country of origin. In thousands of persons. 2003 – 2018¹⁾



1) Projections for 2015 – 2018 (broken lines)
Source: Statistics Norway and Norges Bank

Chart 4 Net migration (in 1000s) to Norway and unemployment rate. Percent. 2003 – 2014



Sources: Eurostat and Statistics Norway

LOWER EXPORTS FROM THE OIL SERVICE INDUSTRY AHEAD

Norwegian petroleum companies have laid the basis for developing a competitive oil service industry at a global level. While satisfying a large share of the demand from the Norwegian continental shelf, the Norwegian oil services industry has emerged as an important export industry. Norwegian oil services companies have a considerable global market share in the seismic, drilling technology, maritime services and subsea production system markets. Foreign markets account for about 40% of industry turnover.¹ A share of the turnover comes from sales via foreign subsidiaries, but the bulk is supplied in the form of Norwegian exports.² Oil services account for 20%-25% of Norwegian exports excluding oil, gas and international shipping.³

Against the background of rising costs and lower oil prices, oil companies worldwide have reduced their investment budgets, postponed activities and implemented cost-cutting measures. Global offshore investments are therefore expected to fall sharply this year and next. The decline in the global oil industry will reduce orders for Norwegian oil services companies. As a result, exports from mainland Norway will be weaker ahead than normally implied by develop-

ments in the krone exchange rate and market growth among Norway's trading partners.

In the national accounts, oil services exports are broken down on various goods and services components that also include other exports. In Chart 1 we have attempted to extract the goods and services components that are closely linked to the petroleum industry. The Chart shows that oil services exports increased sharply in the period 2000–2008 and flattened out thereafter. Developments in recent years may indicate the fact that Norwegian resources have increasingly been used to meet the high level of demand from the Norwegian continental shelf and that foreign turnover has increasingly come from foreign subsidiaries.

Norwegian oil services exports increased through 2014 and held firm through 2015 Q1. A decline is expected in the coming quarters and through 2016, in pace with cutbacks in foreign investments. At the same time, a weaker krone is likely to make it easier for Norwegian oil services companies to win contracts in a shrinking international market for oil services. Export-oriented oil services companies in Norges Bank's regional network reported in May that output had declined and that they expected the decline to continue (see Chart 2.4). At the same time, they report that the fall in export-oriented activity is less pronounced than the decline in oil services for the Norwegian continental shelf.

- 1 Rystad Energy, 2014. International turnover for Norwegian oil suppliers.
- 2 Menon Business Economics (2012): *Internasjonalisering av norsk offshore-leverandørindustri 2011 – øker omsetning og blir mer global*. According to this report exports from Norway accounted for about 65% of foreign turnover in 2011.
- 3 Anslaget er basert på Rystad Energy (2014) og Menon Business Economics (2012).

Chart 1.1 Exports from mainland Norway. Constant 2012 prices. In billions of NOK. 2000 – 2014



COUNTERCYCLICAL CAPITAL BUFFERS IN OTHER COUNTRIES

The objective of the countercyclical capital buffer is to mitigate systemic risk associated with high credit growth and leverage by strengthening the resilience of the banking sector to an impending downturn.¹ The countercyclical capital buffer shall address systemic risk in the individual country and be set on the basis of national conditions. Banks operating in several countries are regulated by the authorities in the country where their head office is located. To ensure an identical buffer rate for different banks' exposures in the same country, EU capital adequacy legislation (CRD IV/CRR) provides for international reciprocity. The total countercyclical capital buffer requirement for an individual bank will therefore be a weighted average of the buffer rates in the countries where the bank has exposures. Reciprocity was an important principle in the rules recommended by the Basel Committee on Banking Supervision in 2010.

Under CRD IV/CRR, buffer rates of up to 2.5% shall be automatically recognised between EU countries.² CRD IV/CRR will eventually apply in Norway through the

EEA Agreement.³ The buffer requirement in Norway has already been recognised by Denmark, Finland, the UK and Sweden. This means that banks with a head office in these countries will have to hold a countercyclical capital buffer for that portion of their activities carried out in Norway. CRD IV/CRR allows EU member states to recognise buffer rates set by third countries, i.e. non-EU/EEA countries, or set their own buffer rate for their banks' exposures in third countries. The European Systemic Risk Board (ESRB) may issue recommendations on buffer rates for third country exposures.

Under CRD IV/CRR, all EU countries are to have set a countercyclical buffer rate by 2016. So far, nine EU/EEA countries have established an institutional framework and set a countercyclical buffer rate for banks (see Table 1).⁴ Most countries have set the rate at zero. Norway and Sweden have set the buffer rate at 1% effective from 1 July 2015 and 13 September 2015, respectively. In Sweden, Finansinspektionen has circulated for comment a proposal to increase the buffer rate to 1.5% as from 27 June 2016.

1 See also the box on systemic risk and macroprudential policy on pages 48–49 in *Monetary Policy Report 4/14*.

2 CRD IV/CRR permits recognition of rates in excess of 2.5%. The European Systemic Risk Board (ESRB) recommends in general that higher rates should also be recognised (see *Recommendation on guidance for setting countercyclical buffer rates*, European Systemic Risk Board (ESRB), 2014). The limit is lower than 2.5% during a phasing-in period between 2016 and 2019.

3 Under the current Regulation on the Level of the Countercyclical Capital Buffer laid down by the Ministry of Finance on 12 December 2013, the buffer shall be calculated using the same risk-weighted assets as for the minimum regulatory capital requirement.

4 Switzerland set the buffer rate at 1% already in February 2013 and then raised the rate to 2% with effect from 30 June 2014. The buffer requirement applies only to banks' residential mortgages. Hong Kong has set the countercyclical capital buffer rate at 0.625% as from 1 January 2016.

TABLE 1 Countercyclical capital buffers introduced in EU/EEA countries

Country	Buffer requirement first announced	Buffer rate	Rate applies as from
Denmark	19 December 2014	0%	1 January 2016
Finland	16 March 2015	0%	16 March 2015
Croatia	13 January 2015	0%	1 January 2016
Latvia	23 January 2015	0%	1 February 2016
Norway	12 December 2013	1%	1 July 2015
Slovakia	7 October 2014	0%	1 November 2014
UK	26 June 2014	0%	26 June 2014
Sweden	10 September 2014	1%	13 September 2015
Czech Republic	28 August 2014	0%	1 October 2015

Source: *Macro-prudential policy actions. Overview of measures*, European Systemic Risk Board (ESRB), as at 12 May 2015.

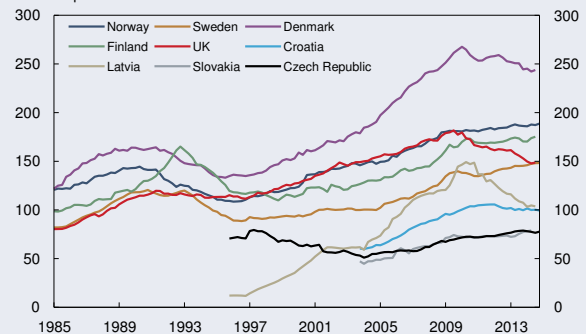
Credit-to-GDP ratios vary considerably across countries (see Chart 1). In 2014, total credit was approximately 80% of GDP in Slovakia and the Czech Republic, while it was around 240% of GDP in Denmark. In all countries, credit grew faster than GDP pre-crisis. Since then, developments have diverged. Denmark, Latvia, Croatia and the UK, which were hard hit by the financial crisis, have experienced a decline in credit ratios. In recent years, credit ratios have increased most in Sweden, Slovakia and the Czech Republic, which were less affected by the crisis. Finland and Norway have experienced a smaller increase in credit ratios.

Under CRD IV/CRR, the countercyclical capital buffer rate shall be assessed on the basis of the credit-to-GDP ratio and the deviation of this ratio from its long-term trend (credit gap). The long-term trend in the credit-to-GDP ratio can be calculated in different ways. The Basel Committee has proposed one method, on which the gaps in Chart 2 are based.⁵

Under CRD IV/CRR, a benchmark buffer rate shall be calculated as a reference on the basis of the credit gap. The Basel Committee has proposed a simple rule for calculating a benchmark buffer rate (see Chart 3 and the box on page 40). The ESRB emphasises that there shall not be a mechanical relationship between the benchmark buffer rate and the level of the buffer, but that the rate shall be based on a broader decision basis.

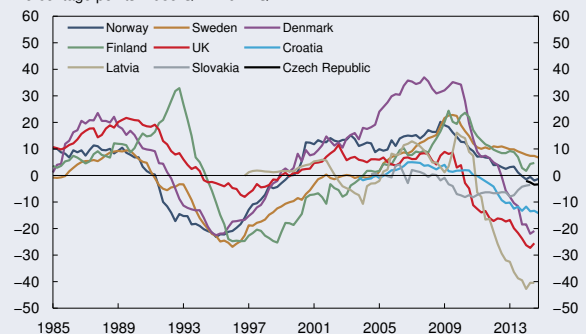
There are considerable differences in the credit gap in the countries that have introduced a countercyclical capital buffer (see Chart 2). Finland and Sweden had a positive credit gap and a positive benchmark buffer rate since the mid-2000s (see Chart 3). The benchmark buffer rate in Sweden was 1.5% in 2014 Q4, which is the same level as the buffer requirement proposed by Finansinspektionen. Finland has set the buffer rate at zero, since other indicators imply that financial imbalances are not building up. The other EU countries had a negative credit gap, which results in a benchmark buffer rate of zero. These countries have set their buffer rate at zero.

Chart 1 Credit-to-GDP for EU/EEA countries that have set a countercyclical capital buffer requirement.¹⁾ Percent. 1985 Q1 – 2014 Q4



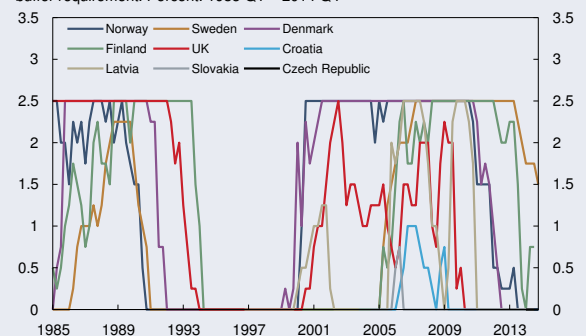
1) Definitions may vary across countries. The chart shows figures used in the calculation of credit gaps. Some countries have only published figures to end-2014 Q2 and Q3. Sources: Bank of England, Czech National Bank, Croatian National Bank, Det Systemiske Risikoråd (Denmark), Financial and Capital Market Commission (Latvia), Finlands Bank, National Bank of Slovakia, Finansinspektionen (Sweden) and Norges Bank

Chart 2 Credit gaps for EU/EEA countries that have set a countercyclical capital buffer requirement. Credit-to-GDP¹⁾ Deviation from estimated trend.²⁾ Percentage points. 1985 Q1 – 2014 Q4



1) Definitions may vary across countries. Some countries have only published figures to end-2014 Q2 and Q3. 2) Trend calculations are based on the method recommended by the Basel Committee on Banking Supervision. For the Czech Republic, figures are only available for 2014. Sources: Bank of England, Czech National Bank, Croatian National Bank, Det Systemiske Risikoråd (Denmark), Financial and Capital Market Commission (Latvia), Finlands Bank, National Bank of Slovakia, Finansinspektionen (Sweden) and Norges Bank

Chart 3 Benchmark buffer rate for EU/EEA countries that have set a countercyclical capital buffer requirement. Percent. 1985 Q1 – 2014 Q4



Sources: Bank of England, Czech National Bank, Croatian National Bank, Det Systemiske Risikoråd (Denmark), Financial and Capital Market Commission (Latvia), Finlands Bank, National Bank of Slovakia, Finansinspektionen (Sweden) and Norges Bank

5 Norges Bank also calculates alternative trends (see box on page 40).

ANNEX

Monetary policy meetings
Tables and detailed projections

MONETARY POLICY MEETINGS WITH CHANGES IN THE KEY POLICY RATE

Dato	Styringsrente ¹	Endring
16 December 2015		
4 November 2015		
23 September 2015		
17 June 2015	1.00	-0.25
6. mai 2015	1.25	0
18 March 2015	1.25	0
10 December 2014	1.25	-0.25
22 October 2014	1.50	0
17 September 2014	1.50	0
18 June 2014	1.50	0
7 May 2014	1.50	0
26 March 2014	1.50	0
4 December 2013	1.50	0
23 October 2013	1.50	0
18 September 2013	1.50	0
19 June 2013	1.50	0
8 May 2013	1.50	0
13 March 2013	1.50	0
19 December 2012	1.50	0
31 October 2012	1.50	0
29 August 2012	1.50	0
20 June 2012	1.50	0
10 May 2012	1.50	0
14 March 2012	1.50	-0.25
14 December 2011	1.75	-0.50
19 October 2011	2.25	0
21 September 2011	2.25	0
10 August 2011	2.25	0
22 June 2011	2.25	0
12 May 2011	2.25	+0.25
16 March 2011	2.00	0
26 January 2011	2.00	0
15 December 2010	2.00	0
27 October 2010	2.00	0
22 September 2010	2.00	0
11 August 2010	2.00	0
23 June 2010	2.00	0
5 May 2010	2.00	+0.25
24 March 2010	1.75	0

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

TABLE 1 MAIN MACROECONOMIC AGGREGATES

Percentage change from previous year/quarter	GDP	Mainland GDP	Private consumption	Public consumption	Mainland fixed investment	Petroleum investment ¹	Mainland exports ²	Imports
2008	0.4	1.7	1.7	2.4	0.9	4.7	4.5	3.2
2009	-1.6	-1.6	0.0	4.1	-10.4	3.3	-5.8	-10.0
2010	0.6	1.8	3.8	2.2	-6.4	-8.9	7.9	8.3
2011	1.0	1.9	2.3	1.0	5.0	11.3	0.8	4.0
2012	2.7	3.8	3.5	1.6	7.4	15.1	1.3	3.1
2013	0.7	2.3	2.1	1.7	2.9	17.1	1.2	4.3
2014	2.2	2.2	2.0	2.7	1.7	-1.7	3.4	1.9
2014 ³ Q2	1.0	1.1	0.6	0.6	2.9	-0.2	5.4	3.6
Q3	0.4	0.0	0.1	0.5	-0.7	-3.0	1.2	3.4
Q4	0.9	0.4	0.8	0.7	-2.5	-7.0	2.5	-3.6
2015 Q1	0.2	0.5	0.6	0.3	-1.1	0.8	-1.9	2.8
2014 level. In billions of NOK	3 150	2 527	1 289	690	523	216	560	932

1 Extraction and pipeline transport.

2 Traditional goods, travel, petroleum services and exports of other services from mainland Norway.

3 Seasonally adjusted quarterly data.

Sources: Statistics Norway and Norges Bank

TABLE 2 CONSUMER PRICES

Annual change/twelve-month change. Per cent	CPI	CPI-ATE ¹	CPIXE ²	CPI-AT ³	CPI-AE ⁴	HICP ⁵
2008	3.8	2.6	3.1	3.9	2.5	3.4
2009	2.1	2.6	2.6	2.1	2.7	2.3
2010	2.5	1.4	1.7	2.4	1.4	2.3
2011	1.2	0.9	1.1	1.1	1.1	1.2
2012	0.8	1.2	1.0	0.6	1.4	0.4
2013	2.1	1.6	1.4	2.1	1.6	2.0
2014	2.0	2.4	2.3	2.1	2.3	1.9
2015 Jan	2.0	2.4	2.4	2.0	2.4	1.9
Feb	1.9	2.4	2.3	1.9	2.3	1.8
Mar	2.0	2.3	2.3	1.9	2.2	1.7
Apr	2.0	2.1	2.1	2.0	2.1	1.8
May	2.1	2.4	2.4	2.1	2.4	2.0

1 CPI-ATE: CPI adjusted for tax changes and excluding energy products.

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

3 CPI-AT: CPI adjusted for tax changes.

4 CPI-AE: CPI excluding energy products.

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

Sources: Statistics Norway and Norges Bank

TABLE 3 PROJECTIONS FOR GDP GROWTH IN OTHER COUNTRIES

Change from projections in <i>Monetary Policy Report 1/15</i> in brackets	Share of world GDP		Change from previous year. Percent.				
	PPP	Market exchange rates ¹	2014	2015	2016	2017	2018
US	16	22	2.4	2¼ (-1)	2¾ (-½)	2¾ (0)	2¼ (-¼)
Euro area	12	19	0.9	1¼ (0)	1½ (0)	1¾ (0)	1¾ (0)
UK	2	4	2.8	2½ (-¼)	2½ (-¼)	2½ (0)	2¼ (0)
Sweden	½	¾	2.4	2¾ (-¼)	3¼ (¼)	2¾ (0)	2¼ (-¼)
China	16	10	7.4	6¾ (-¼)	6½ (-¼)	6¼ (-¼)	6 (-¼)
Emerging economies ²	19	12	2.7	1¾ (-¼)	3¼ (0)	3¾ (-¼)	4 (0)
Trading partners ³	72	78	2	2 (-¼)	2½ (0)	2½ (0)	2½ (0)
World (PPP) ⁴	100	100	3.4	3¼ (-½)	3¾ (-¼)	4 (0)	4 (0)
World (market exchange rates) ⁴	100	100	2.6	2¾ (-¼)	3¼ (-¼)	3¼ (-¼)	3¼ (0)

1 Country's share of global output measured in a common currency (market exchange rate). Average 2010–2012.

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

3 Export weights, 25 main trading partners.

4 GDP weights. Norges Bank's estimates for 25 trading partners, other estimates from IMF.

Sources: IMF, Thomson Reuters and Norges Bank

TABLE 4 PROJECTIONS FOR CONSUMER PRICES IN OTHER COUNTRIES

Change from projections in <i>Monetary Policy Report 1/15</i> in brackets	Change from previous year. Percent.				
	2014	2015	2016	2017	2018
US	1.6	¼ (0)	1½ (-¼)	2 (0)	2¼ (0)
Euro area	0.4	0 (0)	1 (0)	1¼ (0)	1½ (0)
UK	1.5	¼ (0)	1½ (-¼)	2 (0)	2 (0)
Sweden	-0.2	¼ (0)	1¾ (0)	3 (0)	2¾ (0)
China	2.0	1½ (-¼)	1¾ (-½)	2½ (-¼)	2¾ (0)
Emerging economies ¹	7.0	7¼ (0)	5½ (0)	5 (-¼)	4¾ (-¼)
Trading partners ²	1.1	1 (0)	1¾ (0)	2¼ (0)	2¼ (0)
Oil price, Brent Blend. USD per barrel ³	99	62	69	71	73

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

2 Import weights, 25 main trading partners.

3 Futures prices (average for the past five trading days). For 2015, the average of spot prices so far this year and futures prices for the rest of the year are used.

Sources: IMF, Thomson Reuters and Norges Bank

TABLE 5 PROJECTIONS FOR MAIN ECONOMIC AGGREGATES

	In billions of NOK	Percentage change from previous year (unless otherwise stated) Anslag				
		2014	2015	2016	2017	2018
Prices and wages						
CPI		2.0	2	2¼	2	2¼
CPI-ATE ¹		2.4	2¼	2¼	2	2¼
Annual wages ²		3.1	2¾	3	3½	4
Real economy						
GDP	3150	2.2	1¼	1¼	2	2
GDP, mainland Norway	2527	2.2	1¼	1½	2¼	2½
Output gap, mainland Norway (level) ³		-0.4	-1	-1¼	-1	-½
Employment, persons, QNA		1.1	¼	¼	1	1
Labour force, LFS		1.1	1	¼	¾	1
LFS unemployment (rate, level)		3.5	4¼	4¼	4	3¾
Registered unemployment (rate, level)		2.8	3	3¼	3¼	3
Demand						
Mainland demand ⁴	2503	2.1	1½	2½	3¼	3
- Private consumption	1289	2.0	2	1¾	2¾	3
- Private investment ⁵	380	-0.5	-1½	5	6½	4¾
- Public demand ⁶	834	3.6	2	2½	2¼	2¼
Petroleum investment ⁷	216	-1.7	-15	-5	-2½	0
Mainland exports ⁸	560	3.4	3	3	4	4
Imports	932	1.9	2¼	2¼	3¾	4¼
Interest rate and exchange rate						
Key policy rate (level) ⁹		1.5	1	¾	1	1¼
Import-weighted exchange rate (I-44) ¹⁰		93.7	100¾	98¼	96¾	96

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 consumption and private mainland gross fixed investment and public demand.

5 Business and housing investment.

6 General government gross fixed investment and consumption.

7 Extraction and pipeline transport.

8 Traditional goods, travel, petroleum, services and exports of other services from mainland Norway.

9 The key policy rate is the interest rate on banks' deposits in Norges Bank.

10 Level. The weights are estimated on the basis of imports from 44 countries, which comprise 97% of total imports

Sources: Statistics Norway. Technical Reporting Committee on Income Settlements (TBU). Norwegian Labour and Welfare Administration (NAV) and Norges Bank

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