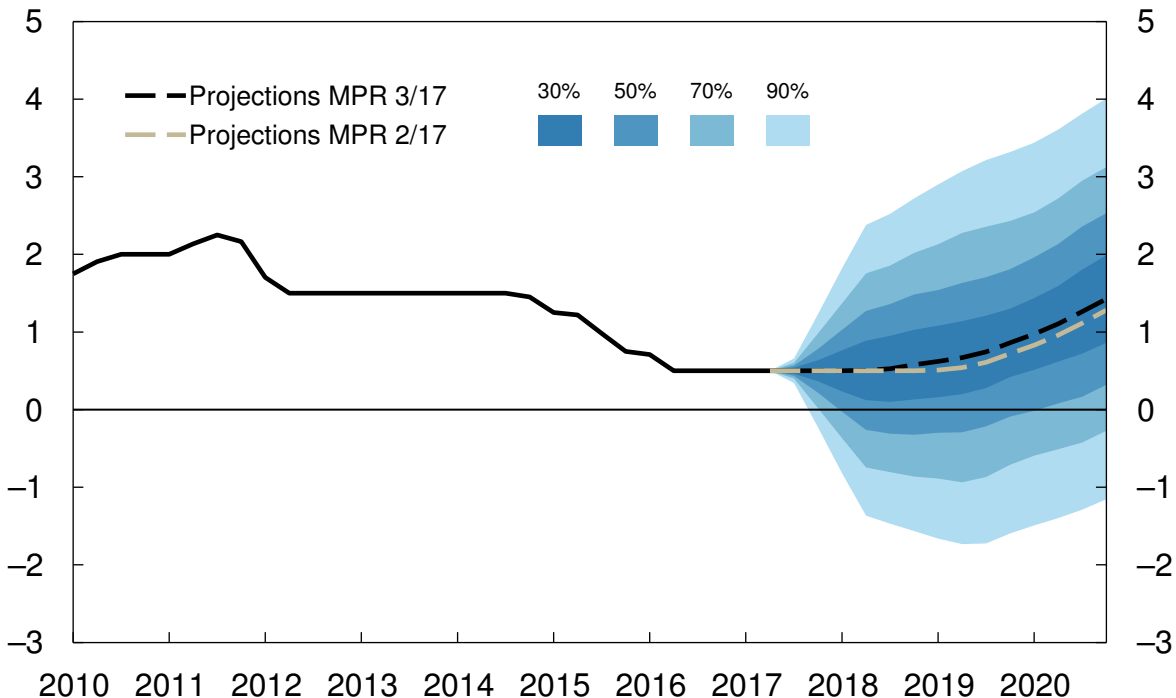


Chart 1.1a Key policy rate with fan chart.¹⁾ Percent.

2010 Q1 – 2020 Q4²⁾

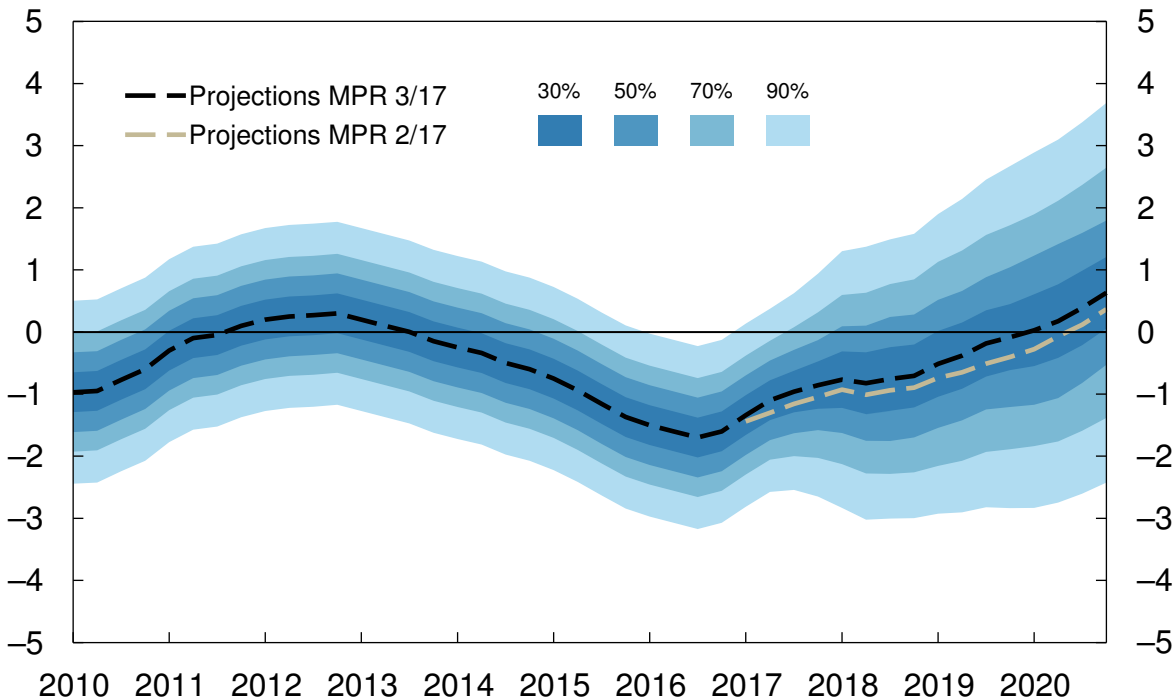


1) The fan charts are based on historical experience and stochastic simulations in Norges Bank's main macroeconomic model, NEMO. The fan chart for the key policy rate does not take into account that a lower bound for the interest rate exists.

2) Projections for 2017 Q3 – 2020 Q4 (broken line).

Source: Norges Bank

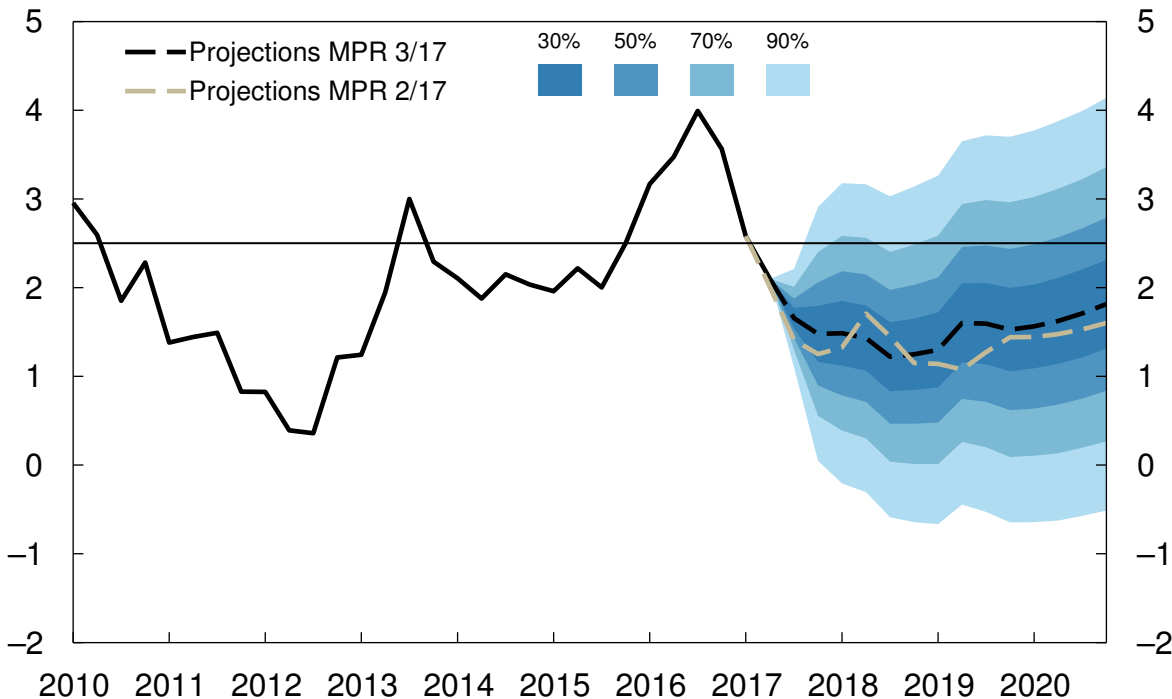
Chart 1.1b Projected output gap¹⁾ with fan chart. Percent. 2010 Q1 – 2020 Q4



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

Source: Norges Bank

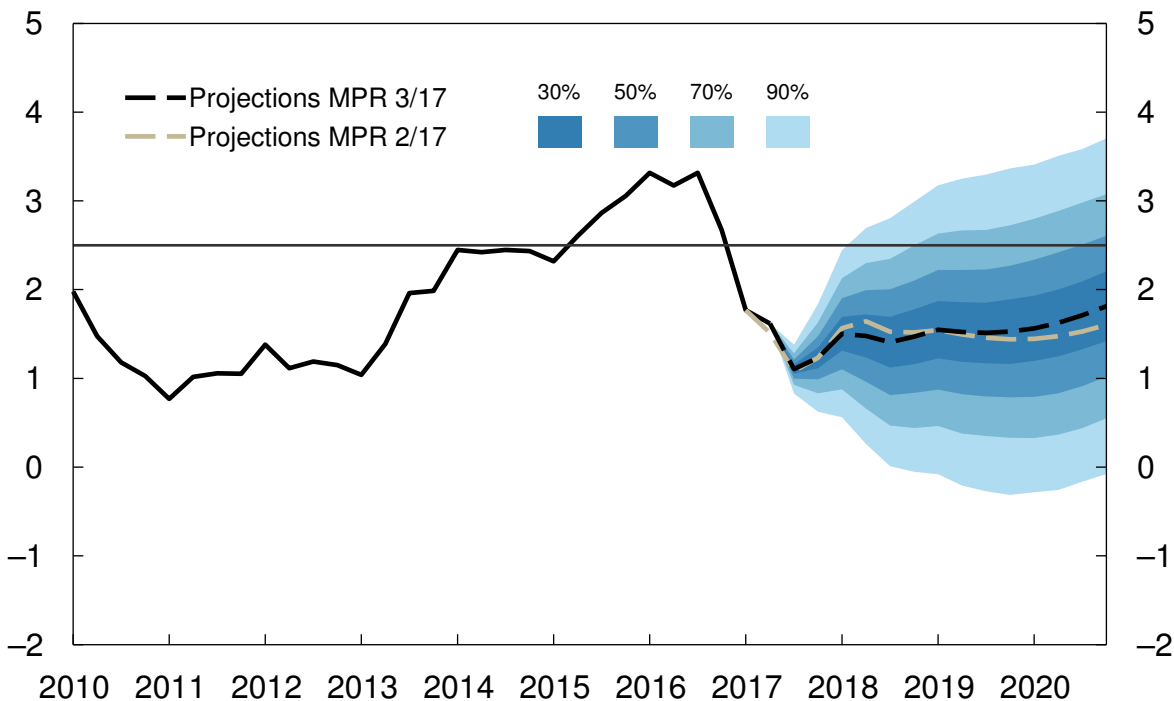
Chart 1.1c Consumer price index (CPI) with fan chart. Four-quarter percentage change. 2010 Q1 – 2020 Q4 ¹⁾



1) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 1.1d CPI-ATE¹⁾ with fan chart. Four-quarter percentage change.
 2010 Q1 – 2020 Q4²⁾

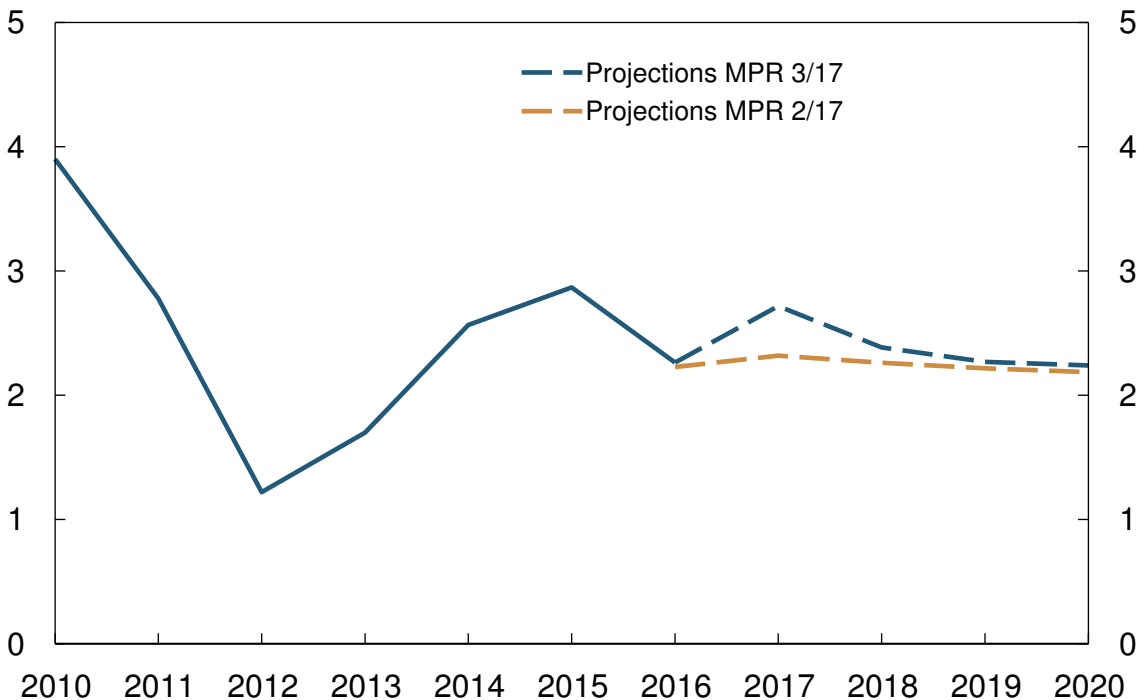


1) CPI adjusted for tax changes and excluding energy products.

2) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 1.2 GDP for Norway's trading partners.¹⁾ Annual percentage change.
2010 – 2020²⁾



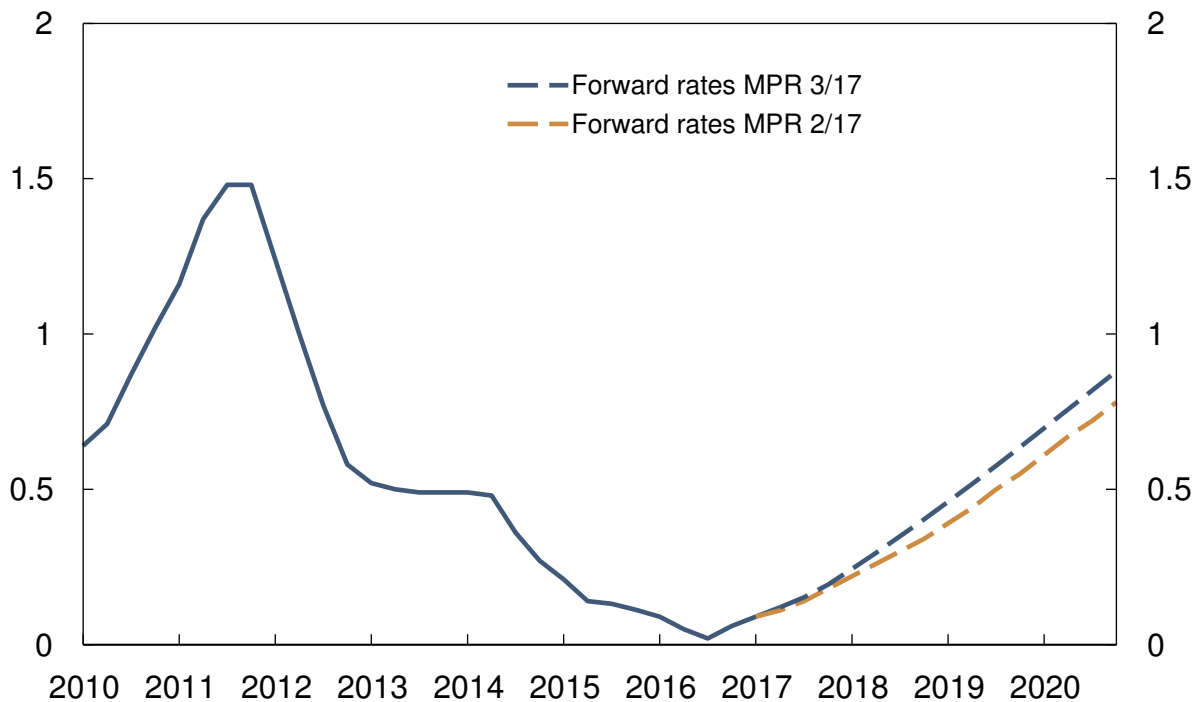
1) Export weights, 25 main trading partners.

2) Projections for 2017 – 2020 (broken lines).

Sources: IMF, Statistics Norway, Thomson Reuters and Norges Bank

Chart 1.3 Three-month money market rates for Norway's trading partners.¹⁾

Percent. 2010 Q1 – 2020 Q4²⁾

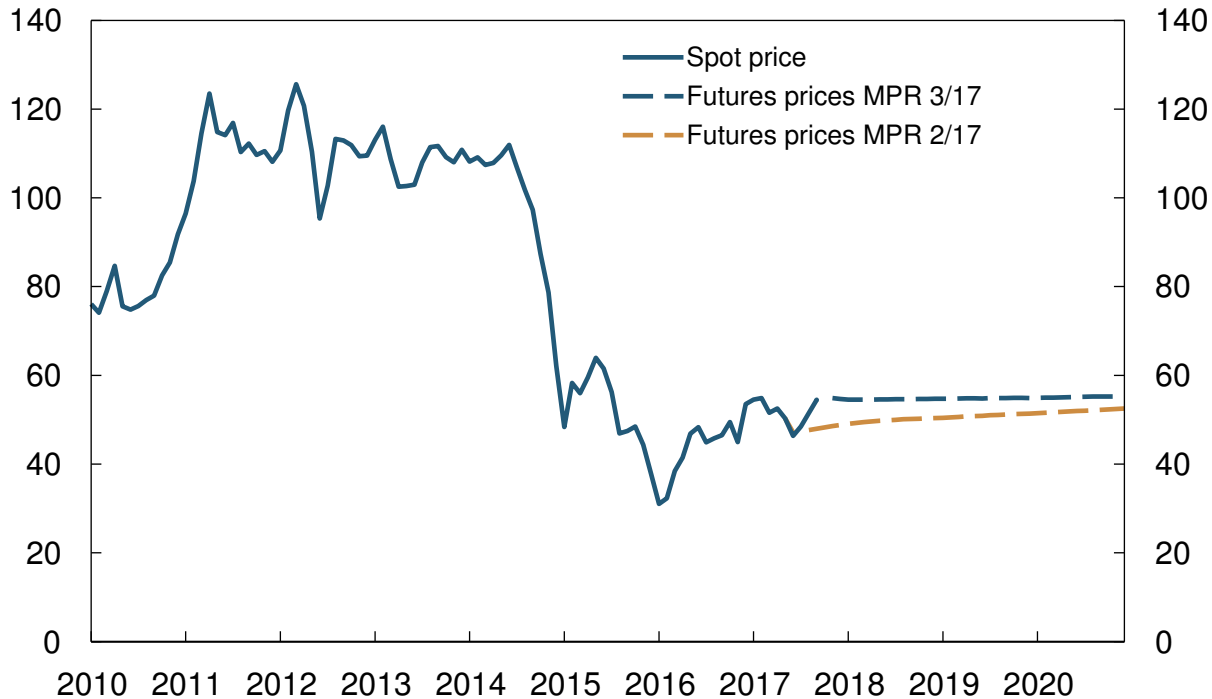


1) Based on money market rates and interest rate swaps. For information about the aggregate for trading partner interest rates, see *Norges Bank Papers 2/2015*.

2) Orange and blue broken lines show forward rates at 16 June 2017 and 15 September 2017 respectively.

Sources: Thomson Reuters and Norges Bank

Chart 1.4 Oil price.¹⁾ USD/barrel. January 2010 – December 2020²⁾

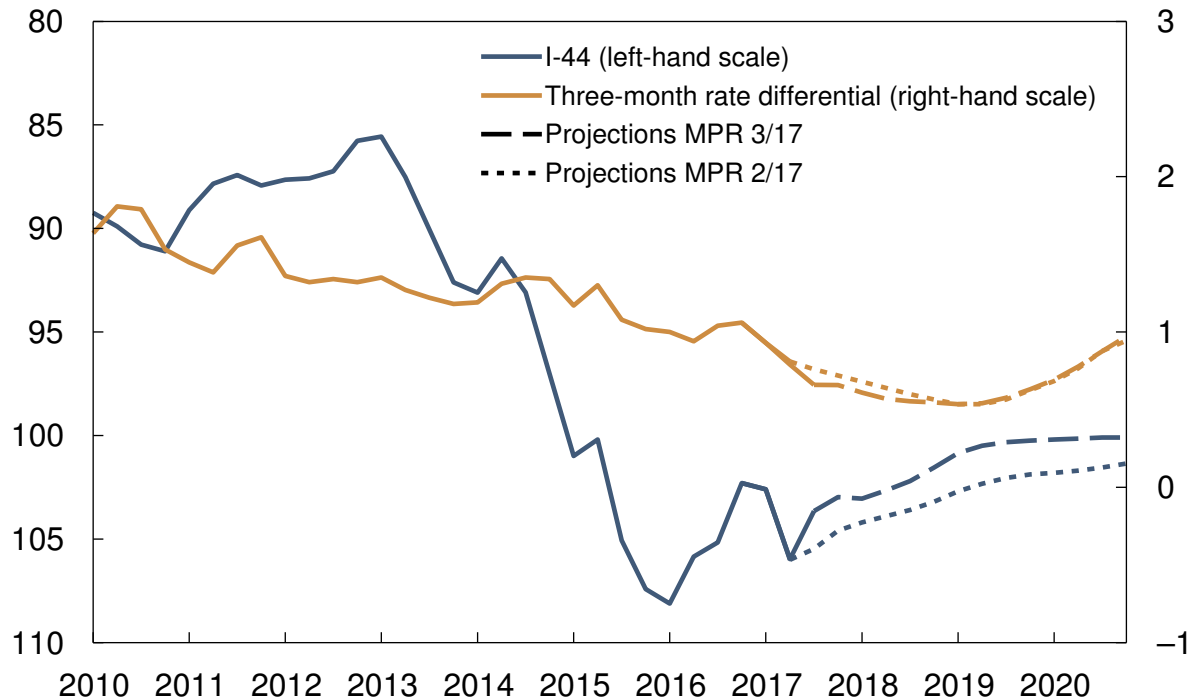


1) Brent Blend. USD/barrel.

2) Futures prices (broken lines) are the averages of futures prices for the period 11 September – 15 September 2017 for MPR 3/17 and 12 June – 16 June 2017 for MPR 2/17.

Sources: Thomson Reuters and Norges Bank

Chart 1.5 Three-month money market rate differential between Norway¹⁾ and trading partners²⁾ and import-weighted exchange rate index (I-44)³⁾. 2010 Q1 – 2020 Q4⁴⁾



1) Key policy rate plus Norwegian money market premium. The calculations are based on the assumption that the key policy rate forecast is priced into the money market.

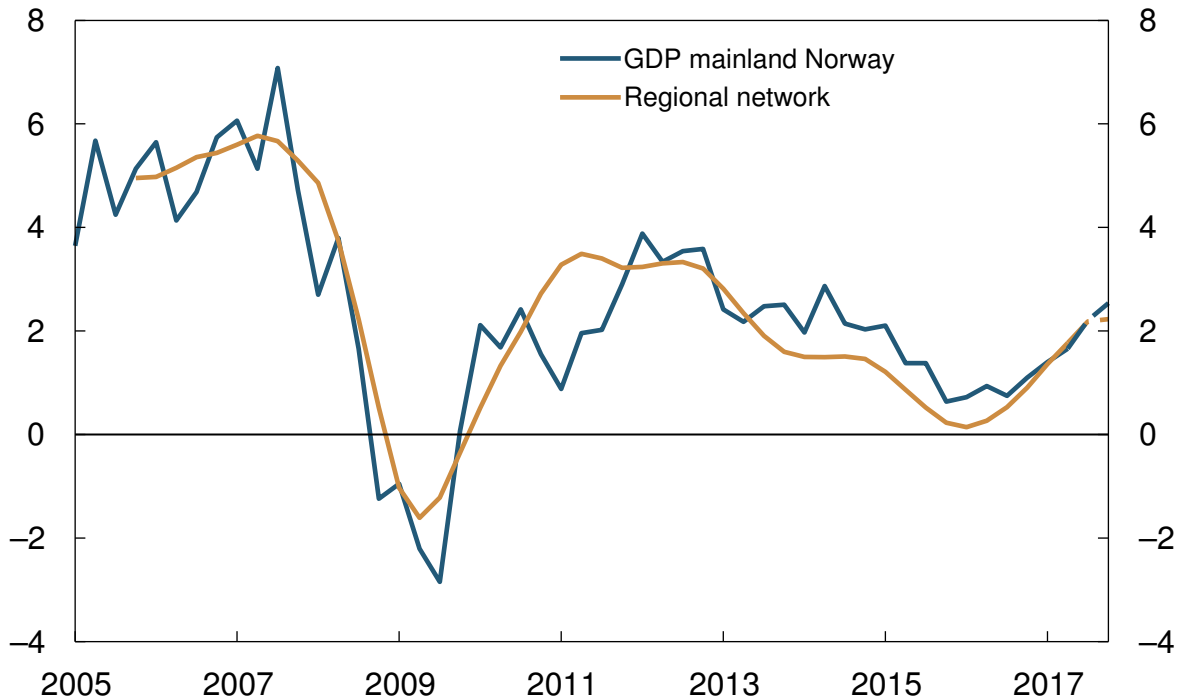
2) Forward rates for trading partners at 15 September 2017 and 16 June 2017. The aggregate for trading partner interest rates is described in *Staff Memo 2/2015*, Norges Bank.

3) A positive slope denotes a stronger krone exchange rate.

4) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Thomson Reuters and Norges Bank

Chart 1.6 GDP for mainland Norway¹⁾ and regional network's indicator of output growth²⁾. Four-quarter percentage change. 2005 Q1 – 2017 Q4³⁾



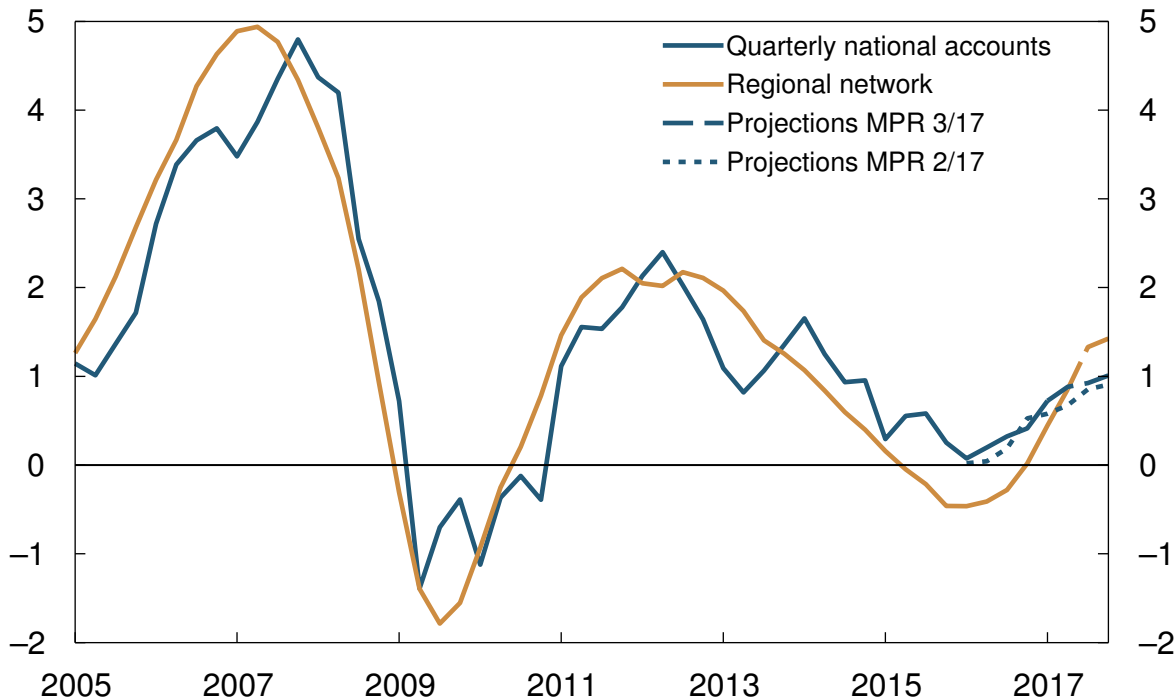
1) Seasonally adjusted.

2) Reported output growth past three months converted to quarterly figures (solid line). The quarterly figures are calculated by weighting together three-monthly figures based on when the survey was carried out. For 2017 Q3 expected output growth is estimated by weighting together reported growth over the past three months and expected growth in the next six months and 2017 Q4 is expected growth in the next six months (broken orange line).

3) Projections for 2017 Q3 – 2017 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

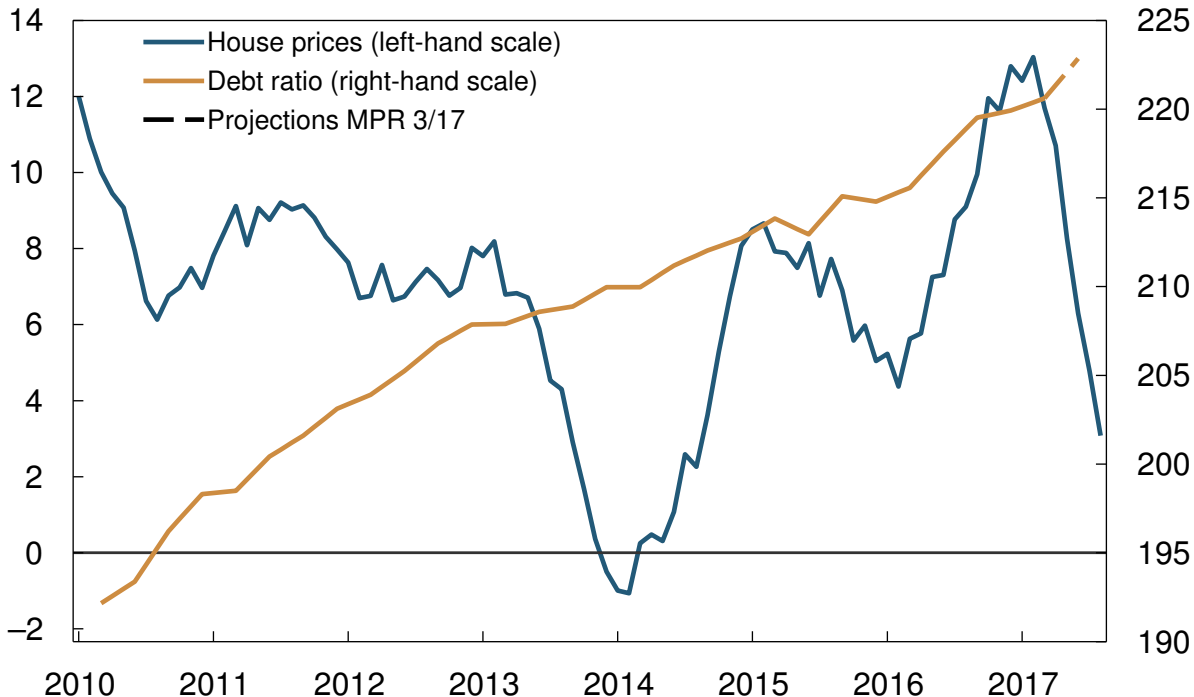
Chart 1.7 Growth in employment in the quarterly national accounts and regional network¹⁾. Four-quarter percentage change. 2005 Q1 – 2017 Q4²⁾



1) Reported output growth past three months (solid line). Quarterly figures are calculated by weighting together three-monthly figures based on when the survey was carried out. For 2017 Q3, expected output growth is estimated by weighting together reported growth over the past three months and expected growth in the next three months and 2017 Q4 is expected growth in the next three months (broken orange line).

2) Projections for 2017 Q3 – 2017 Q4 (broken lines).

Chart 1.8 House prices. Twelve-month percentage change. January 2010 – August 2017. Household debt ratio. Debt as a percentage of disposable income¹⁾. 2010 Q1 – 2017 Q2²⁾

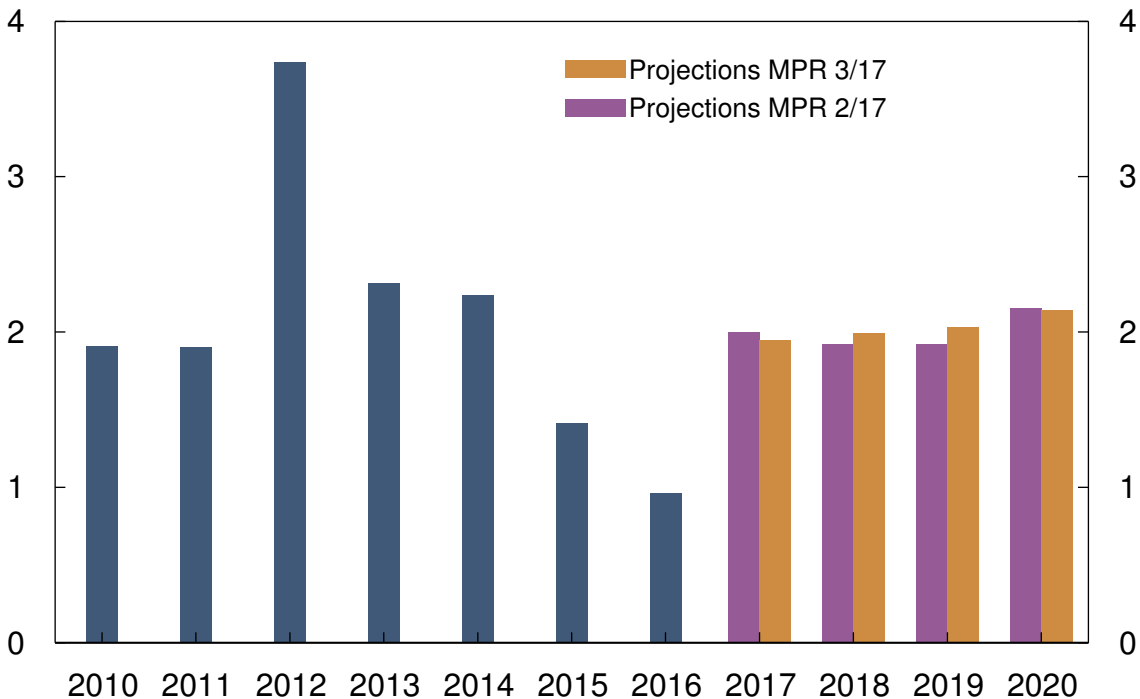


1) Disposable income is adjusted for estimated reinvested dividend income for 2000 Q1 – 2005 Q4 and reduction of equity capital for 2006 Q1 – 2012 Q3. For 2015 Q1 – 2017 Q2 growth in disposable income excluding dividends is used.

2) Projections for 2017 Q2.

Sources: Eiendomsverdi, Finn.no, Real Estate Norway, Statistics Norway and Norges Bank

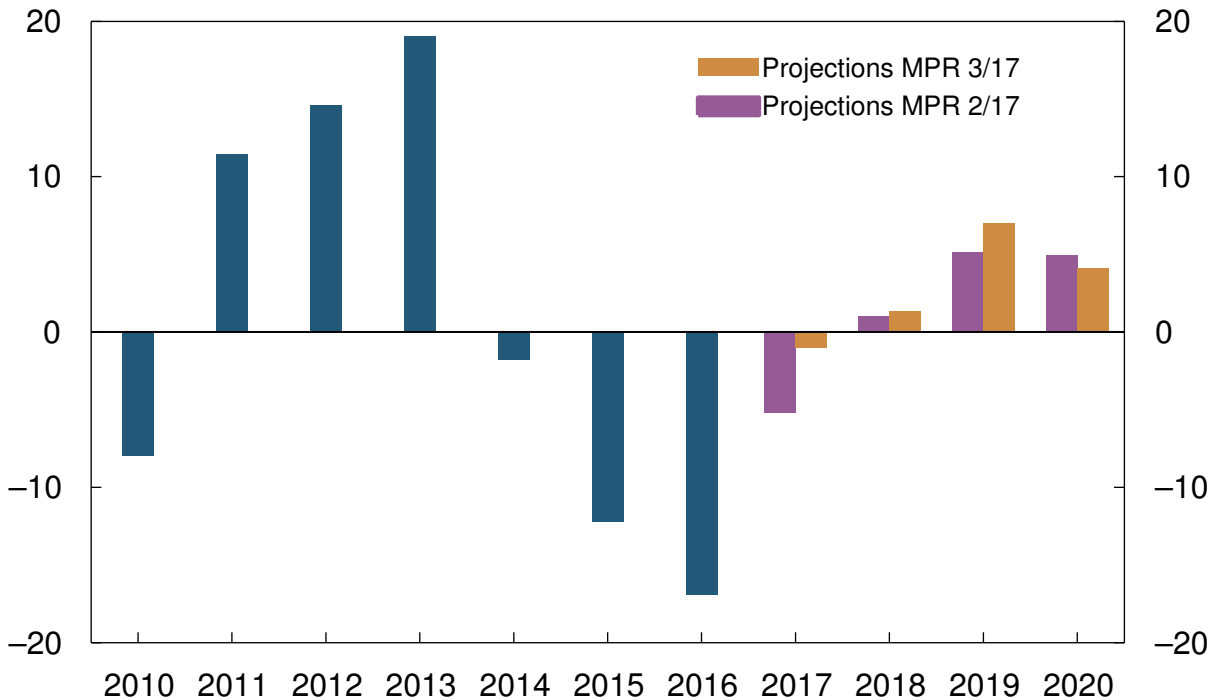
Chart 1.9 GDP for mainland Norway. Annual percentage change. 2010 – 2020¹⁾



1) Projections for 2017 – 2020.

Sources: Statistics Norway and Norges Bank

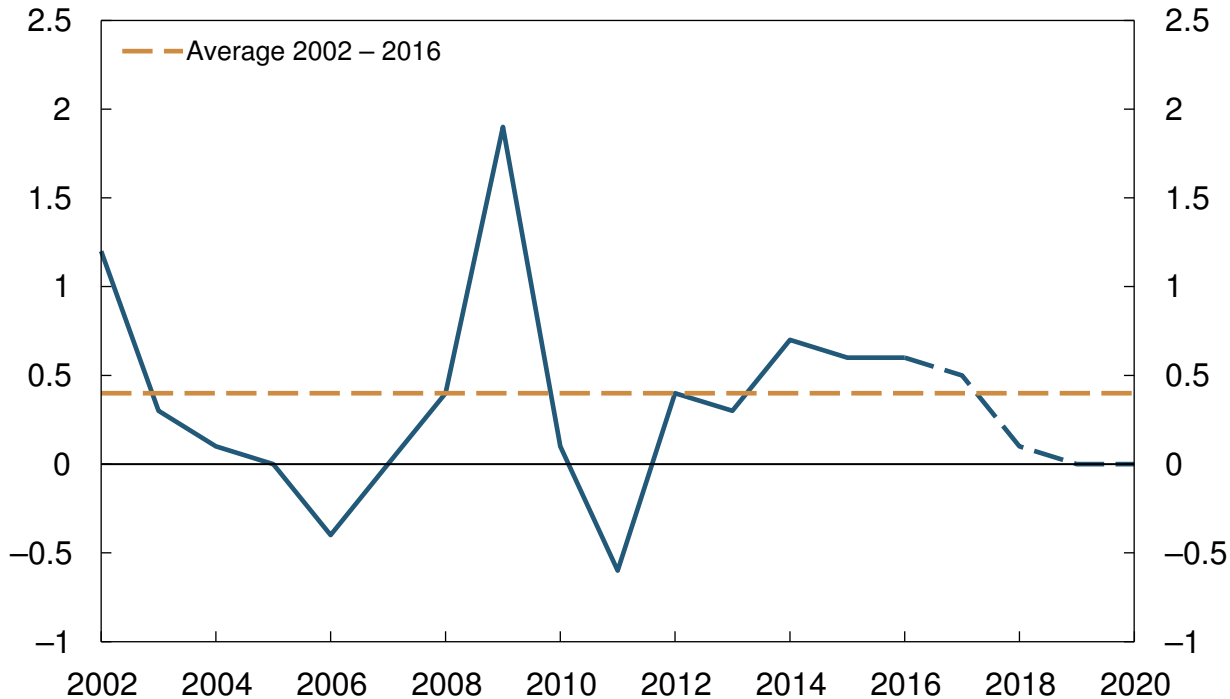
Chart 1.10 Petroleum investment. Annual percentage change. 2010 – 2020¹⁾



1) Projections for 2017 – 2020.

Sources: Statistics Norway and Norges Bank

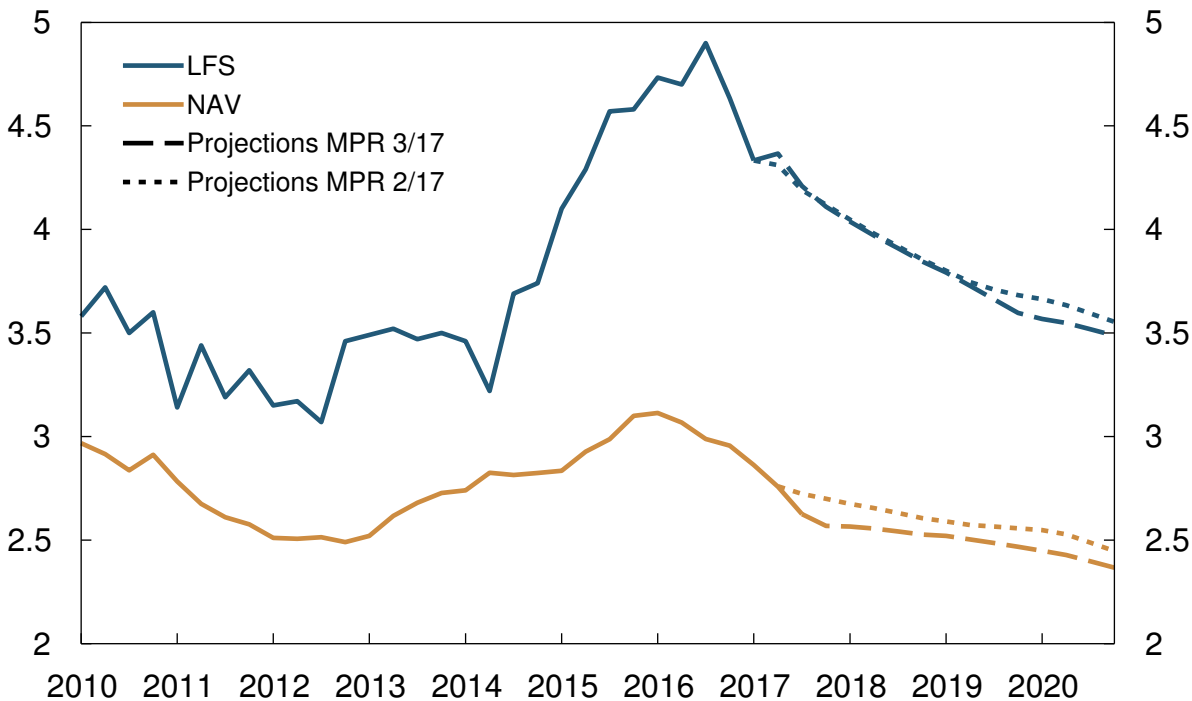
Chart 1.11 Change in structural non-oil deficit as a share of trend GDP for mainland Norway. Percentage points. 2002 – 2020¹⁾



1) Projections for 2017 – 2020 (broken blue line).

Sources: Ministry of Finance and Norges Bank

Chart 1.12 Unemployed as a share of the labour force. LFS¹⁾ and NAV²⁾.
Seasonally adjusted. Percent. 2010 Q1 – 2020 Q4³⁾



1) Labour Force Survey.

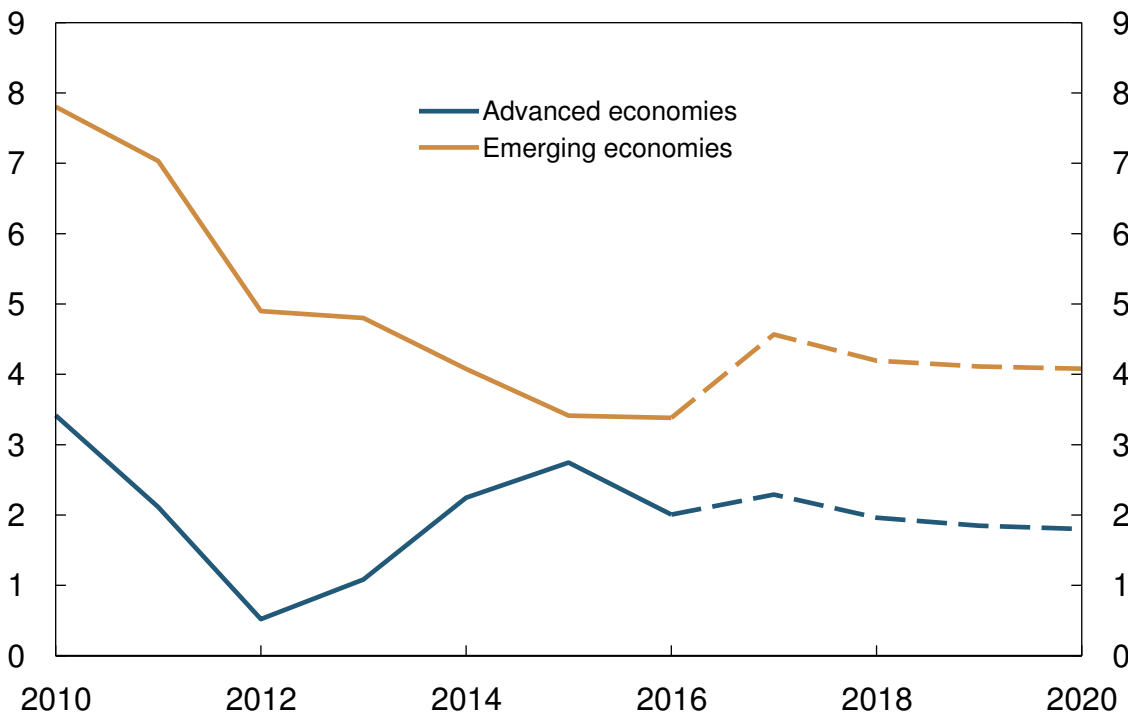
2) Registered unemployment.

3) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Norwegian Labour and Welfare Administration (NAV), Statistics Norway and Norges Bank

Chart 2.1 GDP for Norway's trading partners.¹⁾

Annual percentage change. 2010 – 2020²⁾

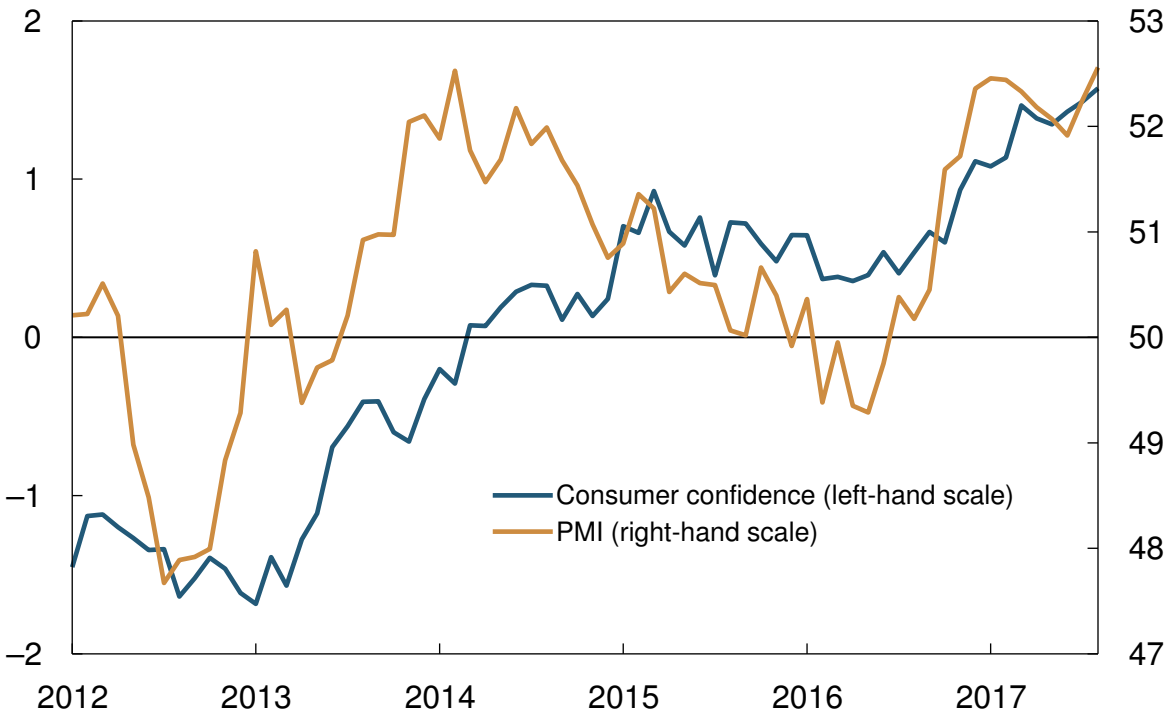


1) Export weights. 25 main trading partners.

2) Projections for 2017 – 2020 (broken lines).

Sources: Thomson Reuters and Norges Bank

Chart 2.2 Global confidence indicators. PMI¹⁾ and consumer confidence index²⁾.
Seasonally adjusted. January 2012 – August 2017

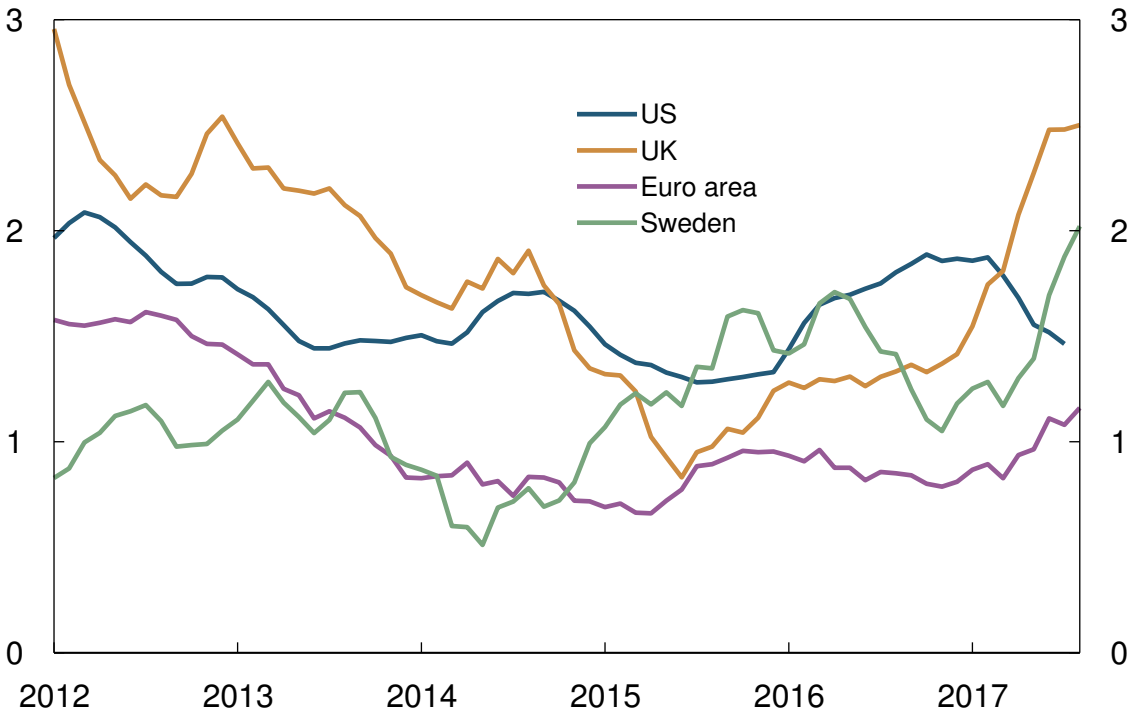


1) Manufacturing PMI. GDP-weighted index for Norway's trading partners.

2) GDP-weighted index of standardised consumer confidence indexes for the US, UK, euro area and Sweden.

Sources: Thomson Reuters and Norges Bank

Chart 2.3 Core CPI¹⁾ in selected countries. Twelve-month percentage change. Three-month moving average. January 2012 – August 2017²⁾



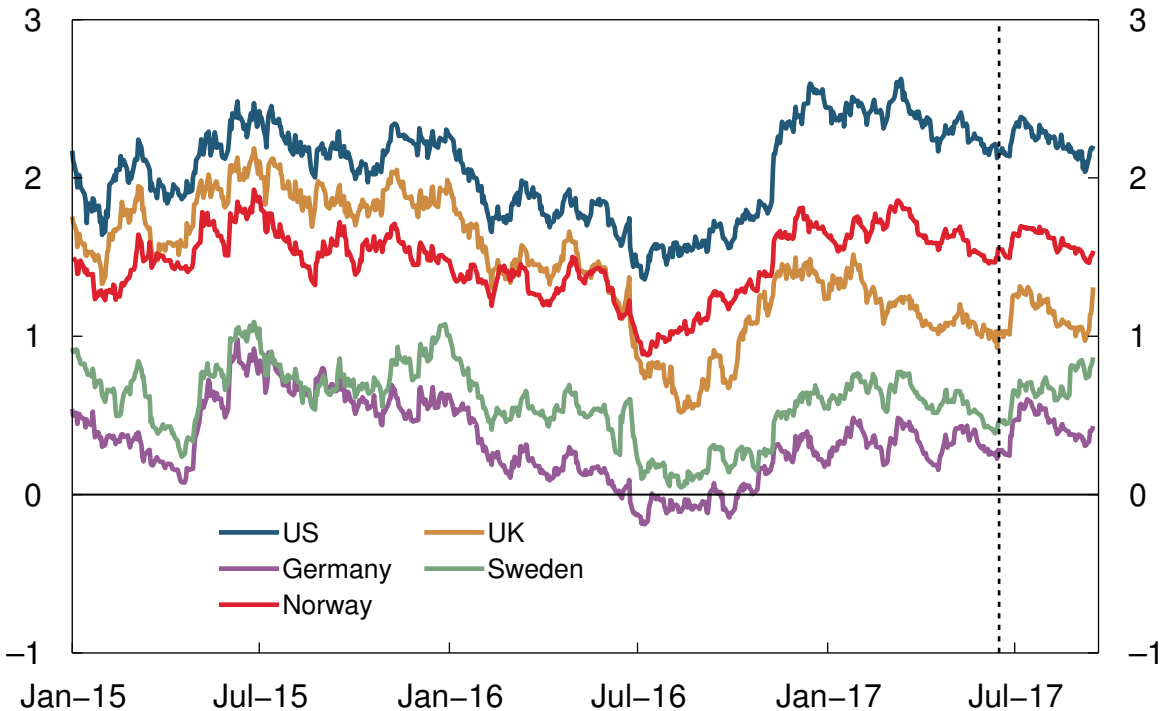
1) CPI excluding the most volatile components (mainly food and energy products).

2) The latest observation for the US is July 2017.

Source: Thomson Reuters

Chart 2.4 Yields on ten-year government bonds in selected countries.

Percent. 1 January 2015 – 15 September 2017¹⁾

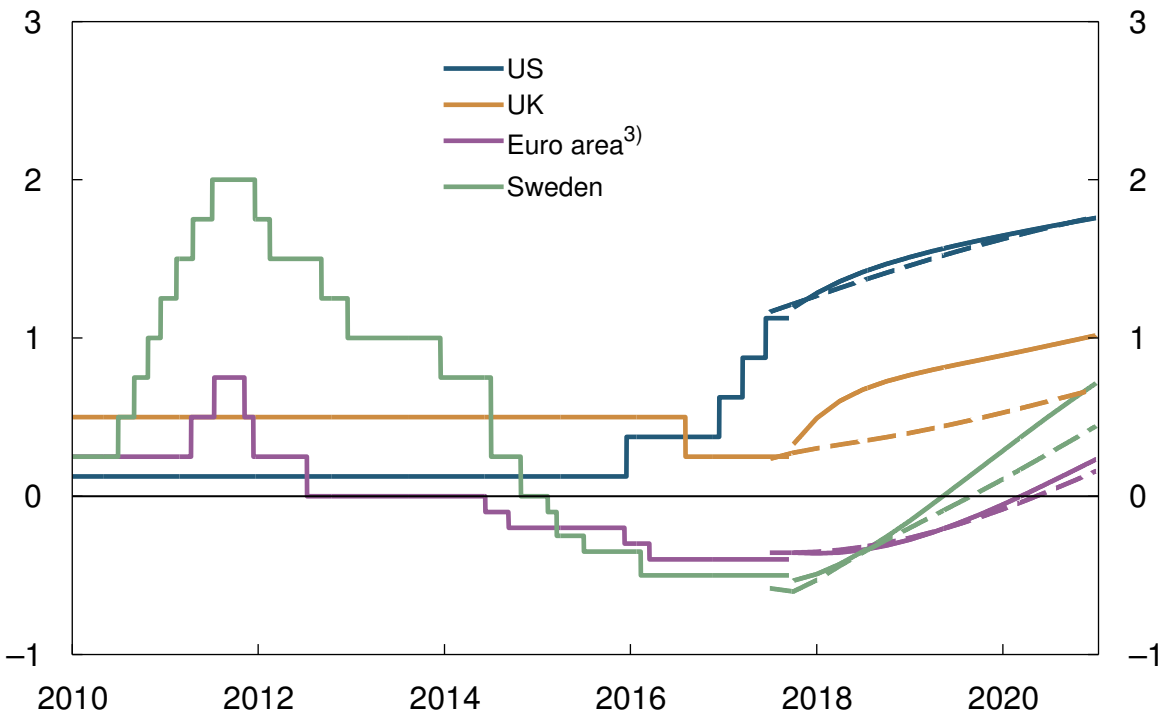


1) MPR 2/17 was based on information through 16 June 2017, indicated by the vertical line.

Source: Bloomberg

Chart 2.5 Policy rates and estimated forward rates¹⁾ in selected countries.

Percent. 1 January 2010 – 31 December 2020²⁾



1) Forward rates at 16 June 2017 (broken lines) and 15 September 2017 (solid lines).

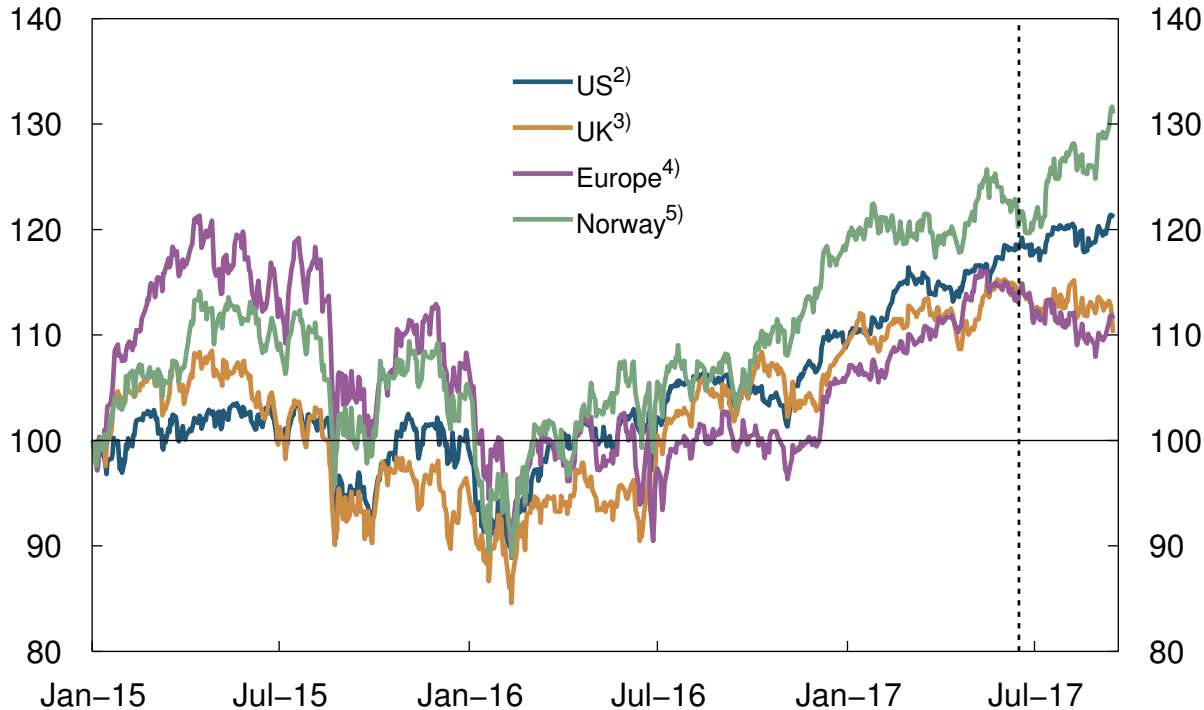
Forward rates are based on Overnight Index Swap (OIS) rates.

2) Daily data through 15 September 2017. Quarterly data from 2017 Q4.

3) ECB's deposit rate. Eonia from 2017 Q4.

Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 2.6 Equity price indexes in selected countries. 2 January 2015 = 100.
2 January 2015 – 15 September 2017¹⁾



1) MPR 2/17 was based on information through 16 June 2017, indicated by the vertical line.

2) Standard and Poor's 500 Index.

3) Financial Times Stock Exchange 100 Index.

4) Stoxx Europe 600 Index.

5) OSE Benchmark Index.

Source: Bloomberg

Chart 2.7 Investment in the US.

Quarterly percentage change. Seasonally adjusted. 2012 Q1 – 2017 Q2

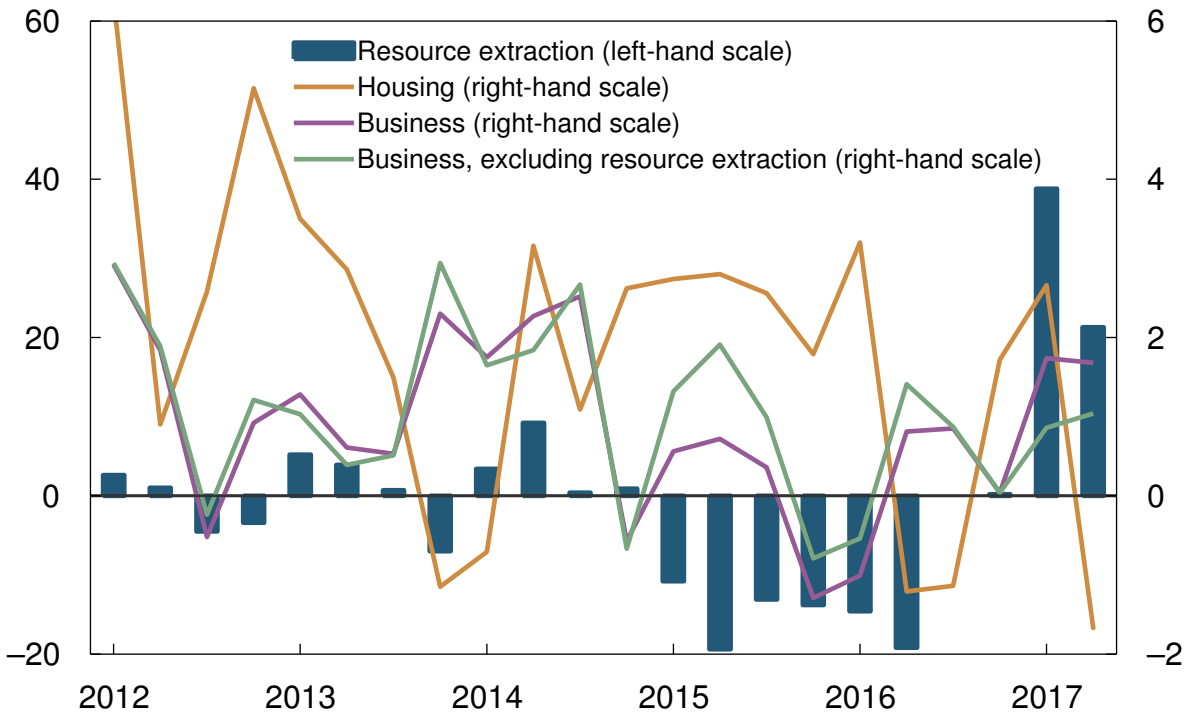
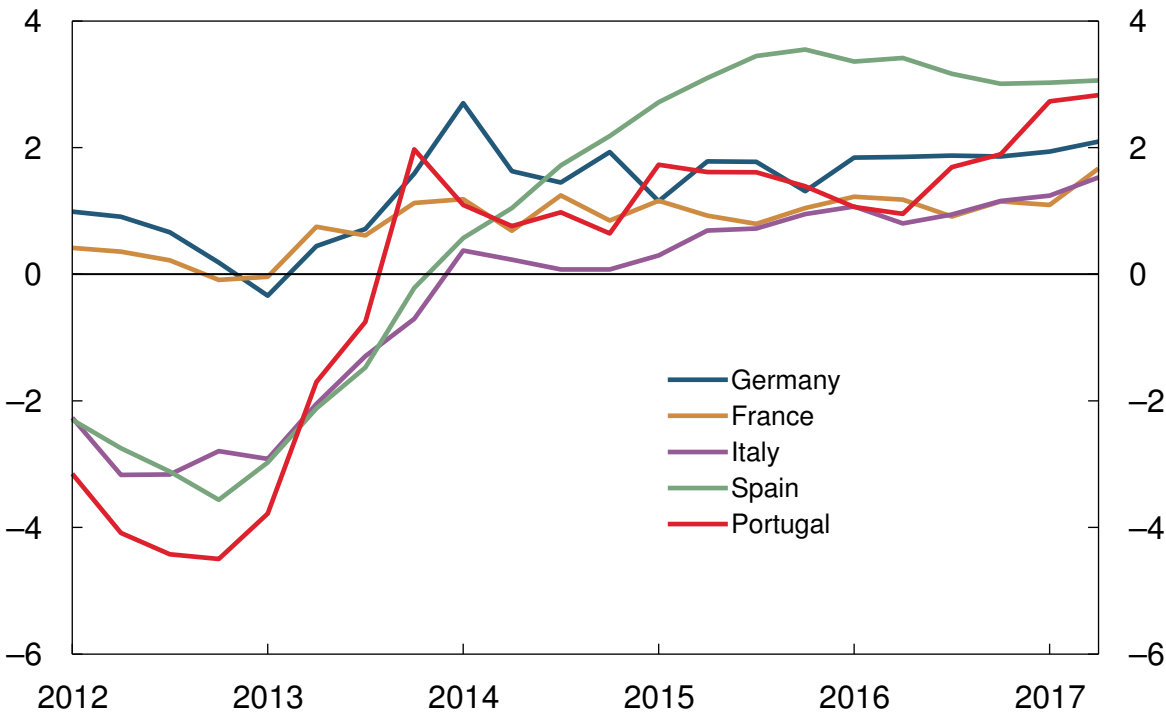
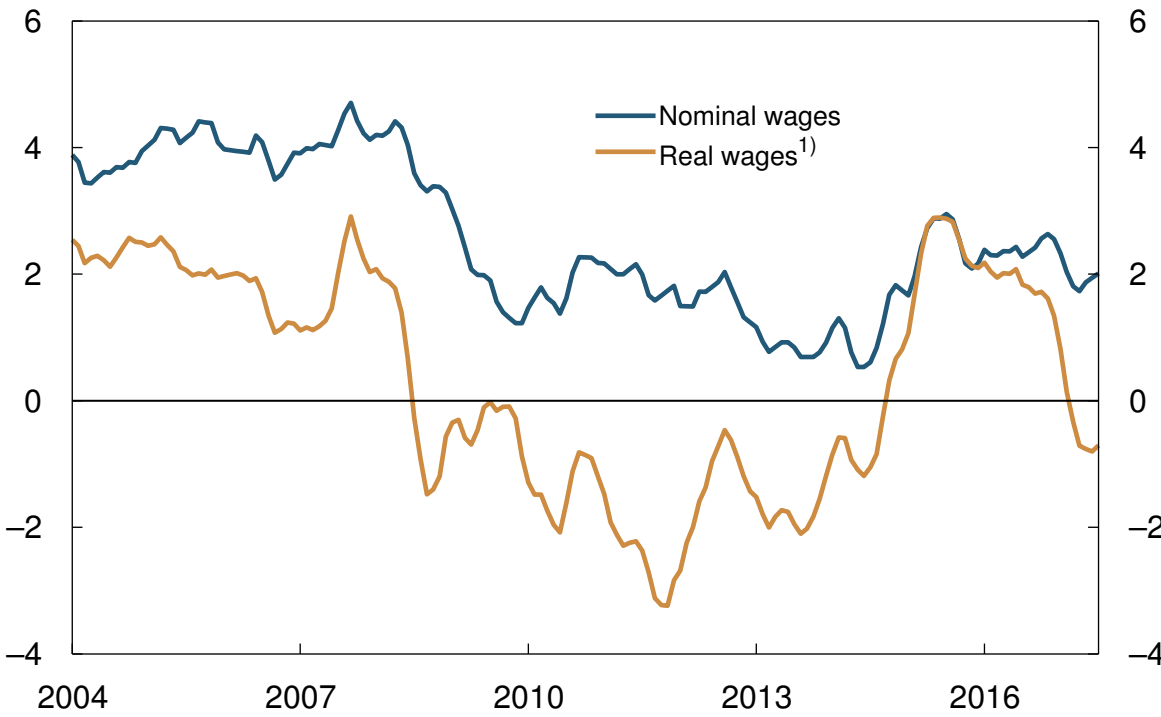


Chart 2.8 GDP for selected countries in the euro area.
Four-quarter percentage change. 2012 Q1 – 2017 Q2



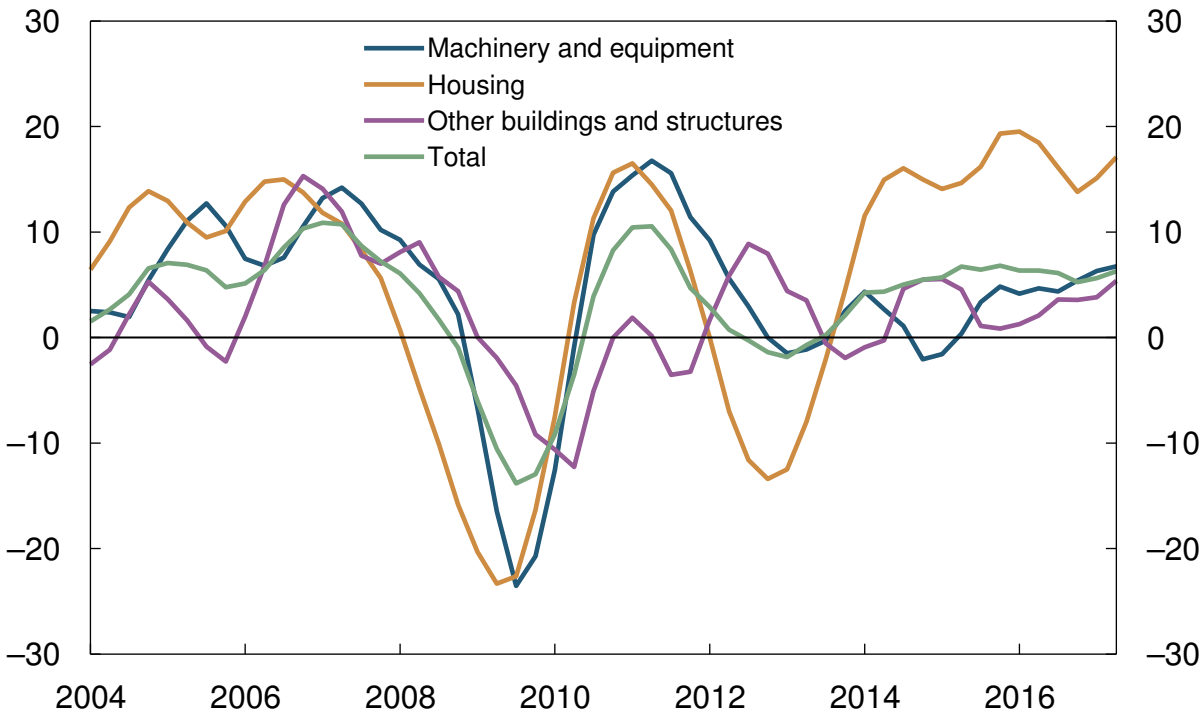
Source: Thomson Reuters

Chart 2.9 Wage growth in the UK. Twelve-month percentage change.
Three-month moving average. January 2004 – July 2017



1) Nominal wage growth deflated by the consumer price inflation.

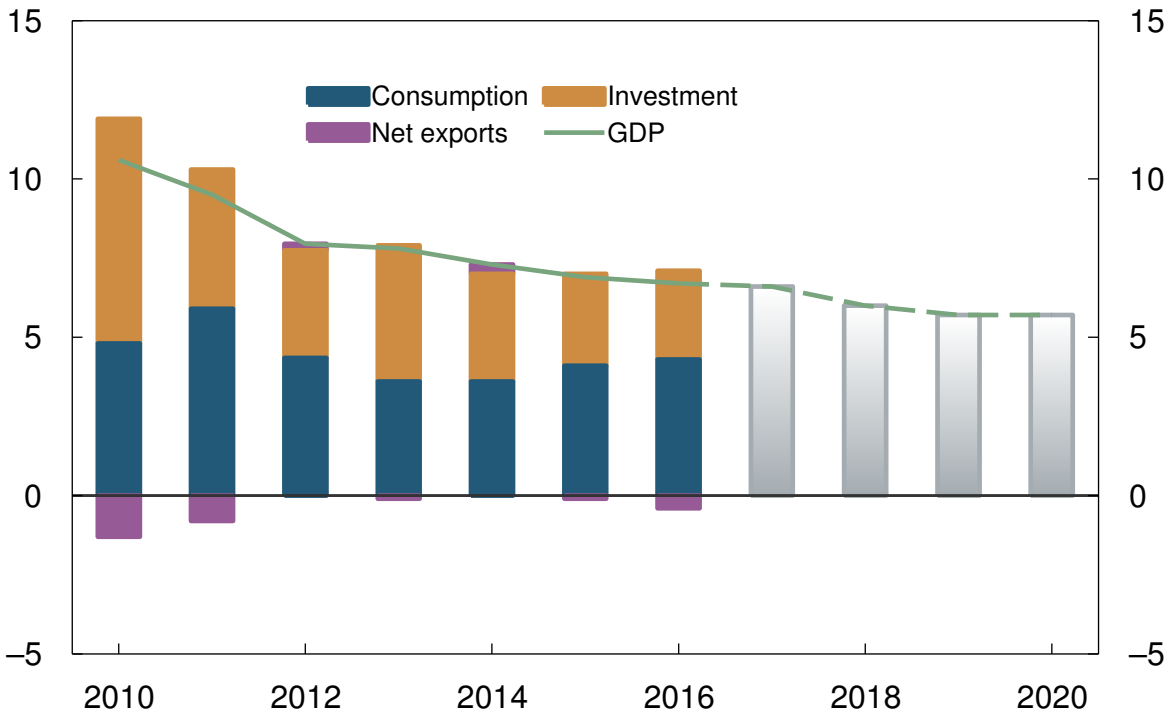
Chart 2.10 Investment in Sweden. Four-quarter percentage change.
Three-quarter moving average. 2004 Q1 – 2017 Q2



Source: Statistics Sweden

Chart 2.11 GDP in China. Annual percentage change.

Contributions from demand components. Percentage points. 2010 – 2020¹⁾

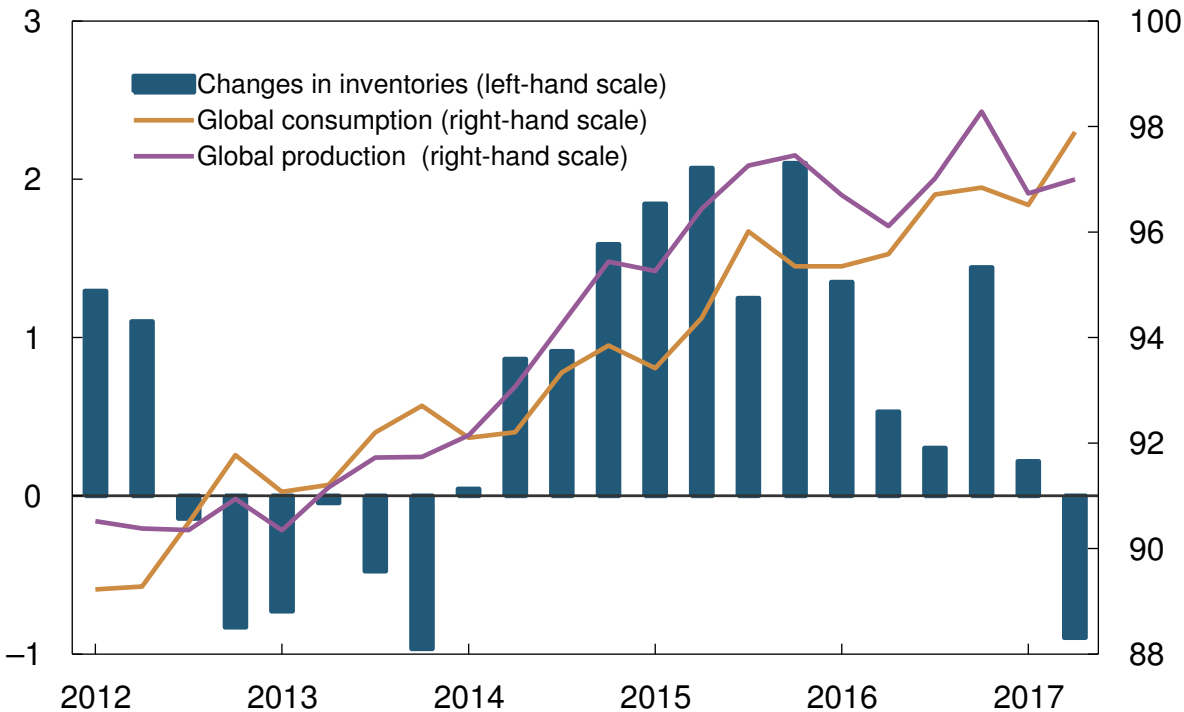


1) Projections for 2017 – 2020 (broken line and shaded bars).

Sources: Thomson Reuters and Norges Bank

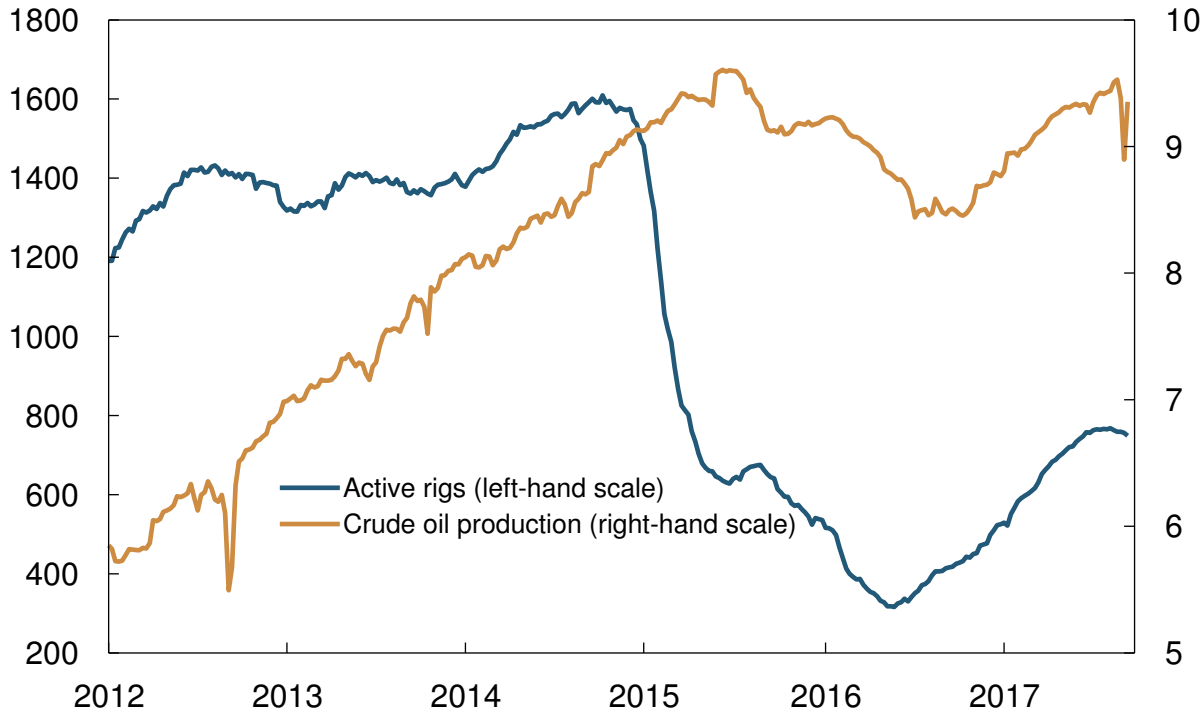
Chart 2.12 Balance in the global oil market. In millions of barrels per day.

2012 Q1 – 2017 Q2



Source: IEA

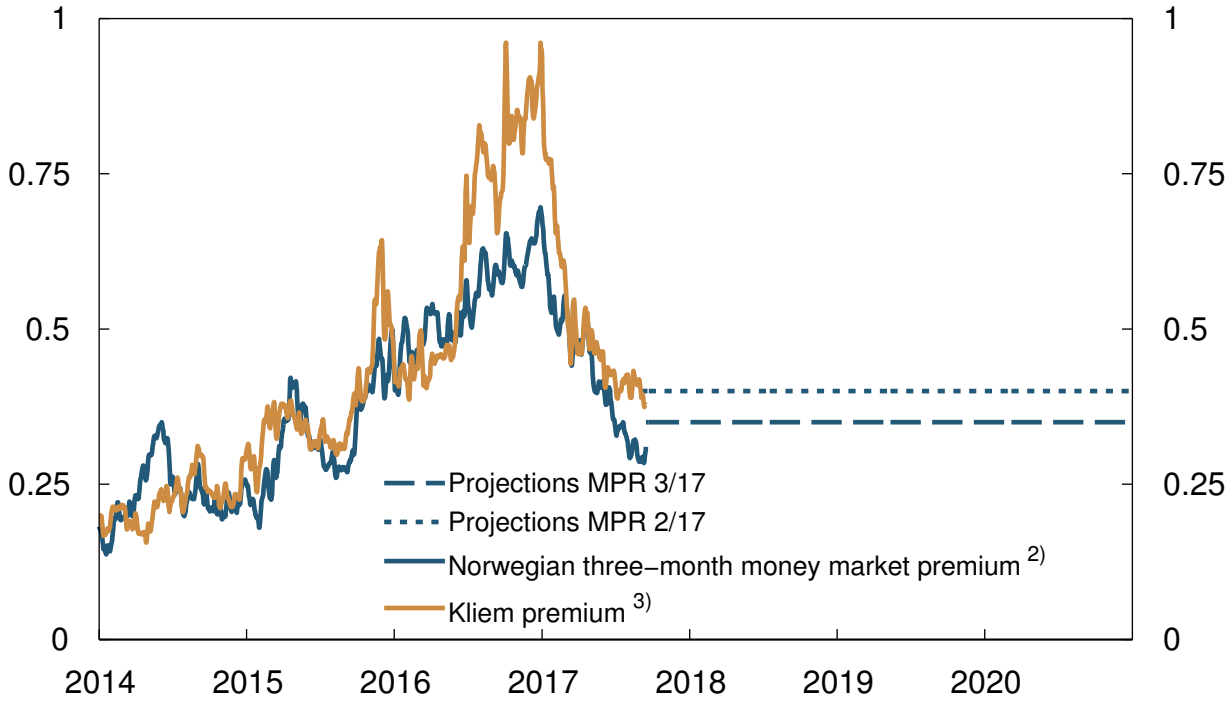
Chart 2.13 Active rigs and crude oil production in the US.¹⁾
Production. In millions of barrels per day. Week 1 2012 – week 37 2017



1) The main reason for the abrupt change in crude oil production over the last two weeks is Hurricane Harvey.

Chart 3.1 Three-month money market premium. Percentage points.

Five-day moving average. 1 January 2014 – 31 December 2020¹⁾



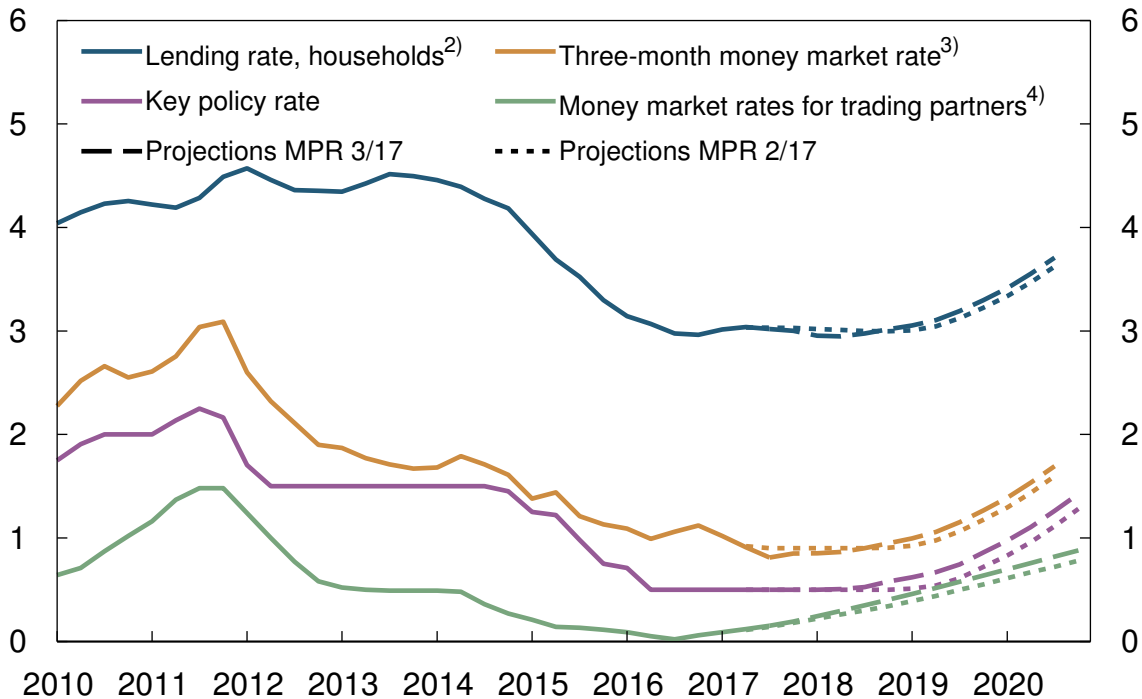
1) Projections for 2017 Q3 – 2020 Q4 (broken lines).

2) Norges Bank estimates of the difference between the three-month money market rate and the expected key policy rate.

3) The Kliem premium is intended to reflect European banks' cost of USD interbank borrowing. In practice, the Kliem rate is the European money market rate, Euribor, swapped into USD.

Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 3.2 Interest rates. Percent. 2010 Q1 – 2020 Q4¹⁾



1) Projections for 2017 Q3 – 2020 Q4 (broken lines).

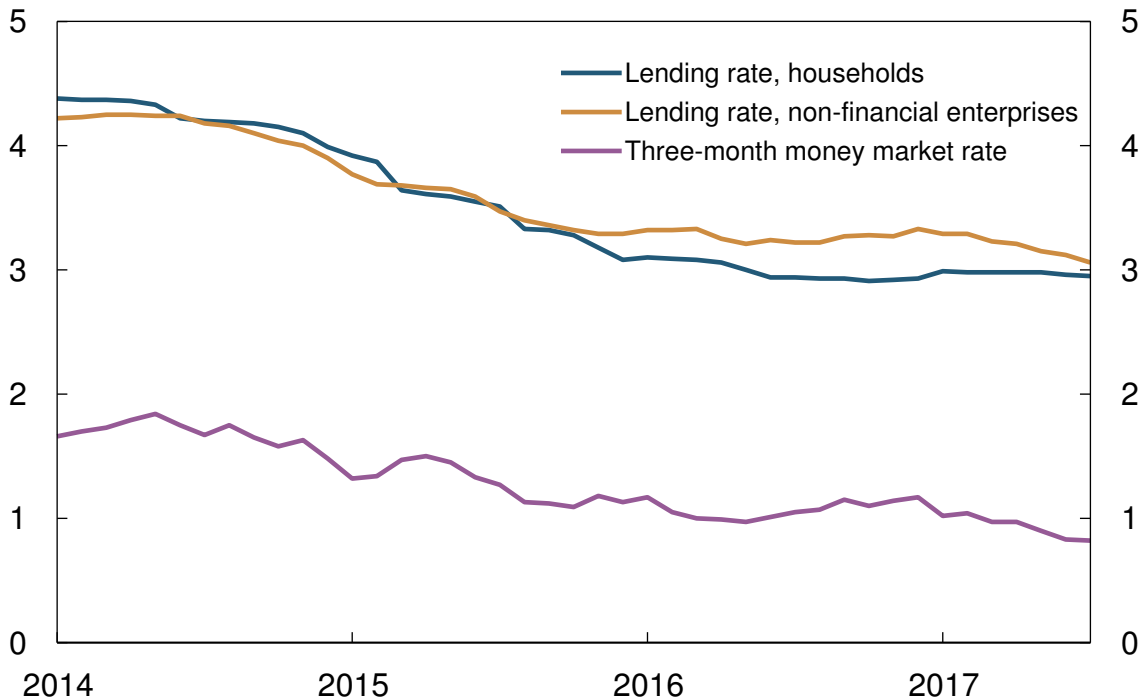
2) Average interest rate on all loans to households from banks and mortgage companies.

3) Key policy rate plus Norwegian money market premium. The calculations are based on the assumption that the key policy rate forecast is priced into the money market.

4) Based on money market rates and interest rate swaps. The aggregate for trading partner three-month interest rates is described in *Norges Bank Memo 2/2015*.

Sources: Statistics Norway, Thomson Reuters and Norges Bank

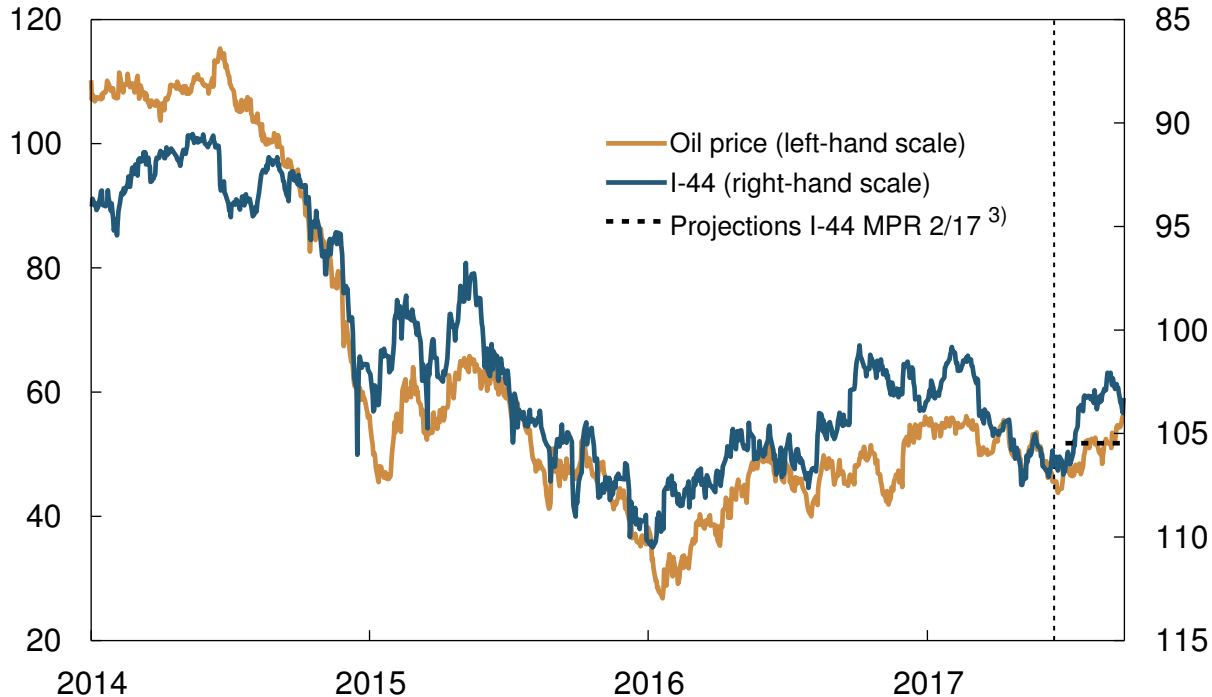
Chart 3.3 Money market rates and lending rates for households and non-financial enterprises.¹⁾ Percent. January 2014 – July 2017



1) Average interest rate on all loans to households and non-financial enterprises from banks and mortgage companies. Fifty largest banks and mortgage companies. Sources: Statistics Norway and Norges Bank

Chart 3.4 Oil price¹⁾ and import-weighted exchange rate index (I-44)²⁾.

1 January 2014 – 15 September 2017



1) Brent Blend. USD/barrel.

2) A positive slope denotes a stronger krone exchange rate.

3) MPR 2/17 was based on information through 16 June 2017, indicated by the vertical line.

Sources: Thomson Reuters and Norges Bank

Chart 3.5 Output percentage change as reported by regional network. Annualised

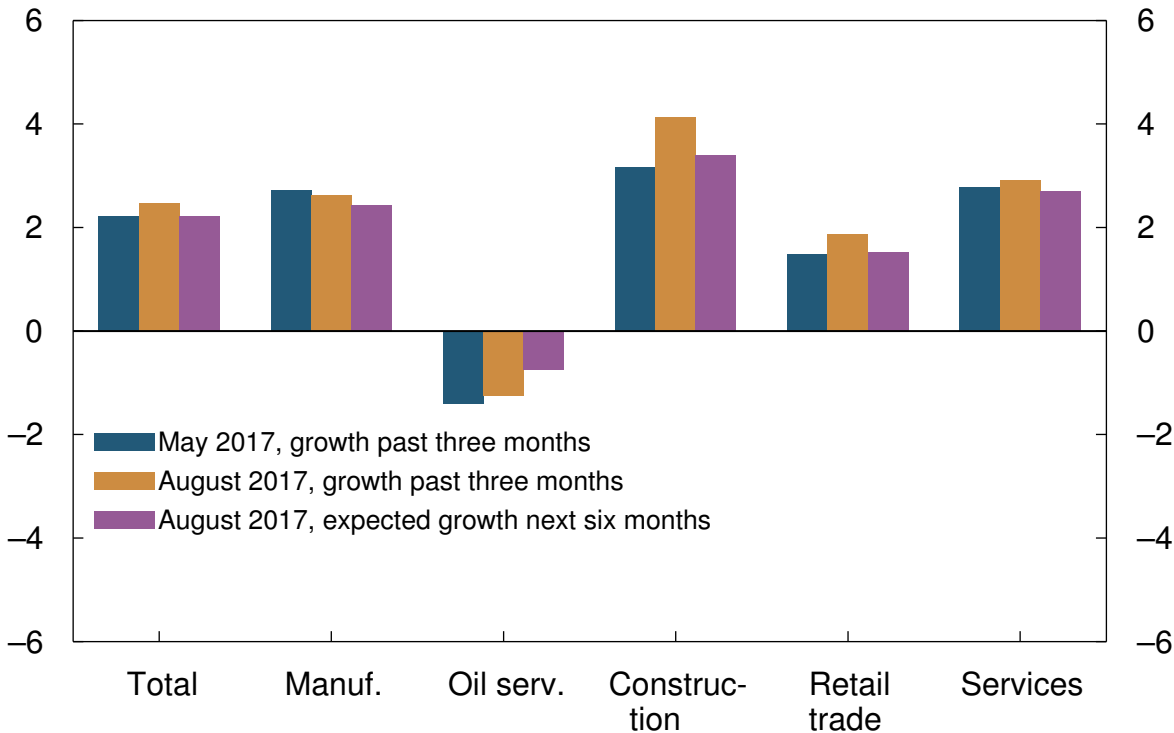
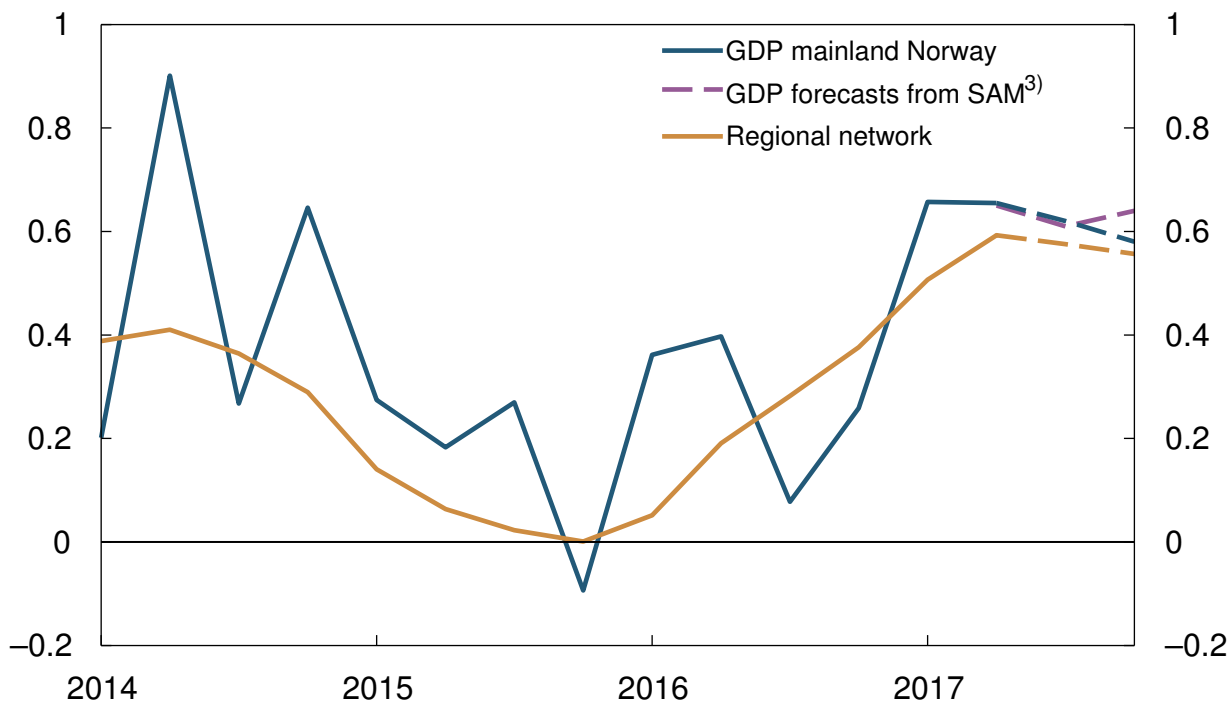


Chart 3.6 GDP for mainland Norway and regional network's indicator of output growth¹⁾. Quarterly percentage change. 2014 Q1 – 2017 Q4²⁾



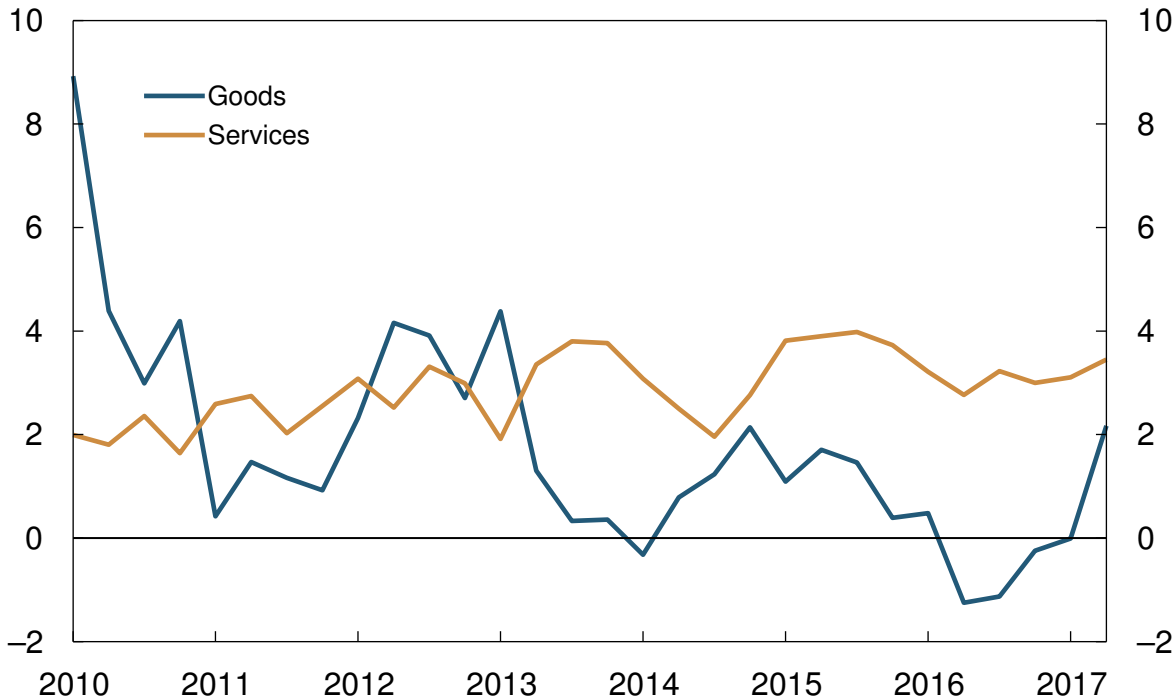
1) Reported output growth past three months converted to quarterly figures (solid line). The quarterly figures are calculated by weighting together three-monthly figures based on when the survey was carried out. For 2017 Q3 expected output growth is estimated by weighting together reported growth over the past three months and expected growth in the next six months. 2017 Q4 is expected growth in the next six months as reported in August (broken orange line).

2) Projections for 2017 Q3 – 2017 Q4 (broken lines).

3) System for Averaging short-term Models.

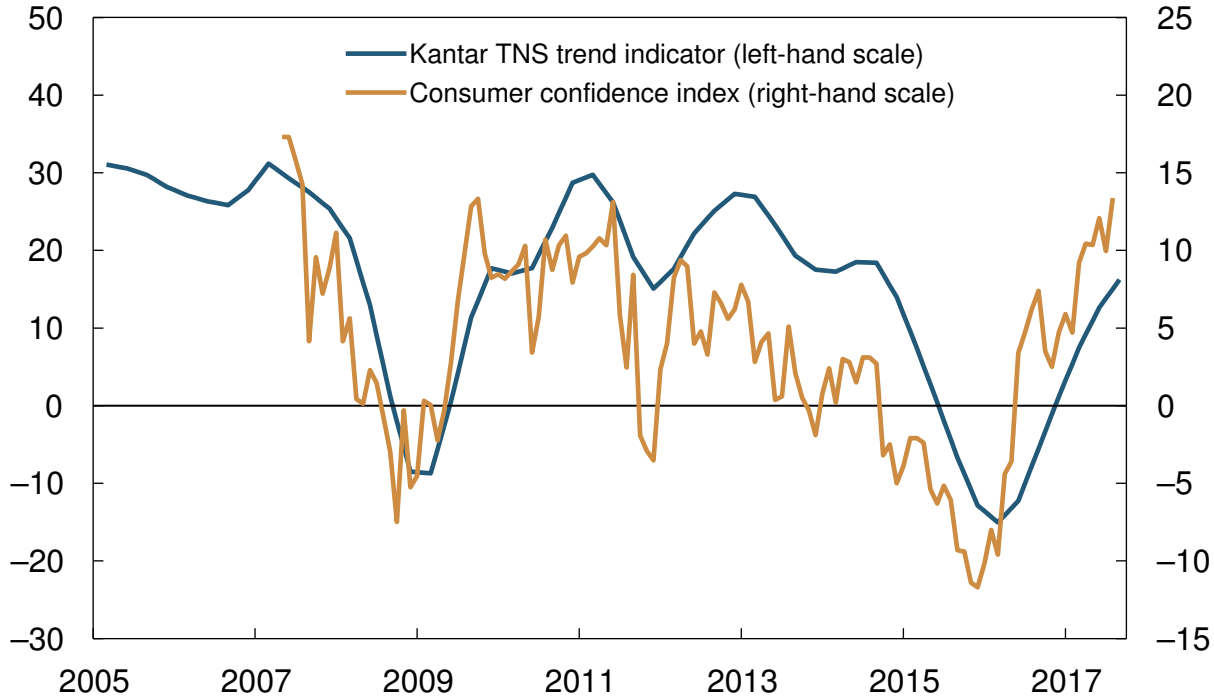
Sources: Statistics Norway and Norges Bank

Chart 3.7 Household consumption of goods and services.
Four-quarter percentage change. Seasonally adjusted. 2010 Q1 – 2017 Q2



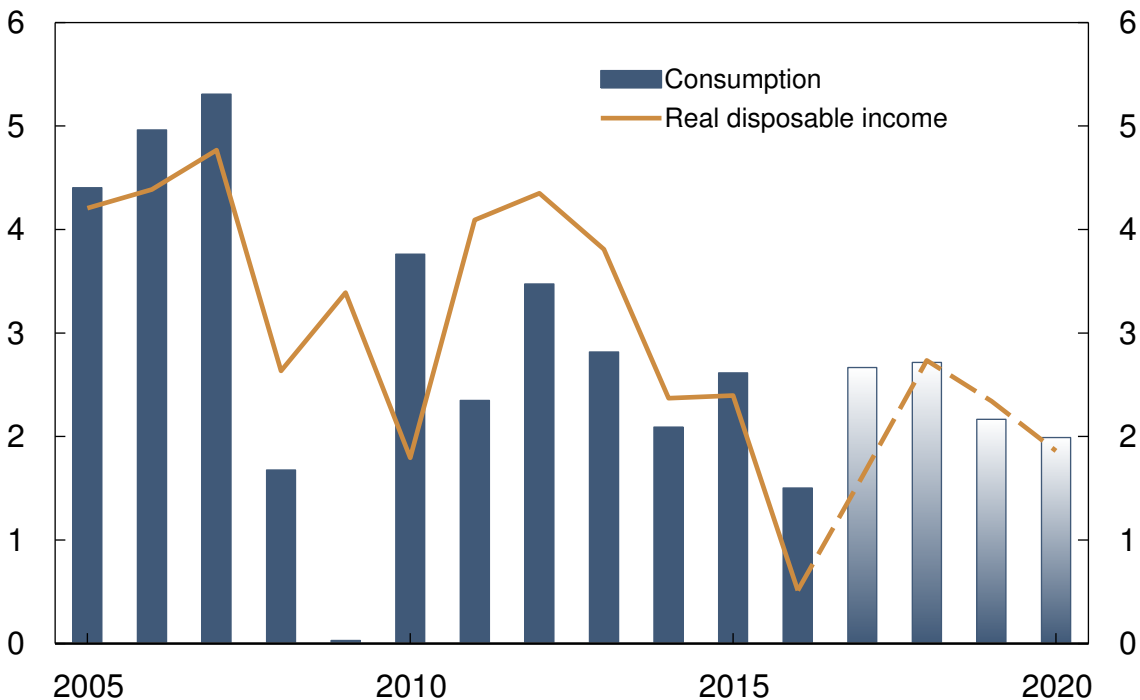
Source: Statistics Norway

Chart 3.8 Consumer confidence. Net values. Kantar TNS trend indicator for households. 2005 Q1 – 2017 Q3. Opinion consumer confidence index (CCI). May 2005 – August 2017



Sources: Kantar TNS and Opinion

Chart 3.9 Household consumption¹⁾ and real disposable income²⁾.
Annual percentage change. 2005 – 2020³⁾



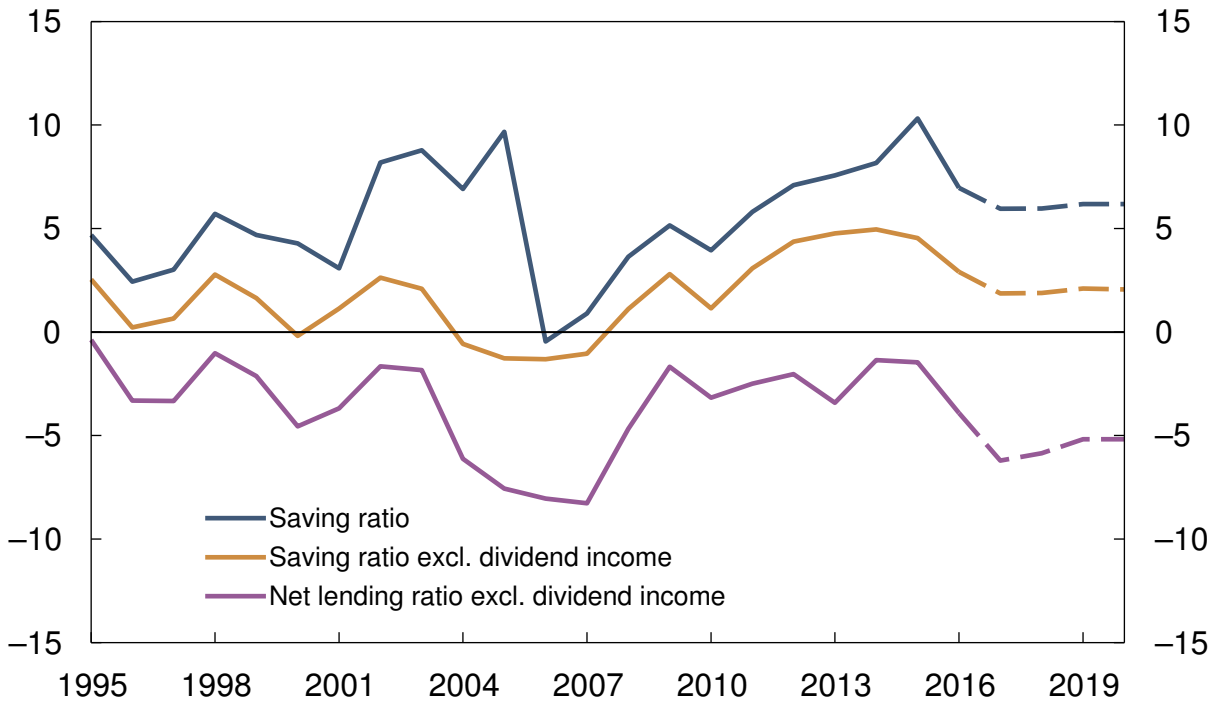
1) Includes consumption for non-profit organisations.

2) Excluding dividend income. Including income for non-profit organisations. Deflated by the CPI.

3) Projections for 2017 – 2020 (broken line and shaded bars).

Sources: Statistics Norway and Norges Bank

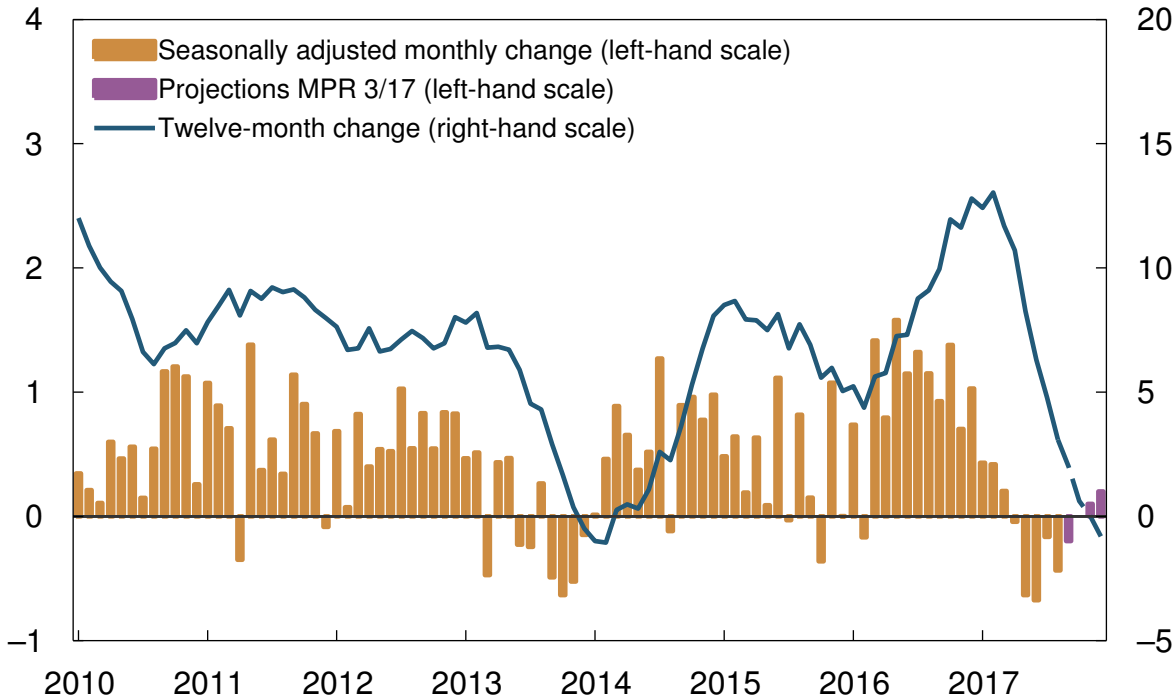
Chart 3.10 Household saving and net lending as a share of disposable income. Percent. 1995 – 2020¹⁾



1) Projections for 2017 – 2020 (broken lines).

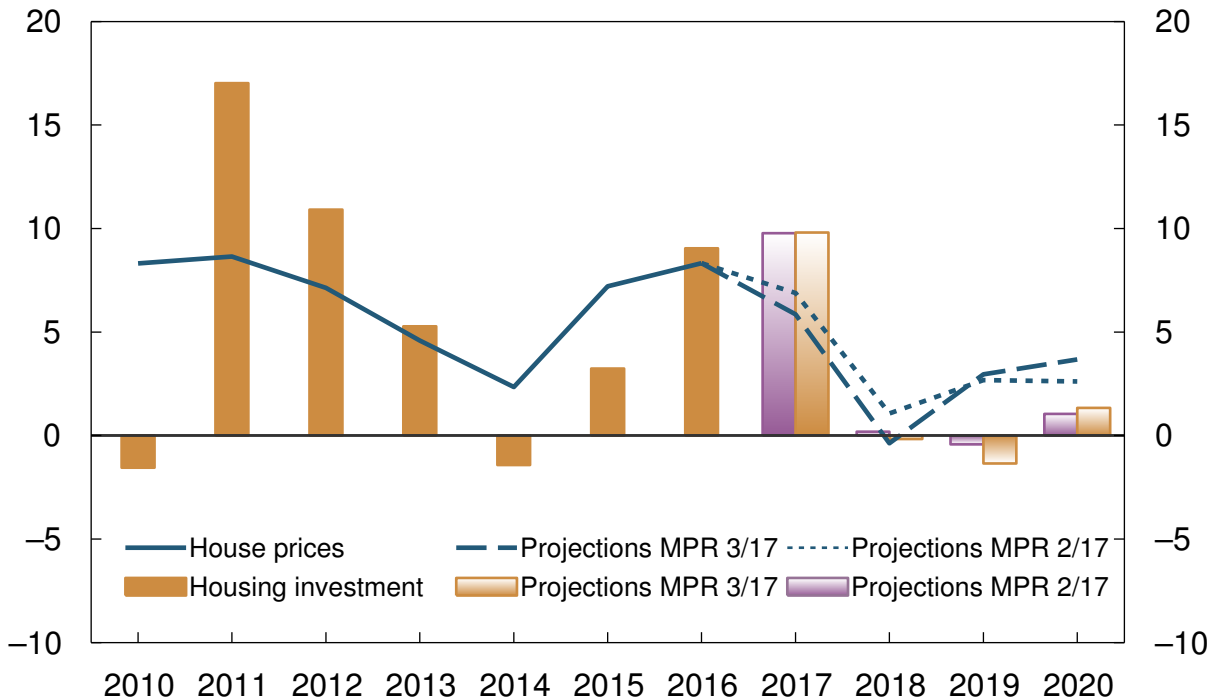
Sources: Statistics Norway and Norges Bank

Chart 3.11 House prices. Twelve-month percentage change and seasonally adjusted monthly percentage change. January 2010 – December 2017 ¹⁾



1) Projections for September 2017 – December 2017.
Sources: Eiendomsverdi, Finn.no, Real Estate Norway and Norges Bank

Chart 3.12 Housing investment and house prices. Annual percentage change. 2010 – 2020 ¹⁾

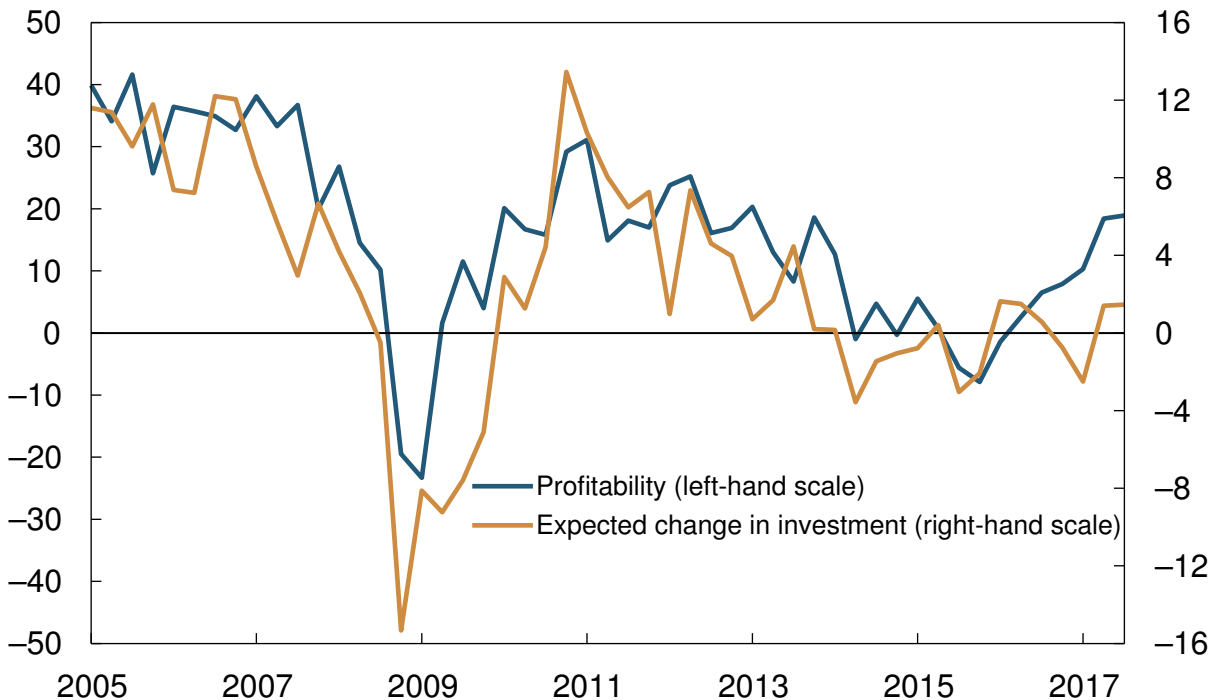


1) Projections for 2017 – 2020 (broken lines and shaded bars).

Sources: Eiendomsverdi, Finn.no, Real Estate Norway, Statistics Norway and Norges Bank

Chart 3.13 Expected profitability¹⁾ and investment²⁾ next 12 months.

2005 Q1 – 2017 Q3



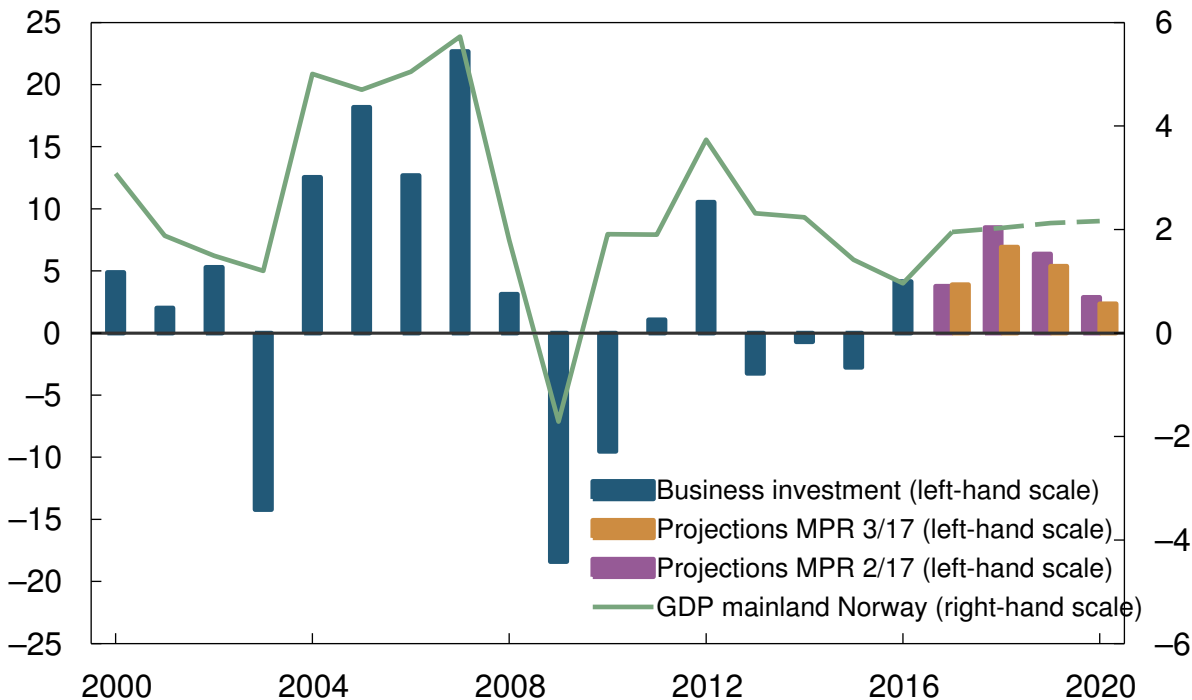
1) Norges Bank's expectations survey. Difference between the share expecting "improved profitability" and the share expecting "reduced profitability".

2) Norges Bank's regional network. Percentage change. Weighted average of manufacturing, oil service, retail trade and services.

Sources: Epinion and Norges Bank

Chart 3.14 Business investment and GDP. Annual percentage change.

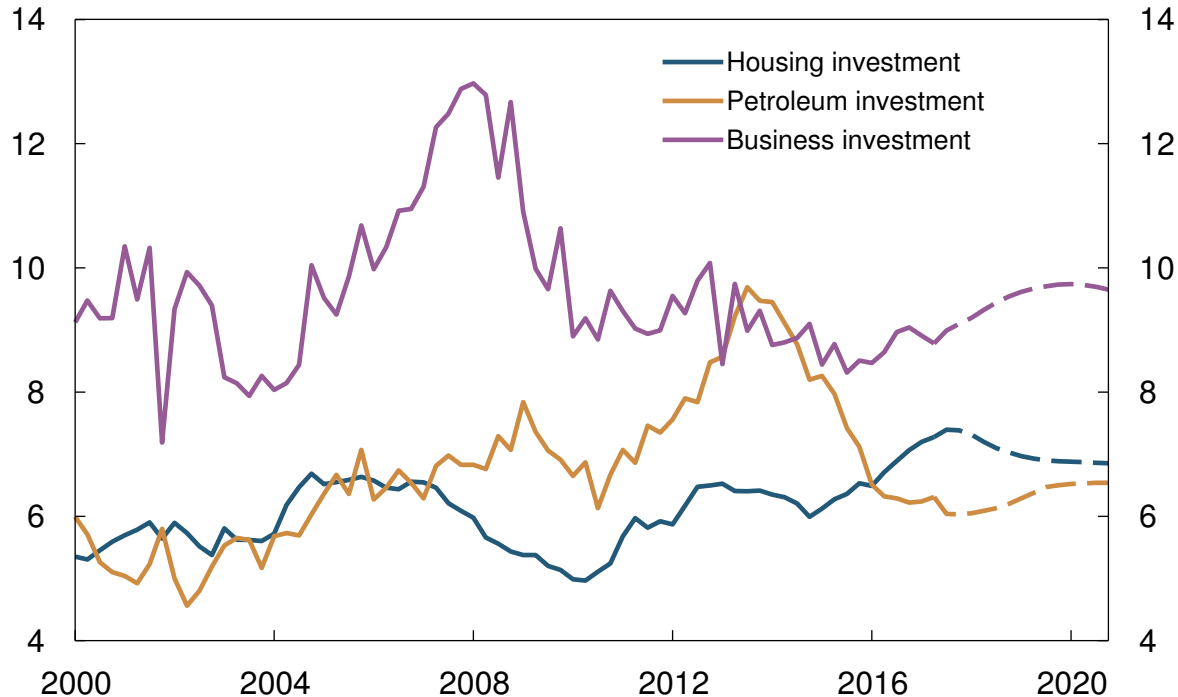
2000 – 2020¹⁾



1) Projections for 2017 – 2020.

Sources: Statistics Norway and Norges Bank

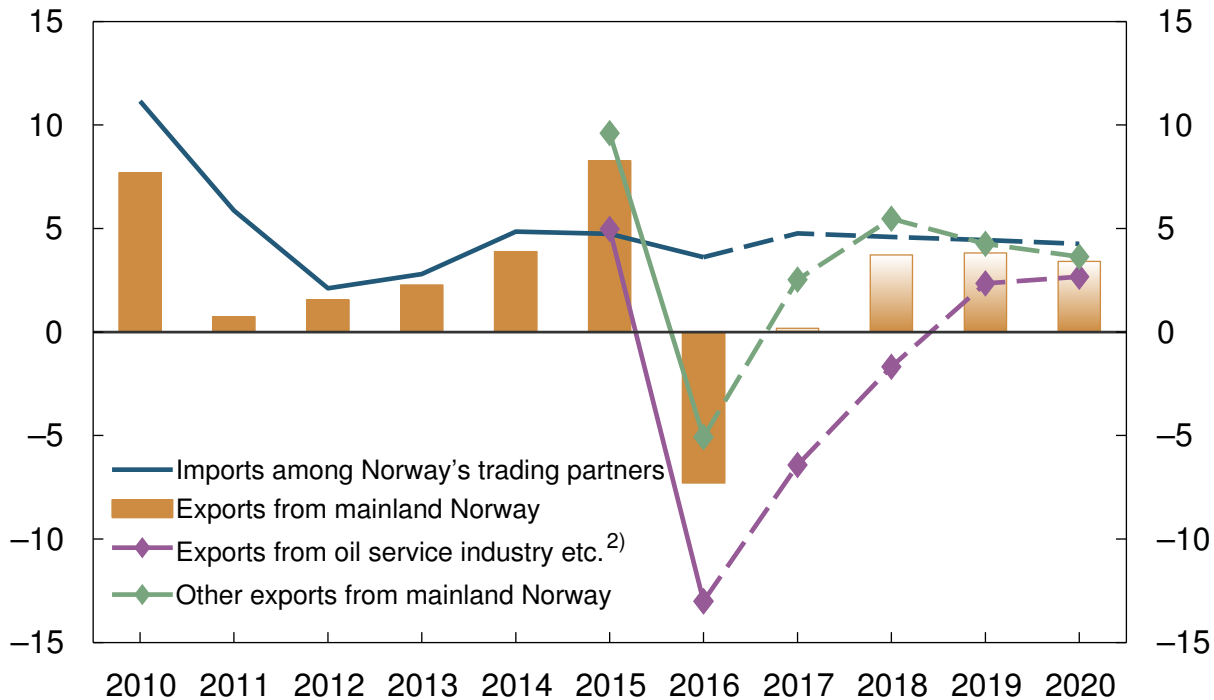
Chart 3.15 Housing, petroleum and business investment as a share of GDP for mainland Norway. Seasonally adjusted. Percent. 2000 Q1 – 2020 Q4 ¹⁾



1) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 3.16 Exports from mainland Norway and imports among Norway's trading partners. Annual percentage change. 2010 – 2020¹⁾

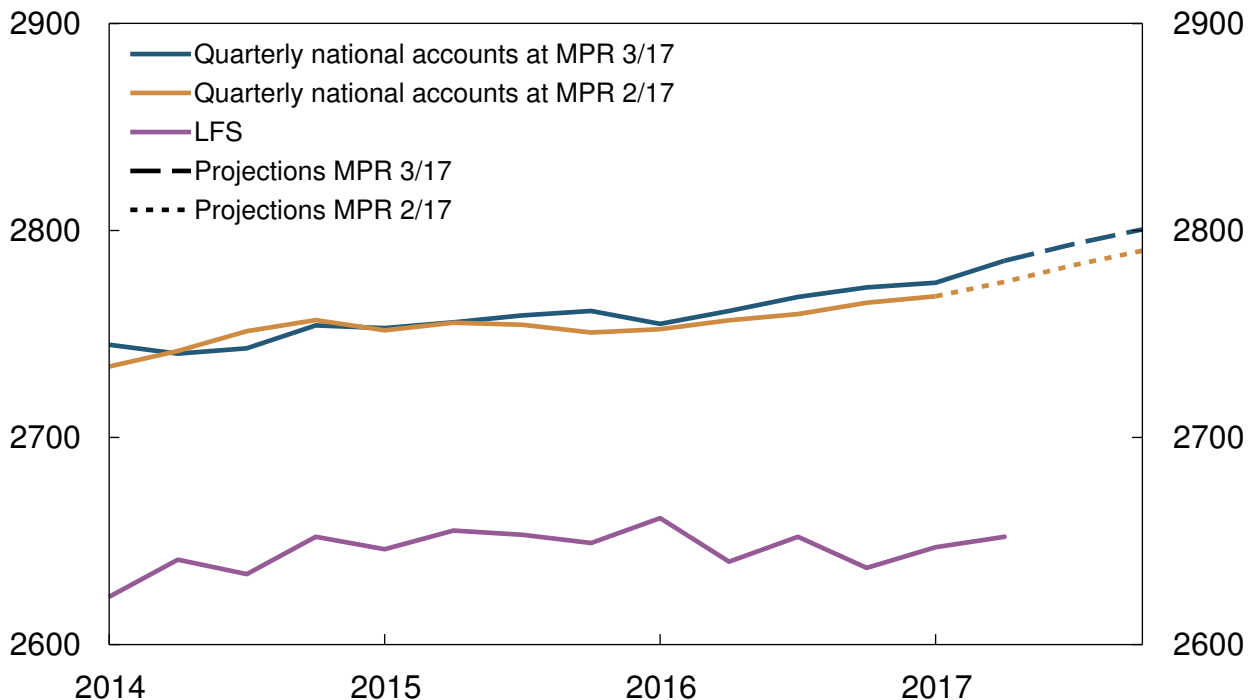


1) Projections for 2017 – 2020 (broken lines and shaded bars).

2) Groups of goods and services in the national accounts where the oil service industry accounts for a considerable share of exports.

Sources: Statistics Norway, Thomson Reuters and Norges Bank

Chart 3.17 Employment in the QNA and the LFS.¹⁾
 Seasonally adjusted. In thousands. 2014 Q1 – 2017 Q4²⁾

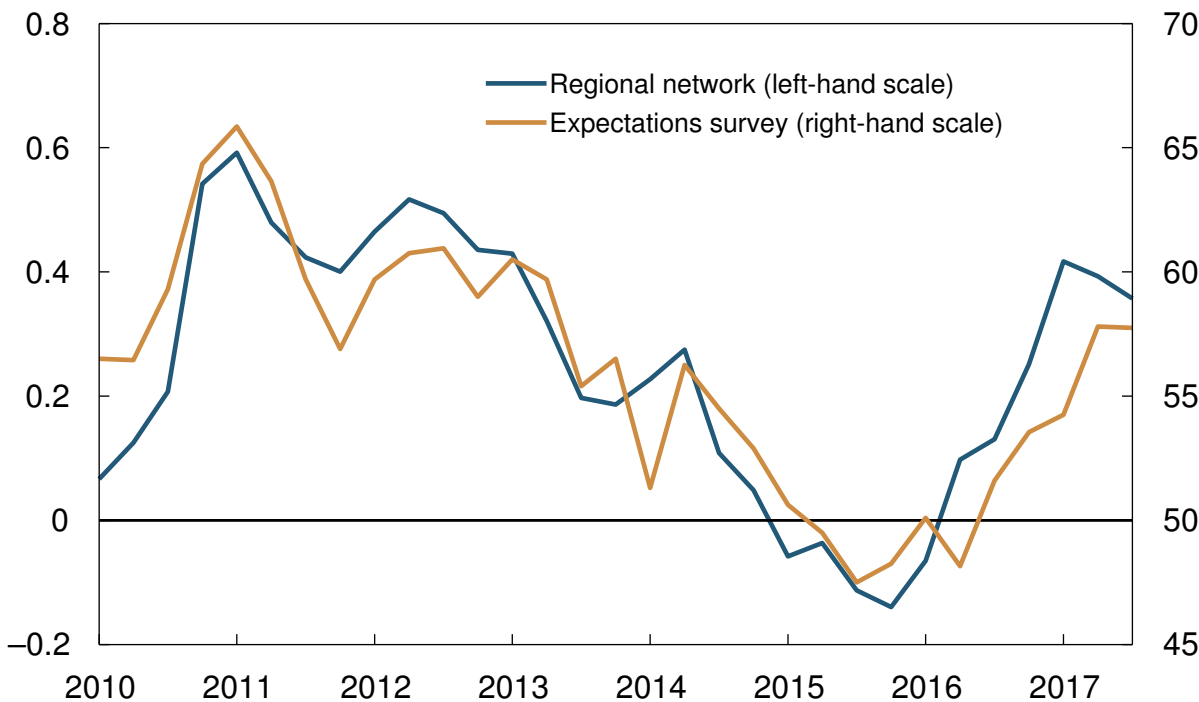


1) The QNA (quarterly national accounts) and the LFS (Labour Force Survey) normally show different levels of employment. This is because the LFS only counts permanent residents, while the national accounts also include temporary residents.

2) Projections from 2017 Q3 – 2017 Q4

Sources: Statistics Norway and Norges Bank

Chart 3.18 Expected change in employment. Regional network.¹⁾ Quarterly percentage change. Norges Bank's expectations survey. Diffusion index.²⁾ 2010 Q1 – 2017 Q3

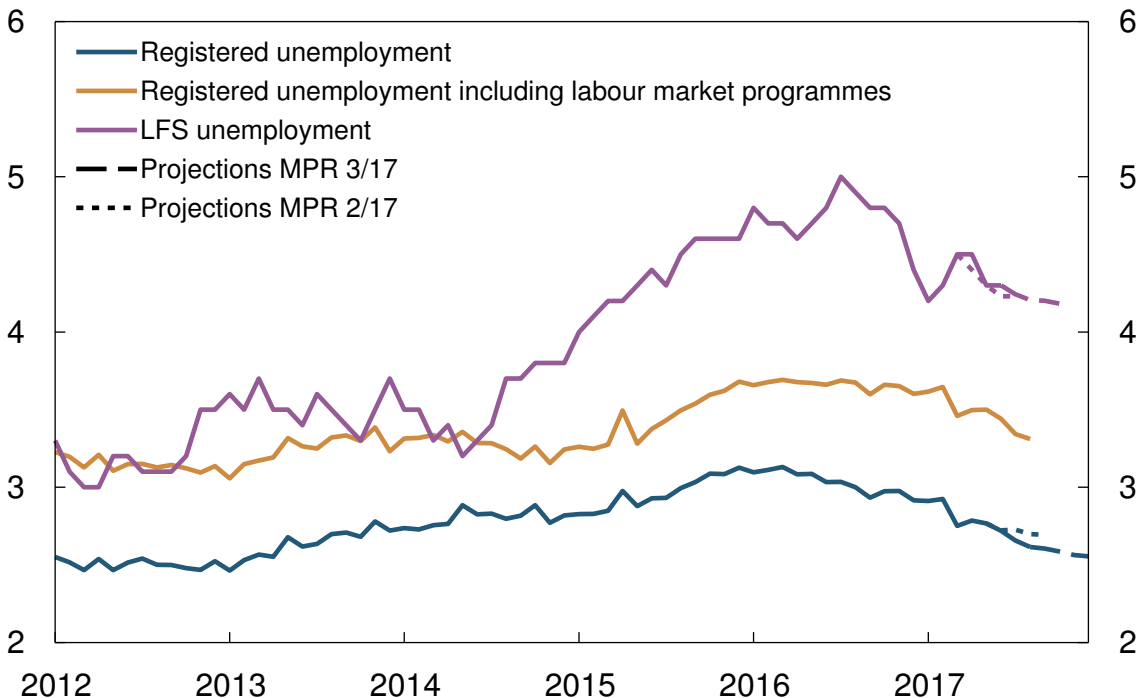


1) Expected change in employment next three months.

2) Share of business leaders expecting "more employees" in their own firm in the following 12 months + (1/2 * share expecting "unchanged number of employees").

Sources: Epinion and Norges Bank

Chart 3.19 Unemployed as a share of the labour force. LFS¹⁾ and NAV²⁾.
 Seasonally adjusted. Percent. January 2012 – December 2017³⁾



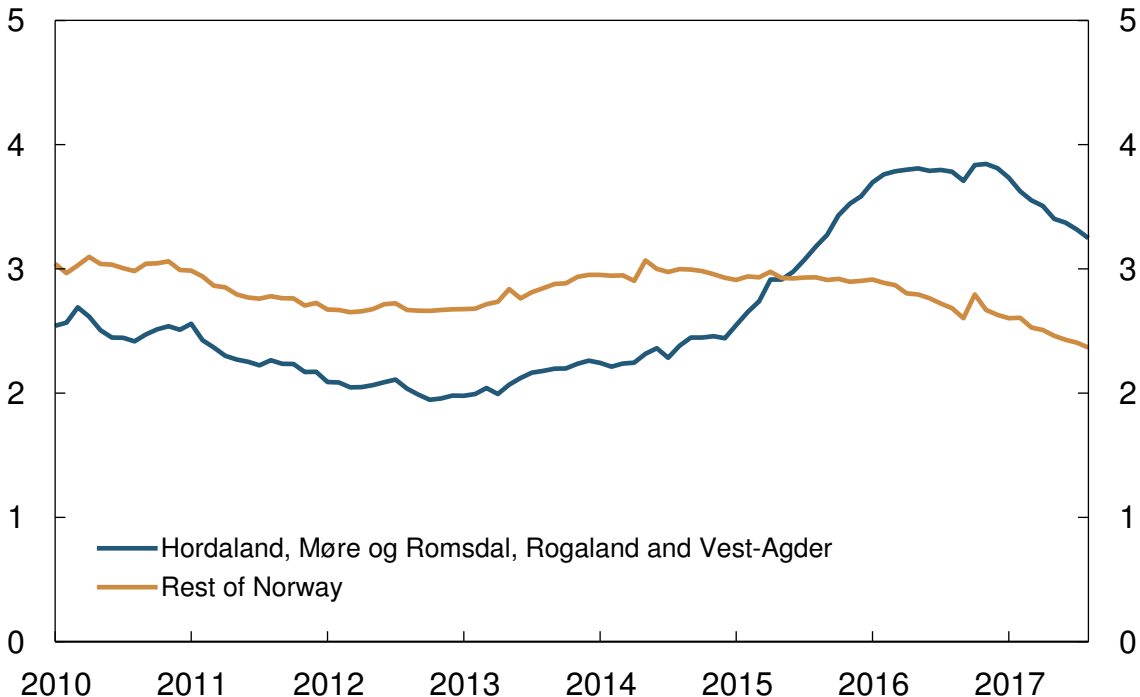
1) Labour Force Survey.

2) Registered unemployment.

3) Projections for September 2017 – December 2017 (registered unemployment)
 and July 2017 – October 2017 (LFS)

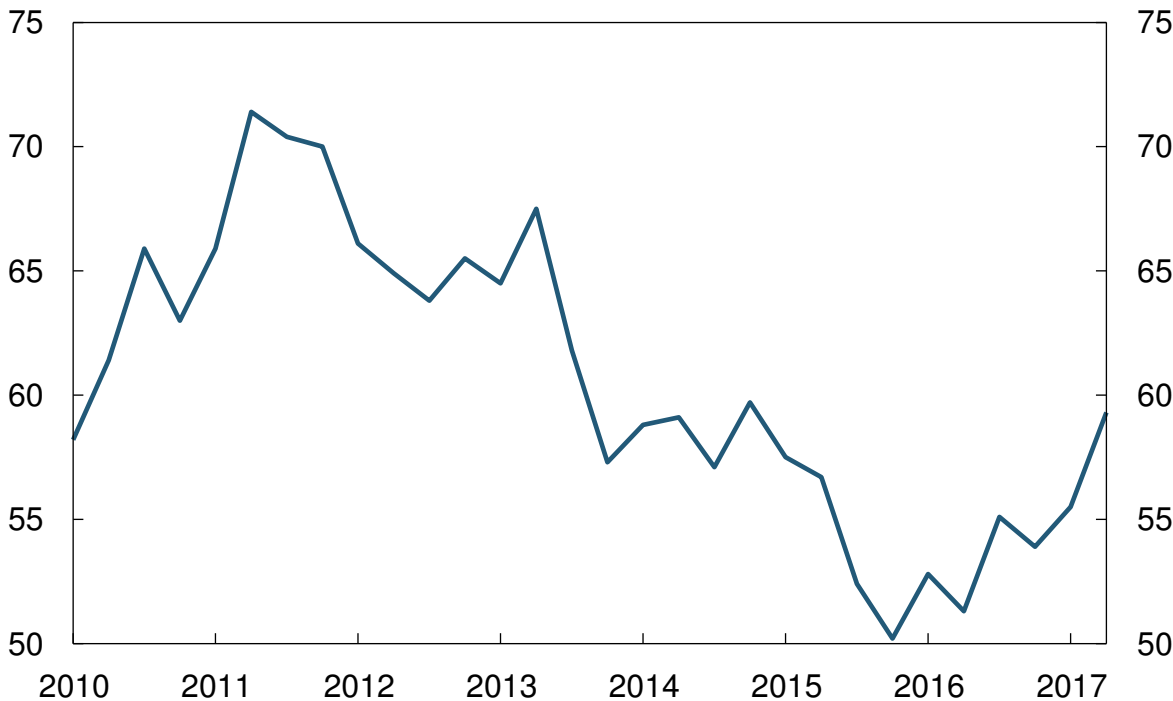
Sources: Norwegian Labour and Welfare Administration (NAV), Statistics Norway and Norges Bank

Chart 3.20 Registered unemployment by county. Share of labour force. Seasonally adjusted. Percent. January 2010 – August 2017



Sources: Norwegian Labour and Welfare Administration (NAV) and Norges Bank

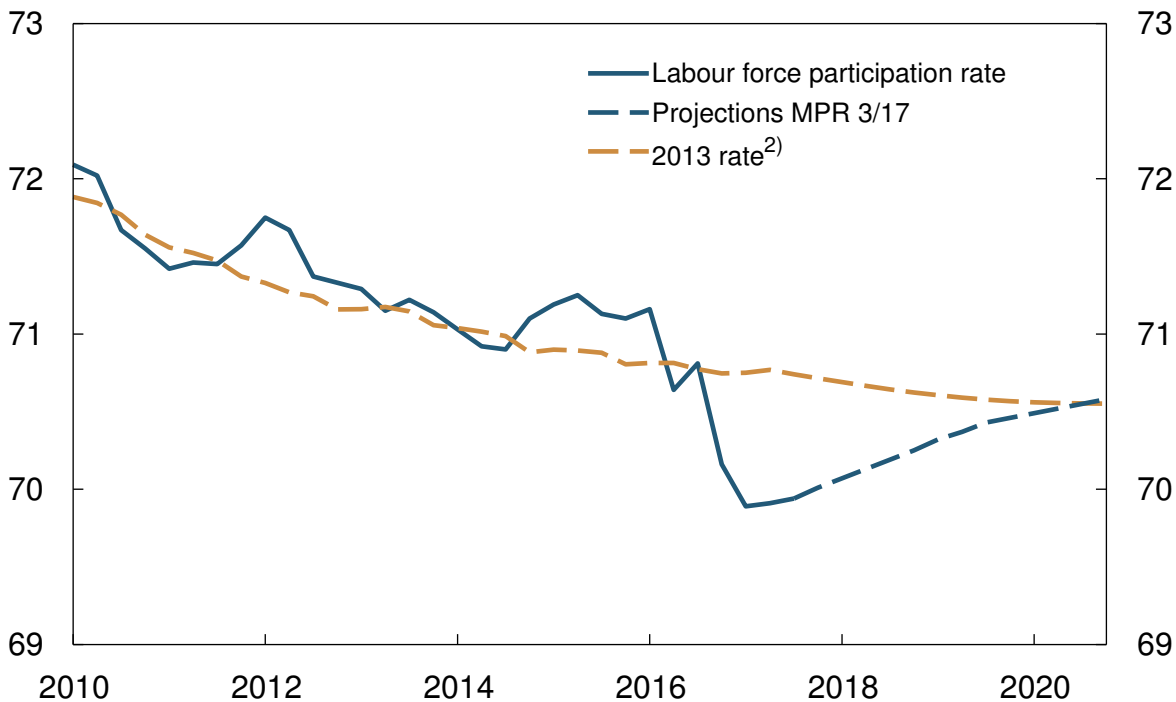
Chart 3.21 Job vacancies. Seasonally adjusted. In thousands. 2010 Q1 – 2017 Q2



Source: Statistics Norway

Chart 3.22 Labour force participation rates. Labour force as a share of the population (aged 15 – 74). Seasonally adjusted. Percent.

2010 Q1 – 2020 Q4 ¹⁾



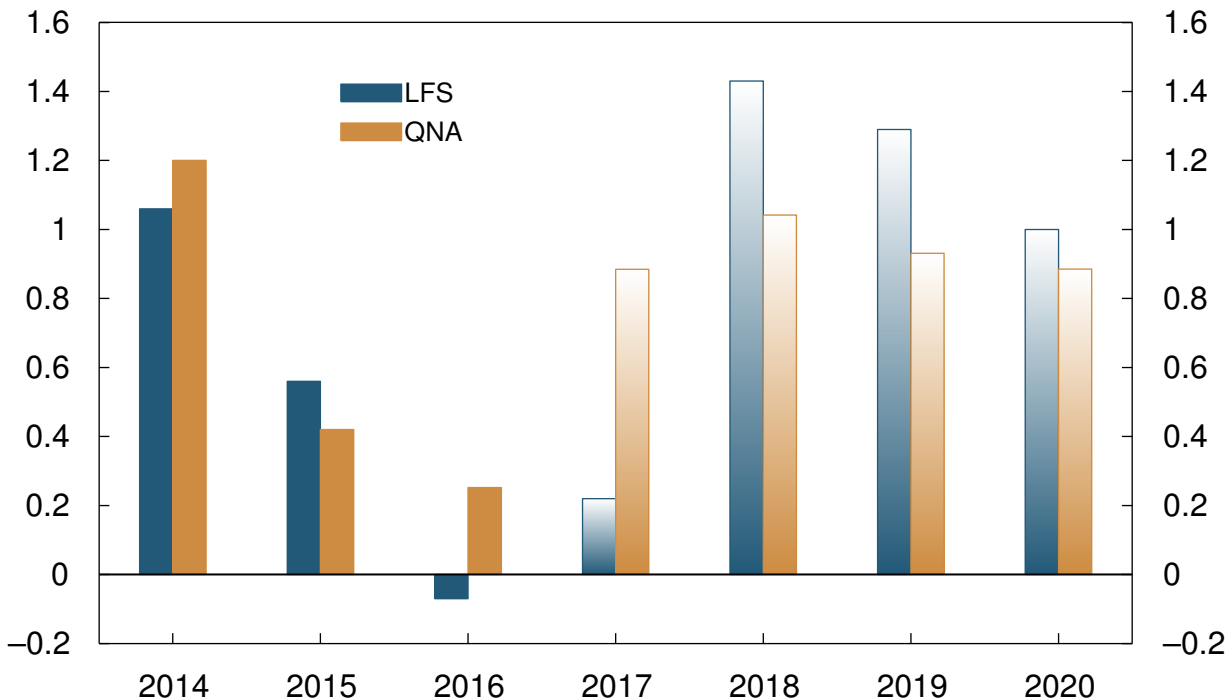
1) Projections 2017 Q3 – 2020 Q4.

2) Developments in the labour force participation rate for the population (aged 15 – 74) at constant 2013 rates for each age cohort. The line slopes downward because a growing number of persons are entering age groups with lower labour force participation rates, owing to population ageing. 2013 is chosen because capacity utilisation is deemed to be close to a normal level that year.

Sources: Statistics Norway and Norges Bank

Chart 3.23 Employment in LFS¹⁾ and QNA²⁾. Annual percentage change.

2014 – 2020³⁾



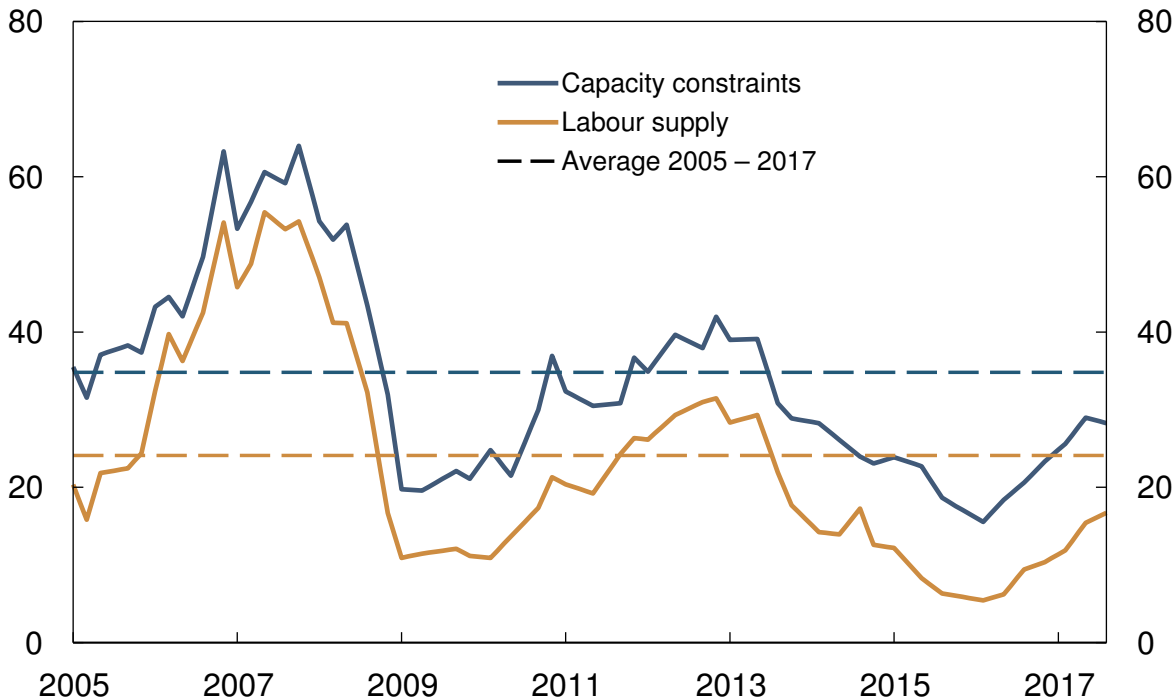
1) Labour Force Survey.

2) Quarterly national accounts.

3) Projections for 2017 – 2020 (shaded).

Sources: Statistics Norway and Norges Bank

Chart 3.24 Capacity constraints and labour supply as reported by regional network.¹⁾ Percent. January 2005 – August 2017

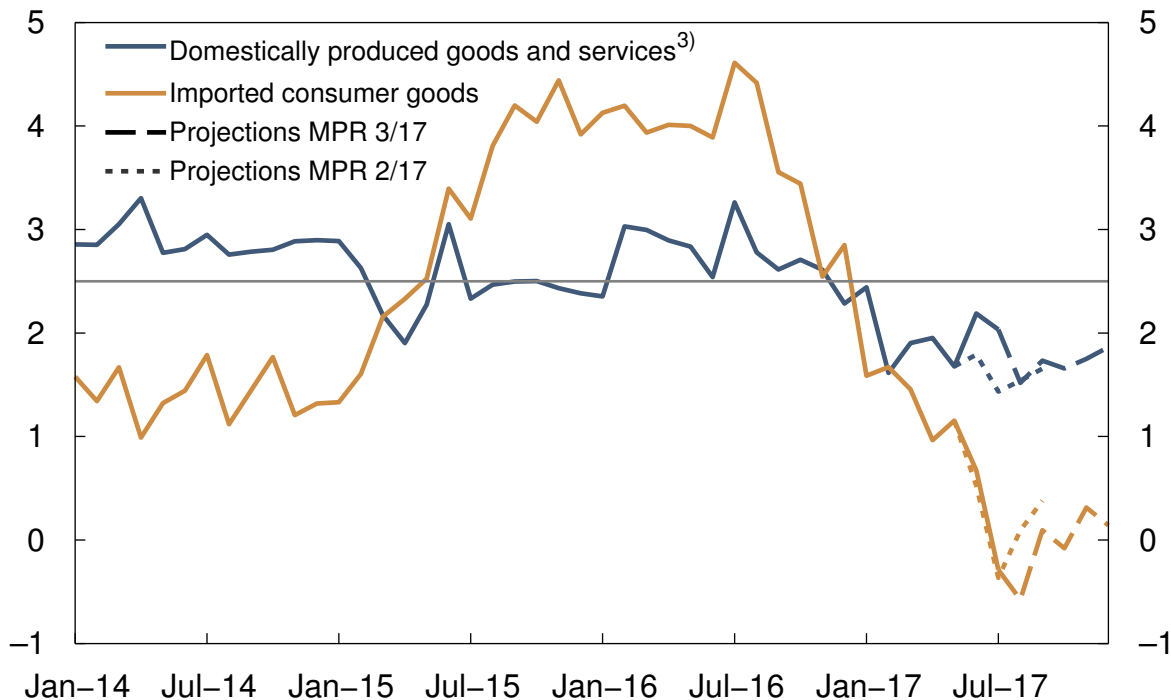


1) Share of contacts that will have some or considerable problems accommodating an increase in demand and the share of contacts reporting that output is being constrained by labour supply.

Source: Norges Bank

Chart 3.25 CPI-ATE¹⁾ by supplier sector.

Twelve-month percentage change. January 2014 – December 2017²⁾



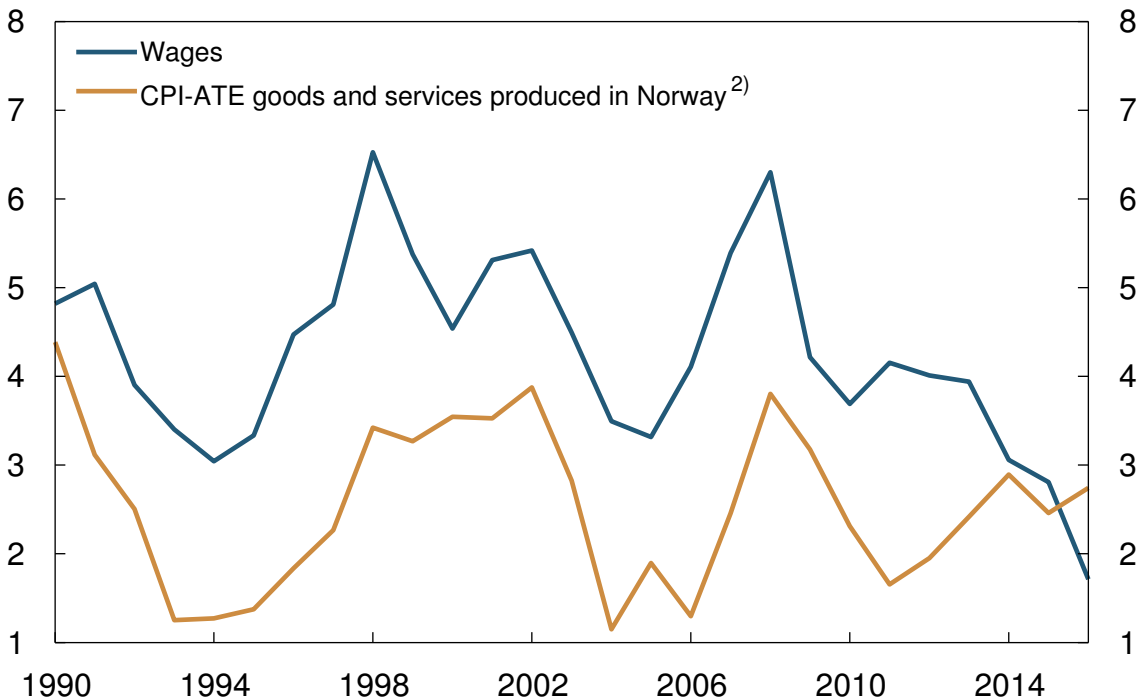
1) CPI adjusted for tax changes and excluding energy products.

2) Projections for September 2017 – December 2017 (broken lines).

3) Norges Bank's estimates.

Sources: Statistics Norway and Norges Bank

Chart 3.26 Wages and goods and services produced in Norway
in the CPI-ATE¹⁾. Annual percentage change. 1990 – 2016

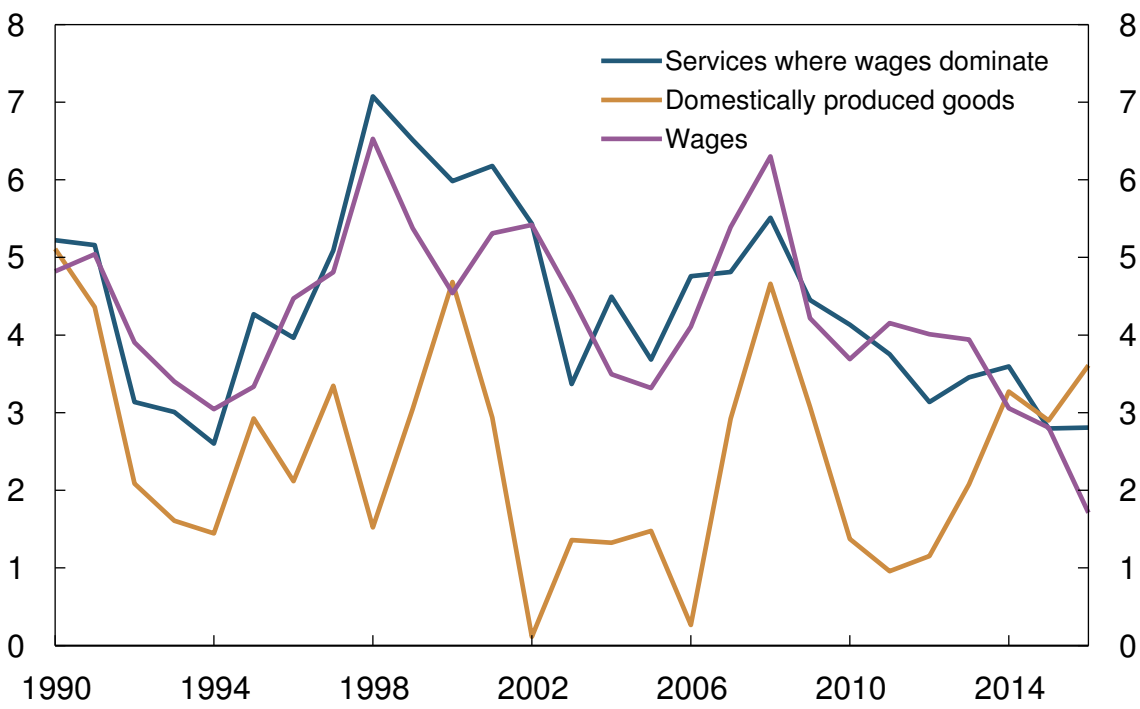


1) CPI adjusted for tax changes and excluding energy products.

2) Norges Bank's estimates.

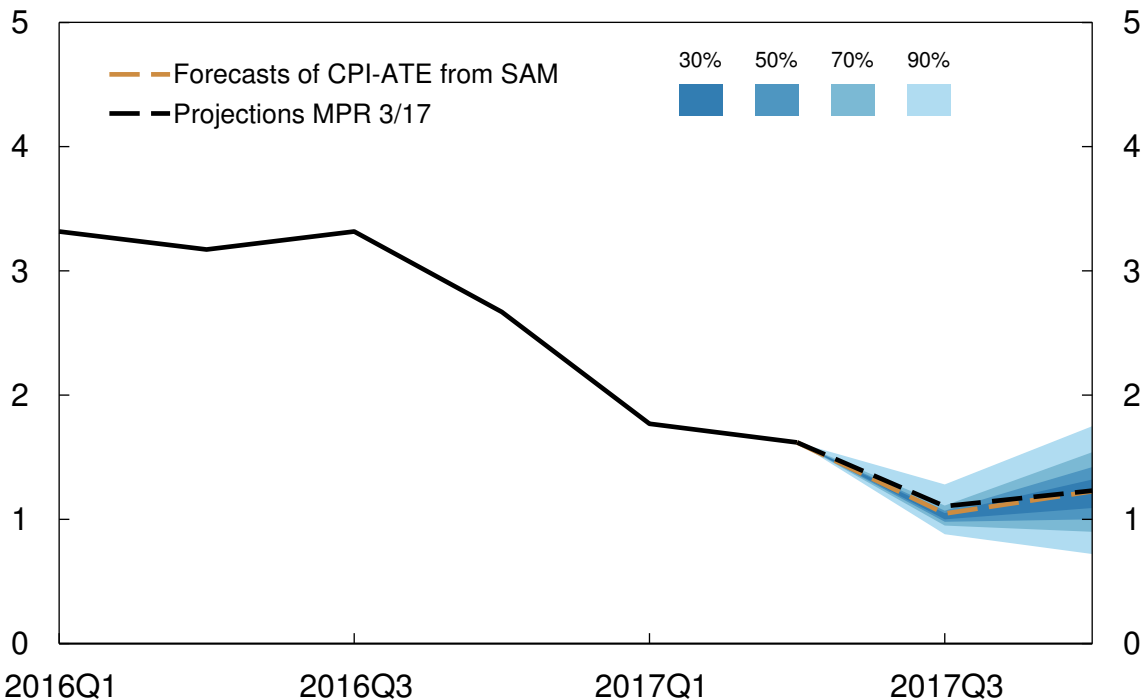
Sources: Norwegian Technical Calculation Committee for Wage Settlements, Statistics Norway and Norges Bank

Chart 3.27 Wages, prices for services where wages dominate and domestically produced goods.¹⁾ Annual percentage change. 1990 – 2016



¹⁾ The price series have been spliced with price series from previous supplier sectors in 2003.
Sources: Statistics Norway and Norges Bank

Chart 3.28 CPI-ATE¹⁾ in MPR 3/17 with fan chart given by SAM²⁾.
 Four-quarter percentage change. 2016 Q1 – 2017 Q4³⁾



1) CPI adjusted for tax changes and excluding energy products.

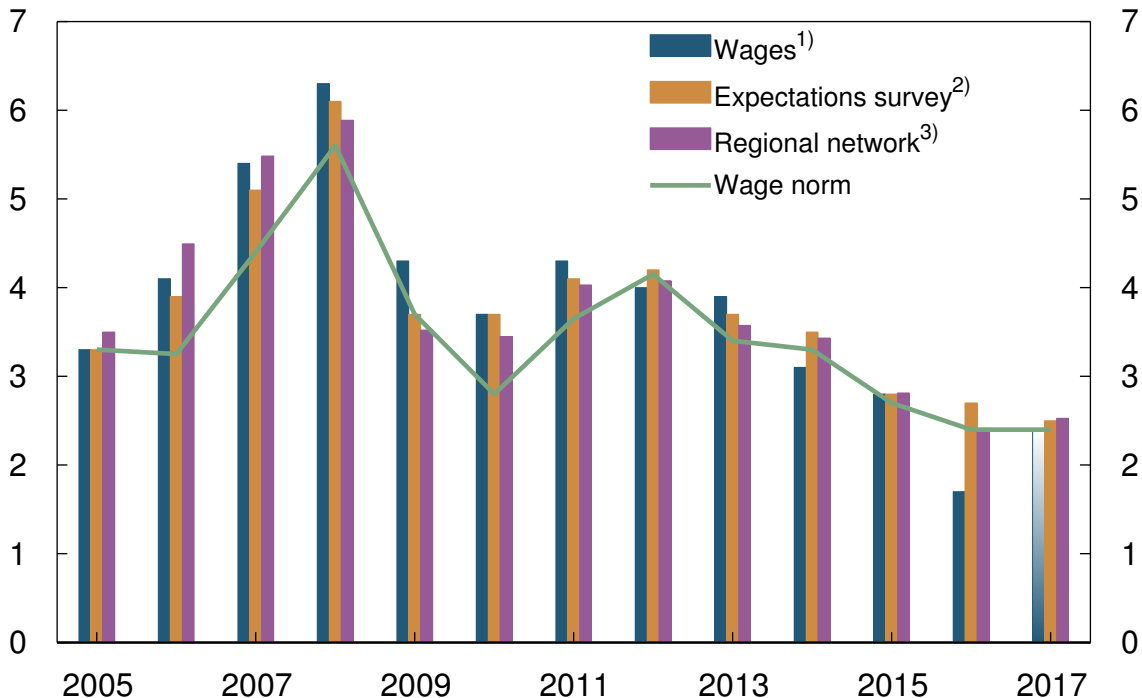
2) System for Averaging short-term Models.

3) Projections for 2017 Q3 – 2017 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 3.29 Wages, wage norm and wage expectations.

Annual percentage change. 2005 – 2017



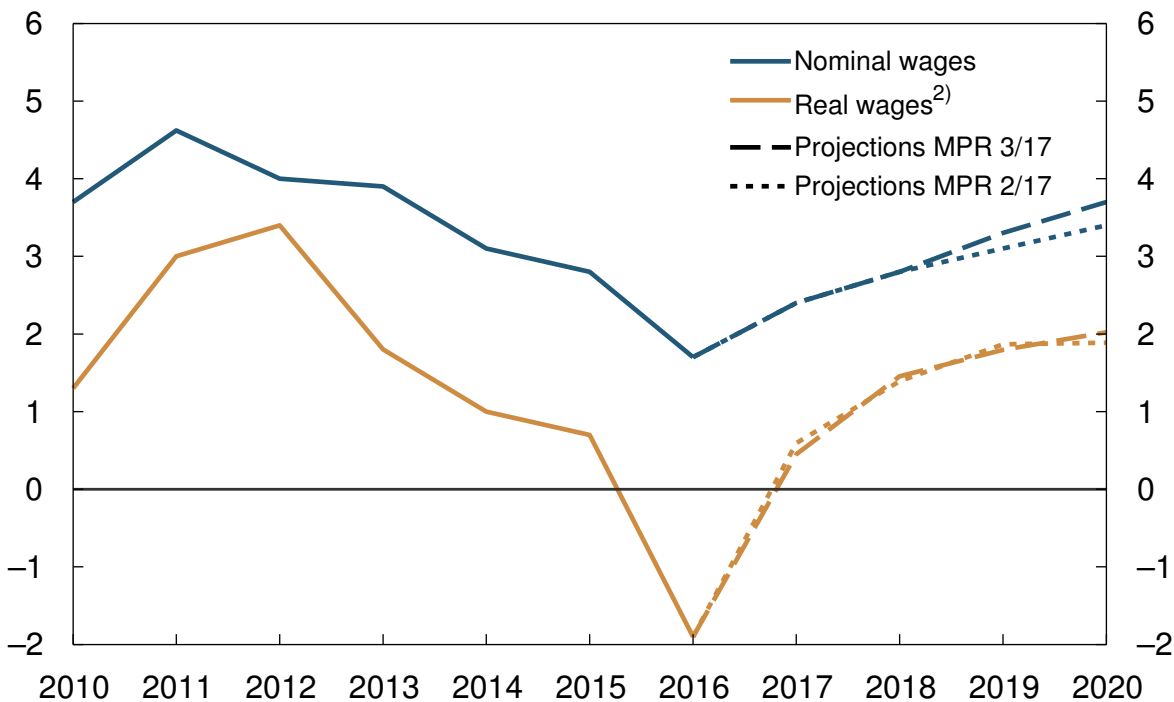
1) Historical annual wage growth from Statistics Norway. Norges Banks' projections for 2017 (shaded bar).

2) Social partners' wage growth expectations for the current year as measured in Q3 each year.

3) Expected wage growth for the current year as reported by regional network in August/September each year.

Sources: Epinion, Statistics Norway and Norges Bank.

Chart 3.30 Wages. Annual percentage change. 2010 – 2020¹⁾

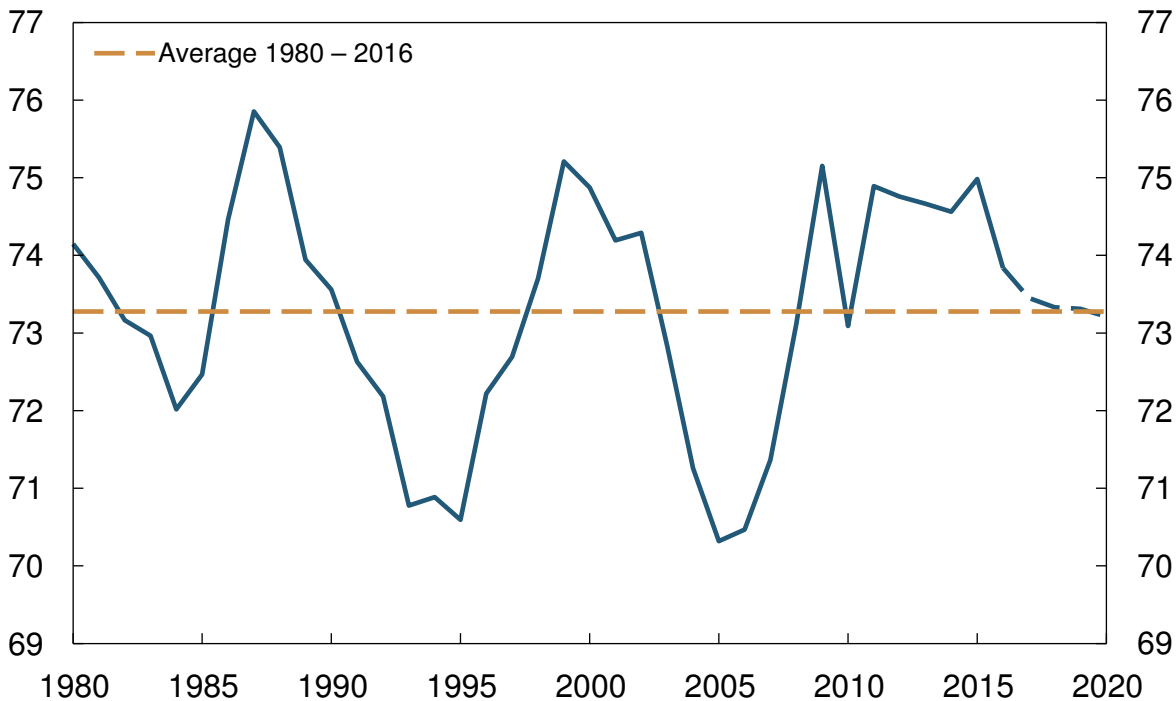


1) Projections for 2017 – 2020 (broken lines).

2) Nominal wage growth deflated by the CPI.

Sources: Norwegian Technical Calculation Committee for Wage Settlements, Statistics Norway and Norges Bank

Chart 3.31 Labour share for mainland Norway.¹⁾ Percent. 1980 – 2020²⁾

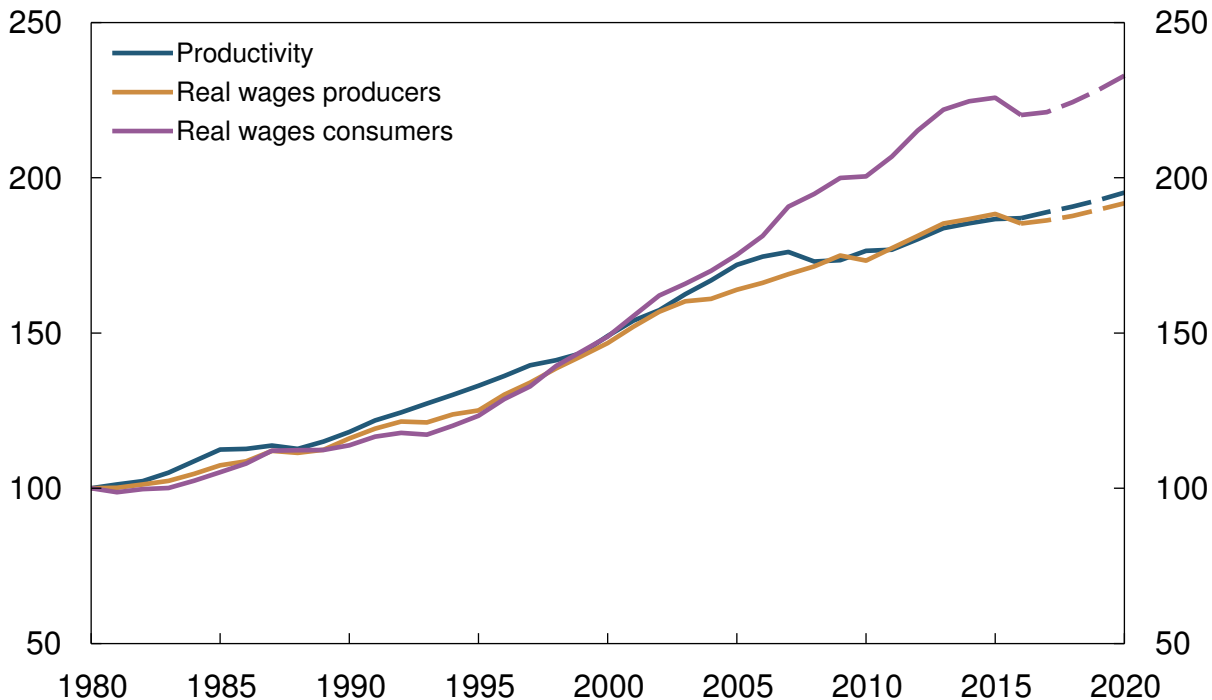


1) Labour costs as a share of the sum of labour costs and operating profit.

2) Projections 2017 – 2020 (broken blue line).

Sources: Statistics Norway and Norges Bank

Chart 3.32 Productivity, real wages for producers¹⁾ and consumers²⁾.
Index. 1980 = 100. 1980 – 2020³⁾



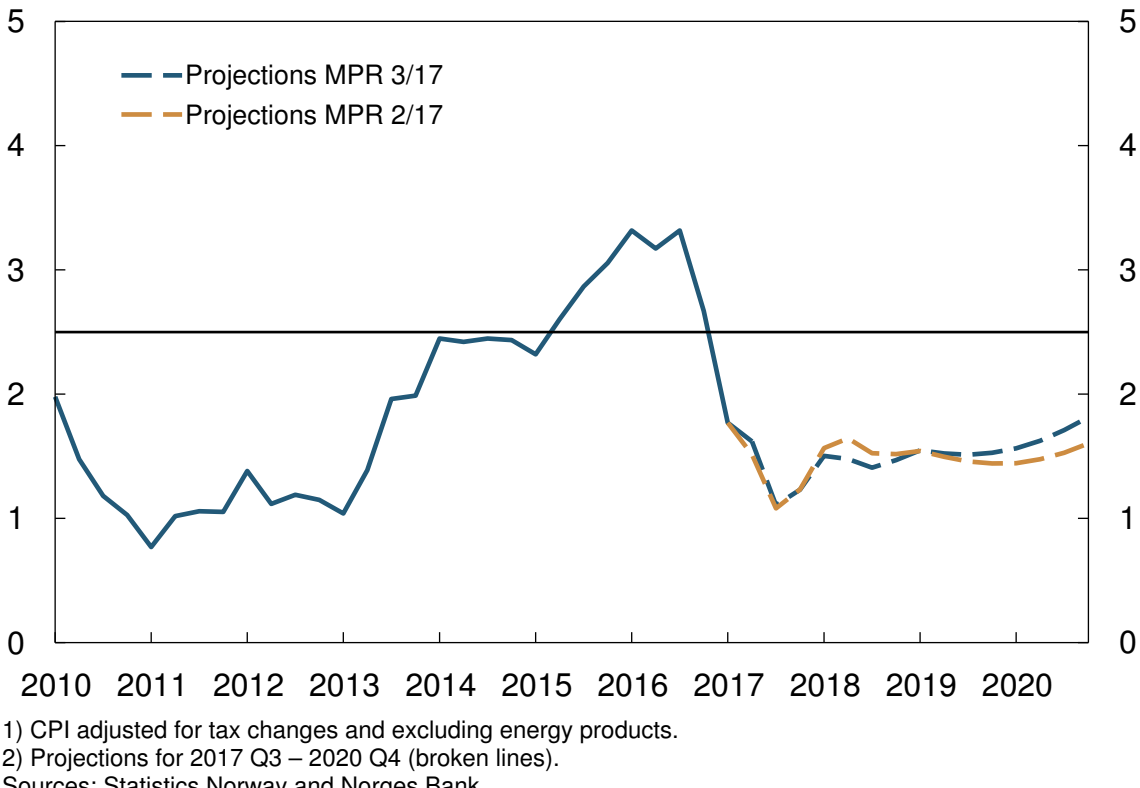
1) Labour costs deflated by producer prices.

2) Labour costs deflated by consumer prices.

3) Projections 2017 – 2020 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 3.33 CPI-ATE¹⁾. Four-quarter percentage change. 2010 Q1 – 2020 Q4²⁾

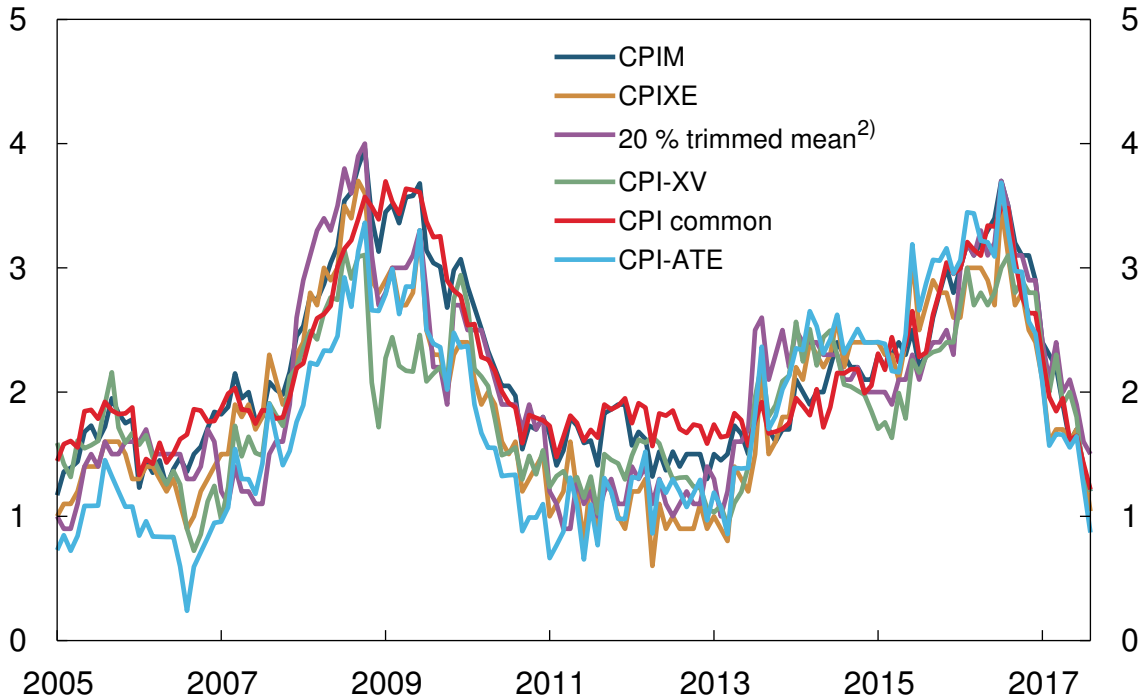


1) CPI adjusted for tax changes and excluding energy products.

2) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 3.34 Indicators of underlying inflation¹⁾. Twelve-month percentage change. January 2005 – August 2017

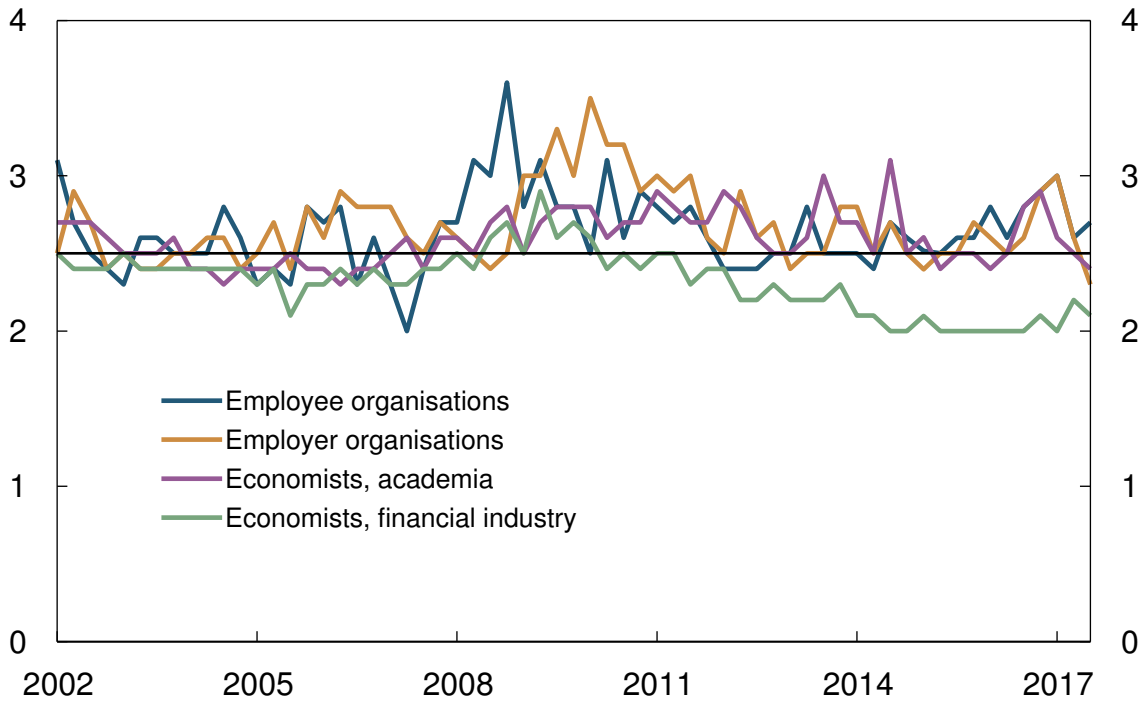


1) For a review of the indicators, see Husabø, E. (2017) "Indicators of underlying inflation in Norway". Staff Memo, Norges Bank (forthcoming).

2) Due to a reorganisation of the statistics at the detailed level, there is a break in the series in January 2016 and January 2017

Sources: Statistics Norway and Norges Bank

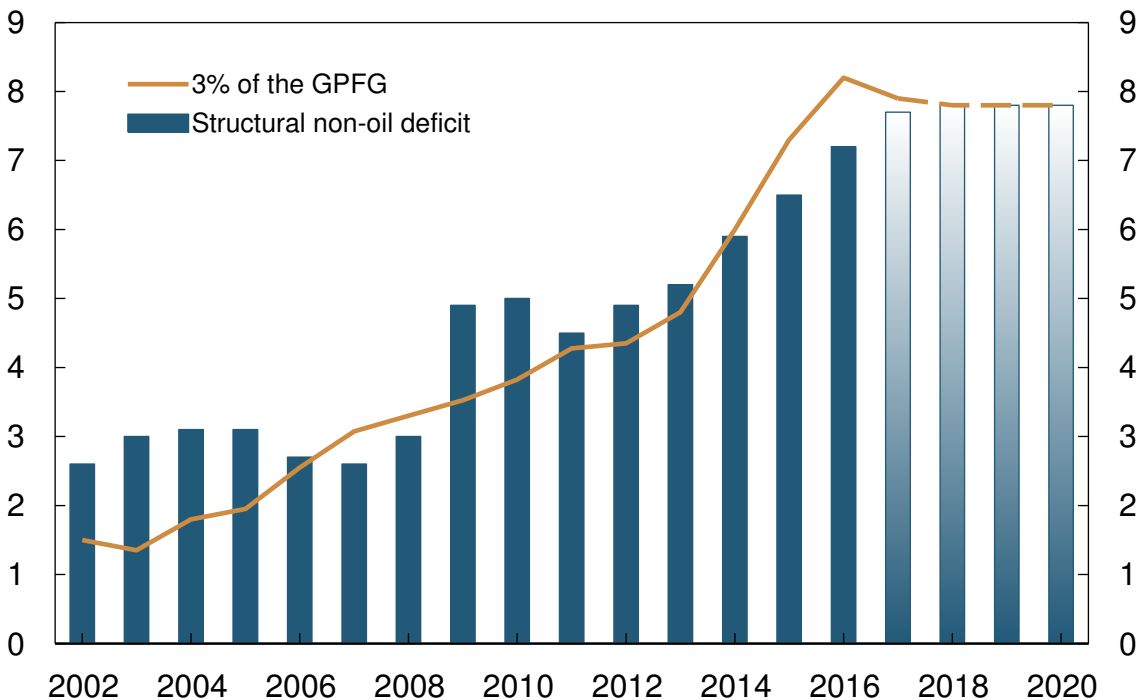
Chart 3.35 Expected consumer price inflation five years ahead.
Twelve-month percentage change. 2002 Q1 – 2017 Q3



Source: Epinion

Chart 3.36 Structural non-oil deficit and 3% of the GPFG¹⁾.

Share of trend GDP for mainland Norway. 2002 – 2020²⁾



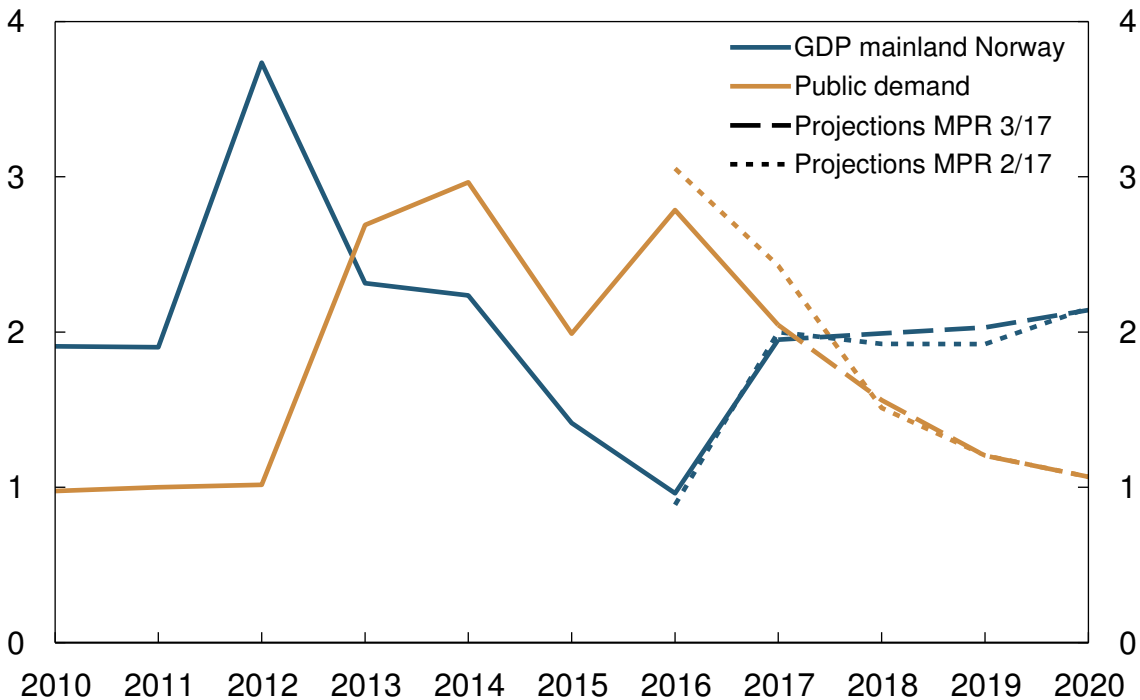
1) Government Pension Fund Global.

2) Projections for 2017 – 2020 (broken line and shaded bars).

Sources: Ministry of Finance and Norges Bank

Chart 3.37 Public sector demand and GDP for mainland Norway.

Annual percentage change. 2010 – 2020¹⁾

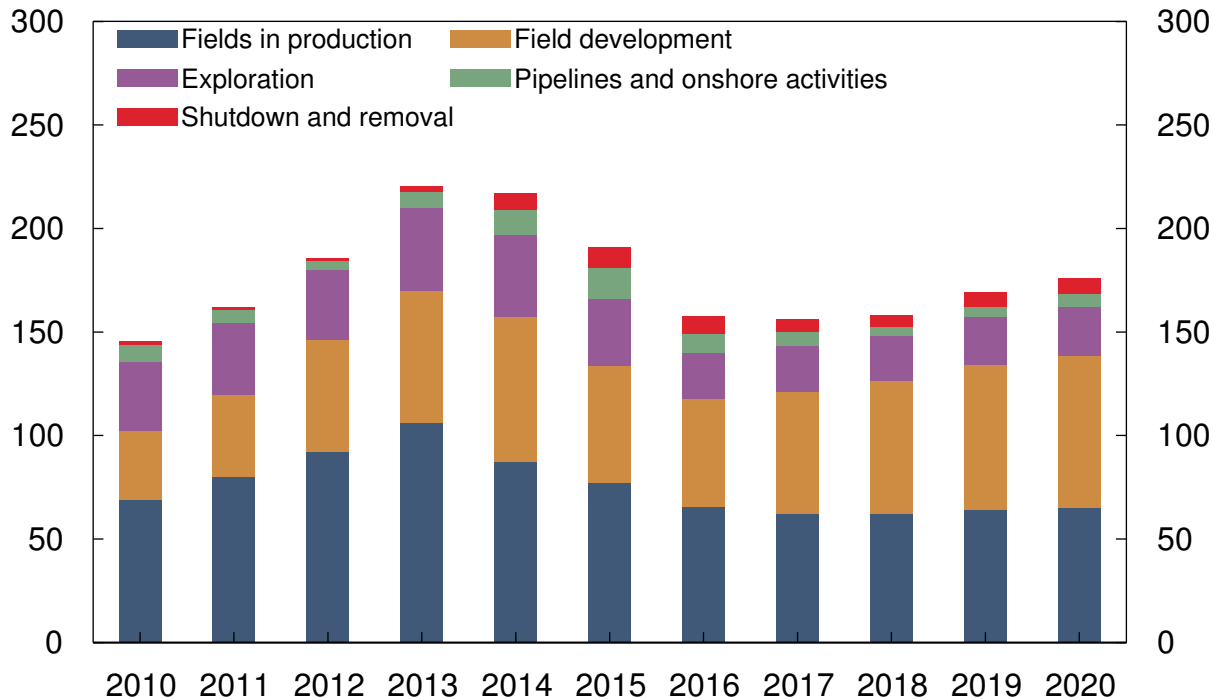


1) Projections for 2017 – 2020 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 3.38 Petroleum investment.

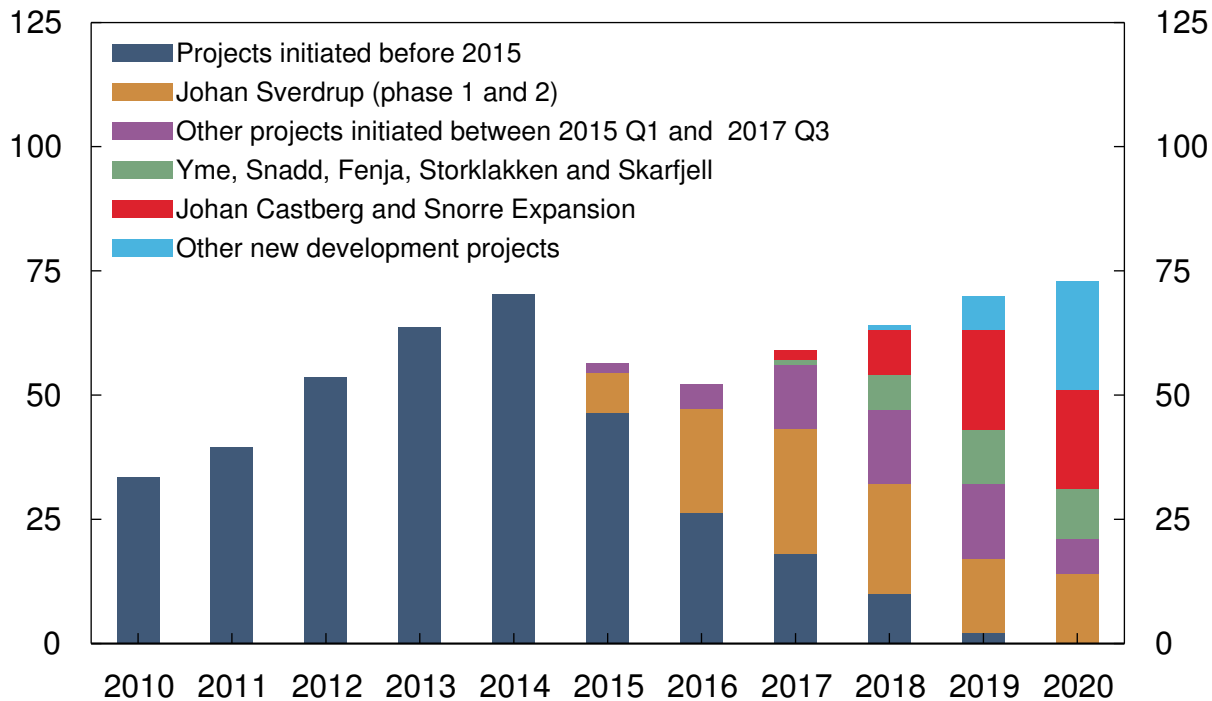
Constant 2017 prices. In billions of NOK. 2010 – 2020 ¹⁾



1) Projections for 2017 – 2020. Figures for 2010 – 2016 are from Statistics Norway's investment intentions survey and deflated by the price index for petroleum investment in the national accounts. The index is projected to fall by 3.5% between 2016 and 2017 and to be unchanged between 2017 and 2018. Sources: Statistics Norway and Norges Bank

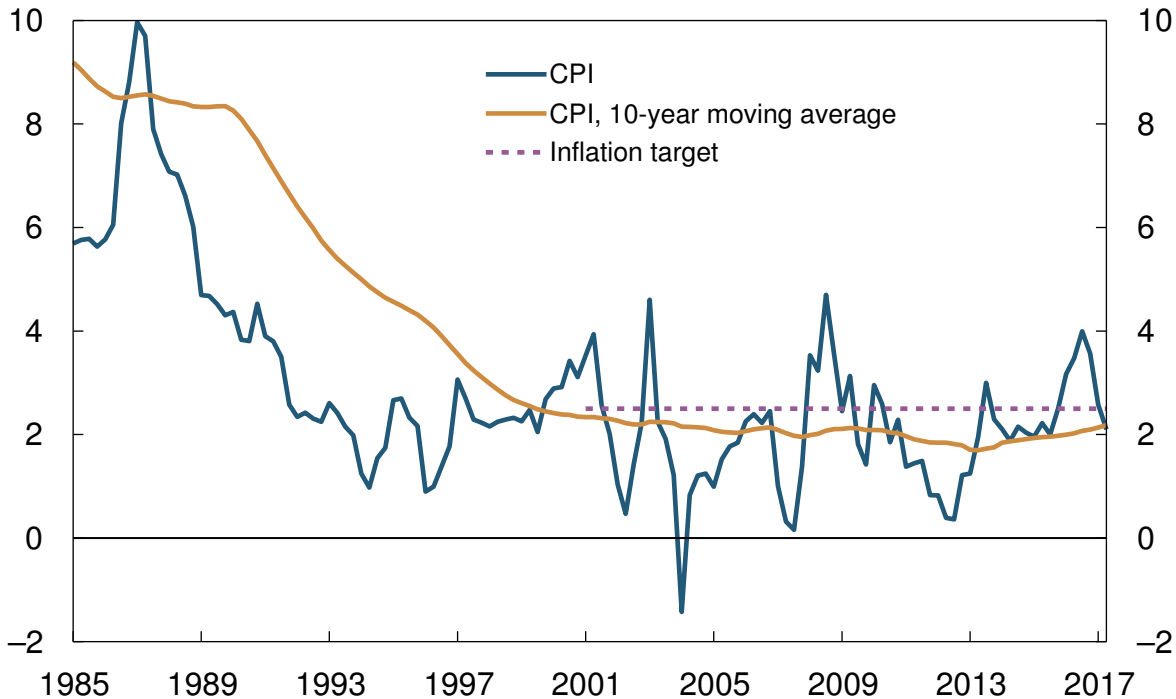
Chart 3.39 Field development.

Constant 2017 prices. In billions of NOK. 2010 – 2020¹⁾



1) Projections for 2017 – 2020 and for the breakdown of investment in 2015 and 2016. Figures for total development investment for 2010 – 2016 are from Statistics Norway's investment intentions survey and deflated by the price index for petroleum investment in the national accounts. The projections are based on reports to the Storting, impact analyses, forecasts from the Norwegian Petroleum Directorate, Statistics Norway's investment intentions survey and current information about development investments.
Sources: Statistics Norway and Norges Bank

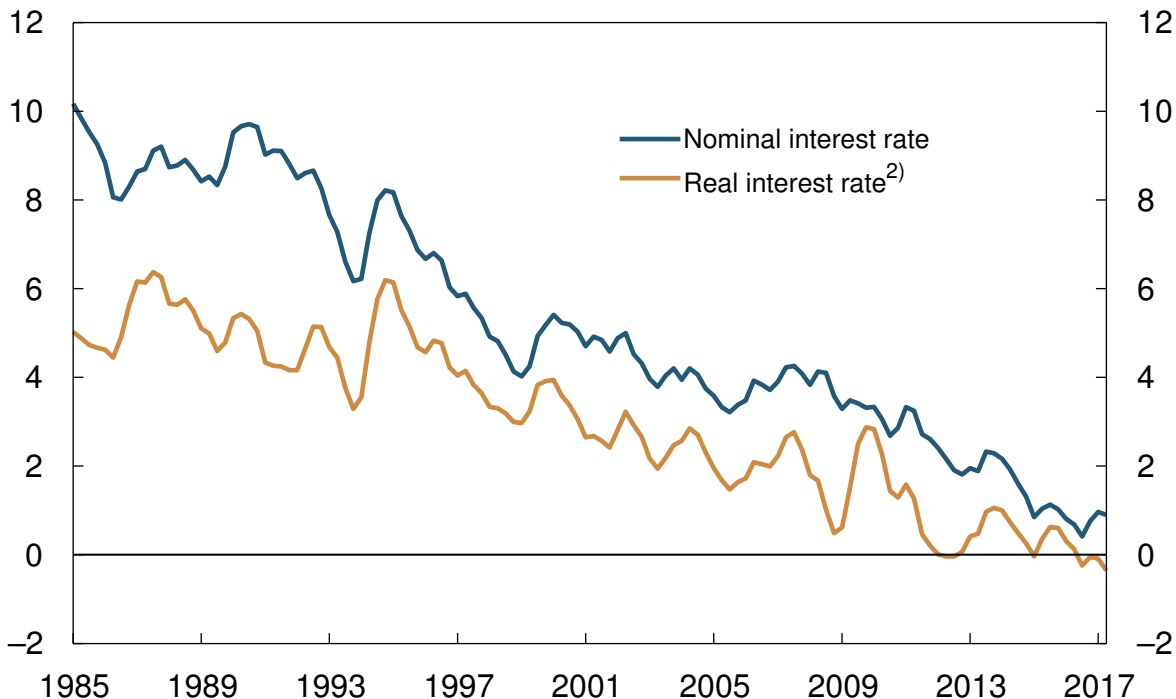
Chart 4.1 CPI. Four-quarter percentage change. 1985 Q1 – 2017 Q2



Sources: Statistics Norway and Norges Bank

Chart 4.2 Yields on 10-year government bonds. 14 OECD countries.¹⁾

Percent. 1985 Q1 – 2017 Q2



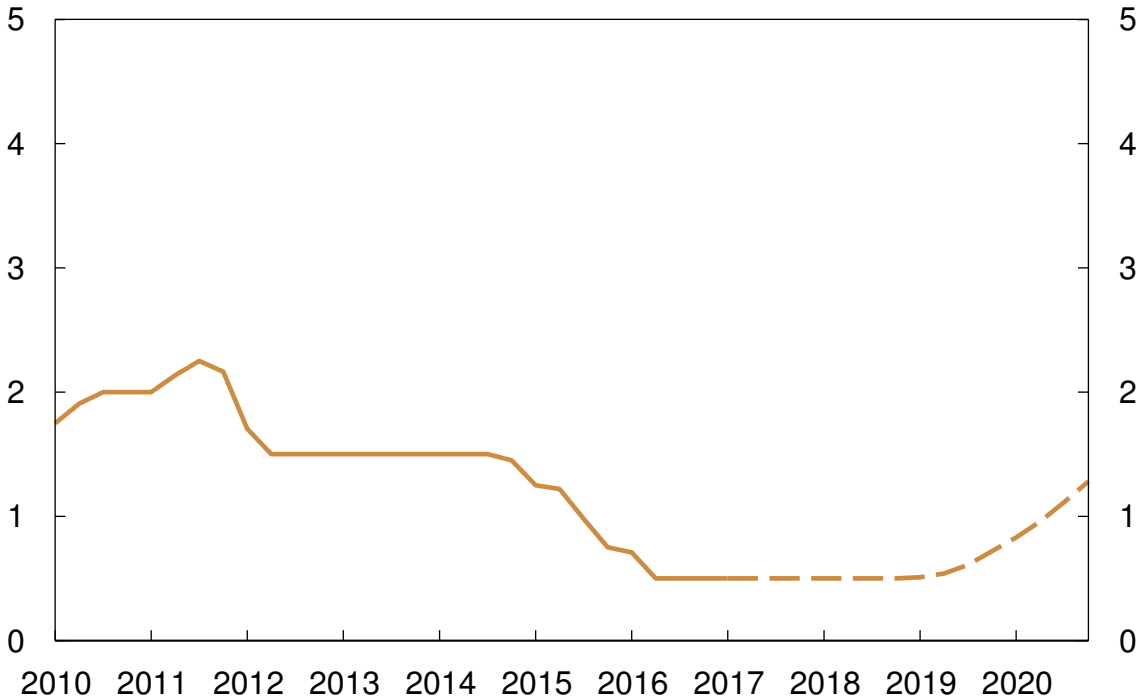
1) Austria, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, UK, US and Norway. Unweighted average.

2) The real interest rate is calculated using the nominal government bond yield less average inflation by the consumer price index over the past year.

Sources: OECD and Norges Bank

Chart 4.3a Key policy rate. Projections in MPR 2/17. Percent.

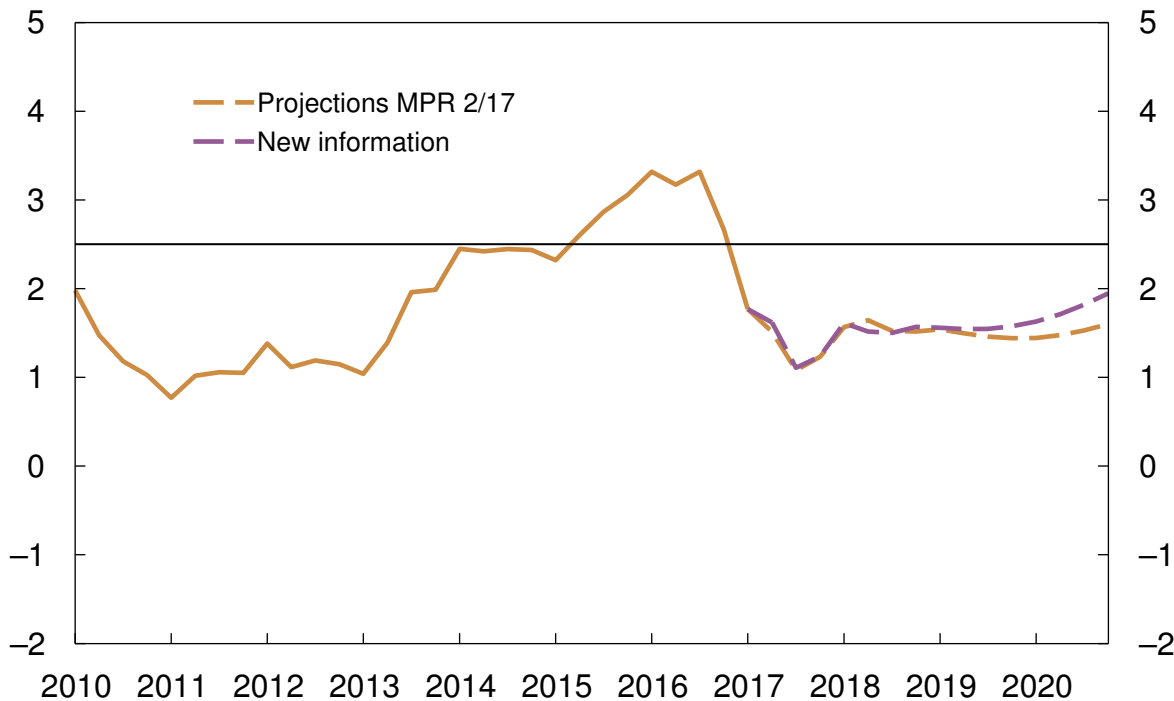
2010 Q1 – 2020 Q4¹⁾



1) Projections for 2017 Q2 – 2020 Q4 (broken line).

Source: Norges Bank

Chart 4.3b CPI-ATE¹⁾. Projection conditional on new information and key policy forecast in MPR 2/17. Four-quarter percentage change. 2010 Q1 – 2020 Q4²⁾

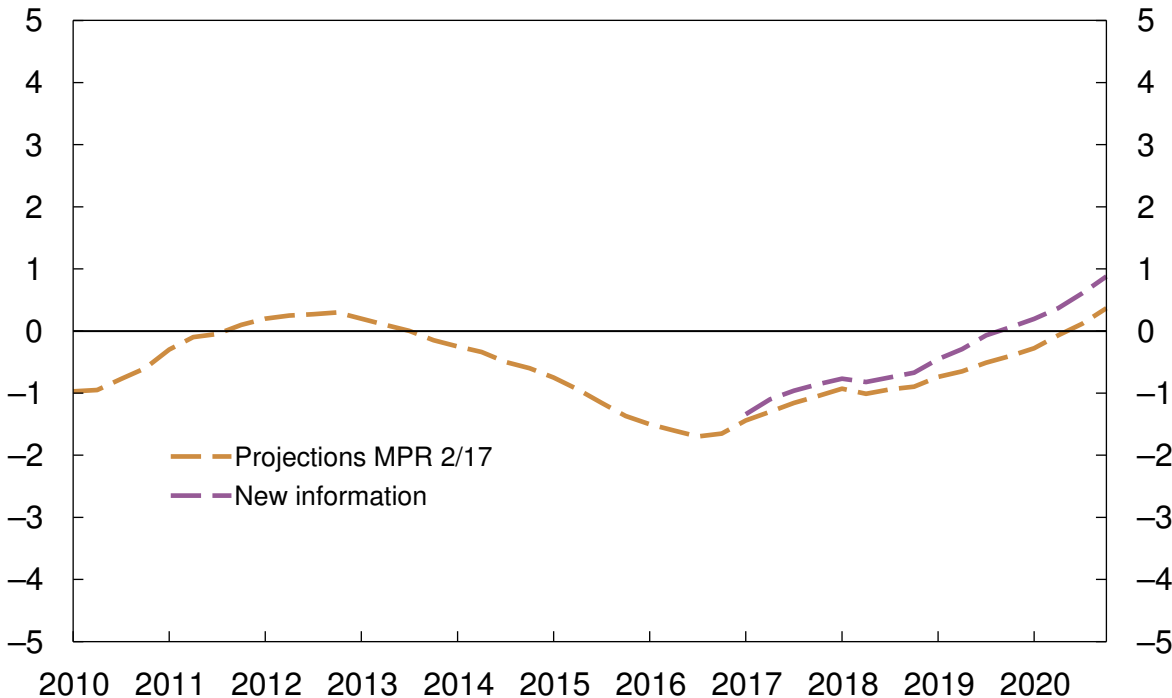


1) CPI adjusted for tax changes and excluding energy products.

2) Projections for 2017 Q2 – 2020 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

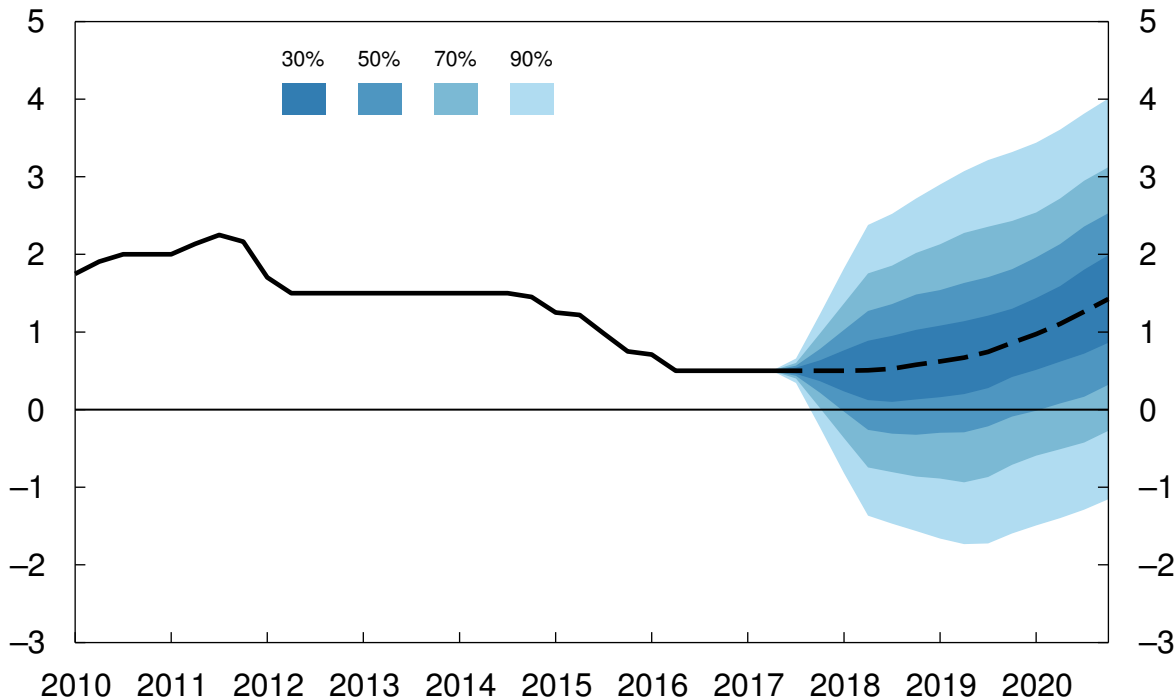
Chart 4.3c Projected output gap. Projection conditional on new information and key policy rate forecast in MPR 2/17. Percent. 2010 Q1 – 2020 Q4



Source: Norges Bank

Chart 4.4a Key policy rate with fan chart.¹⁾

Percent. 2010 Q1 – 2020 Q4²⁾

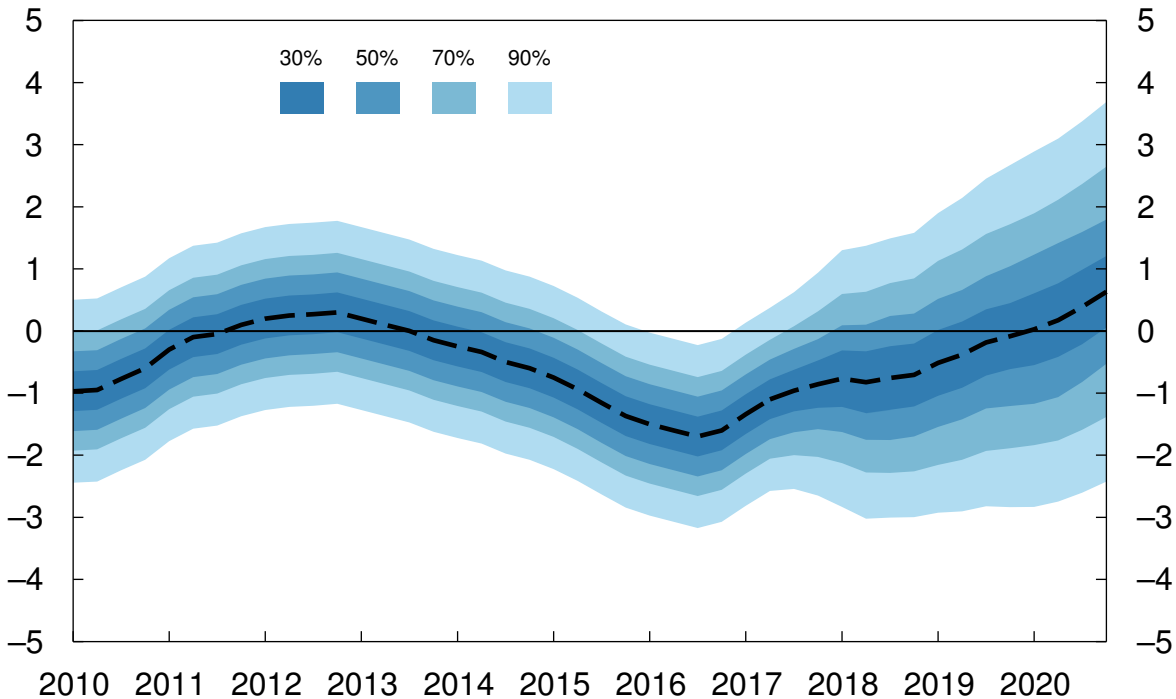


1) The fan charts are based on historical experience and stochastic simulations in Norges Bank's main macroeconomic model, NEMO. The fan chart for the key policy rate does not take into account that a lower bound for the interest rate exists.

2) Projections for 2017 Q3 – 2020 Q4 (broken line).

Source: Norges Bank

Chart 4.4b Projected output gap¹⁾ with fan chart.
Percent. 2010 Q1 – 2020 Q4

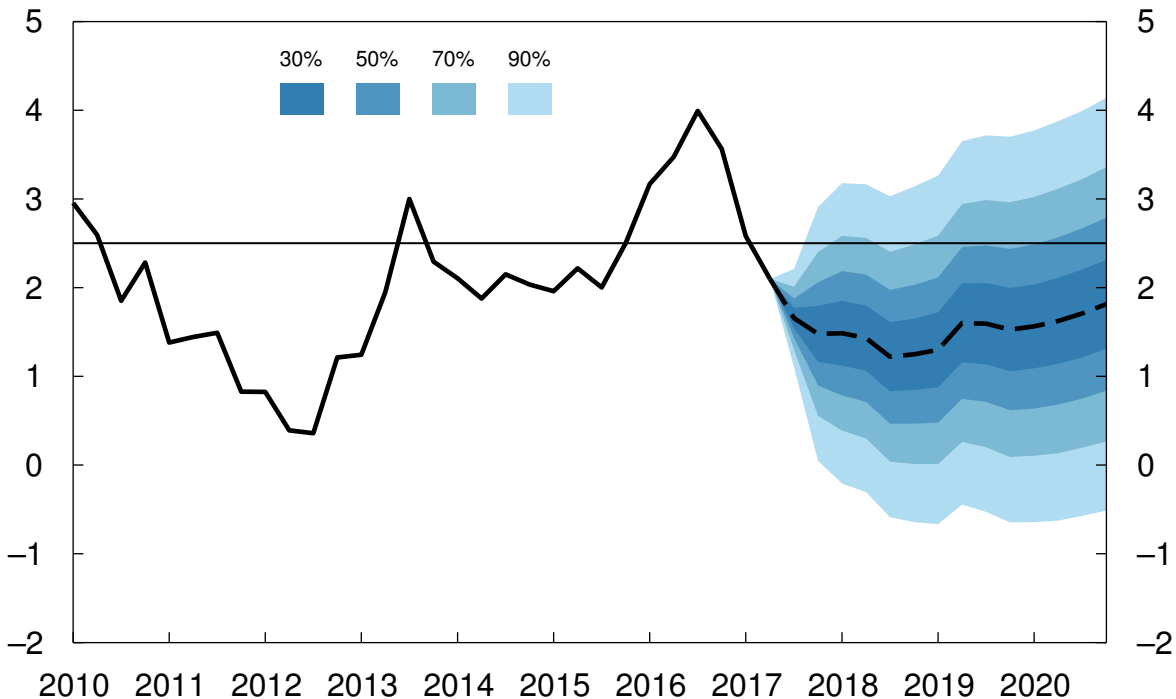


1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP.

Source: Norges Bank

Chart 4.4c CPI with fan chart.

Four-quarter percentage change. 2010 Q1 – 2020 Q4 ¹⁾

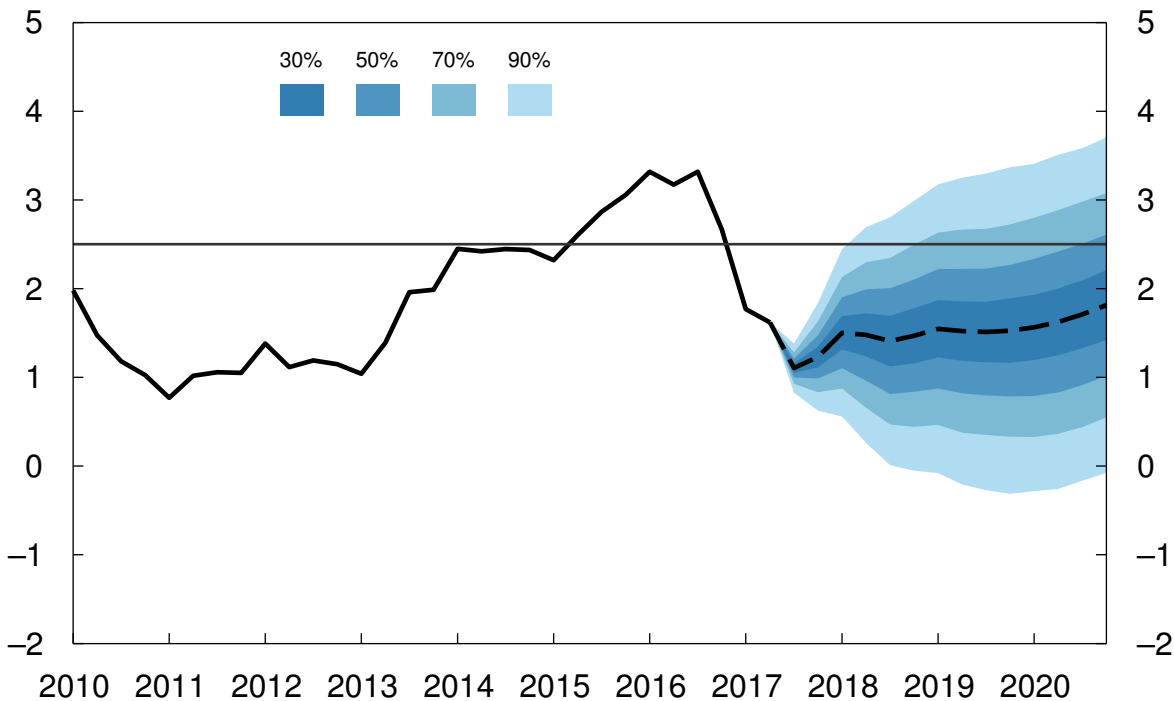


1) Projections for 2017 Q3 – 2020 Q4 (broken line).

Sources: Statistics Norway and Norges Bank

Chart 4.4d CPI-ATE¹⁾ with fan chart.

Four-quarter percentage change. 2010 Q1 – 2020 Q4²⁾

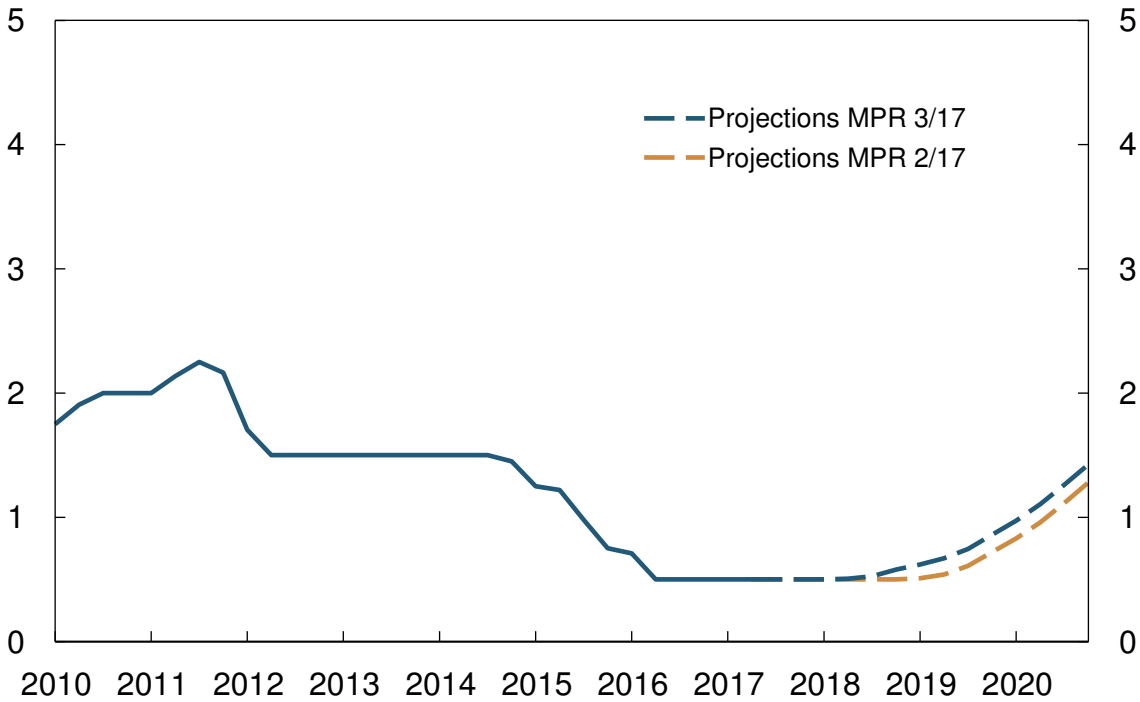


1) CPI adjusted for tax changes and excluding energy products.

2) Projections for 2017 Q3 – 2020 Q4 (broken line).

Sources: Statistics Norway and Norges Bank

Chart 4.5 Key policy rate. Percent. 2010 Q1 – 2020 Q4¹⁾



1) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Source: Norges Bank

Chart 4.6 Factors behind changes in key policy rate forecast since MPR 2/17. Cumulative contribution. Percentage points. 2017 Q4 – 2020 Q4

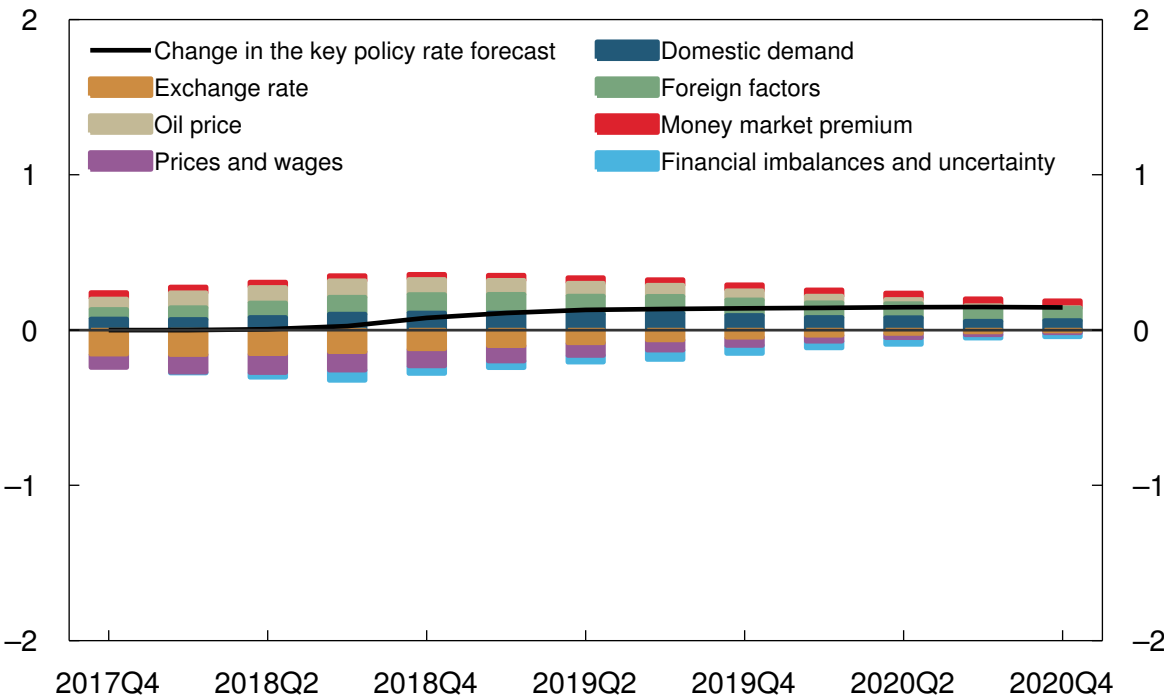
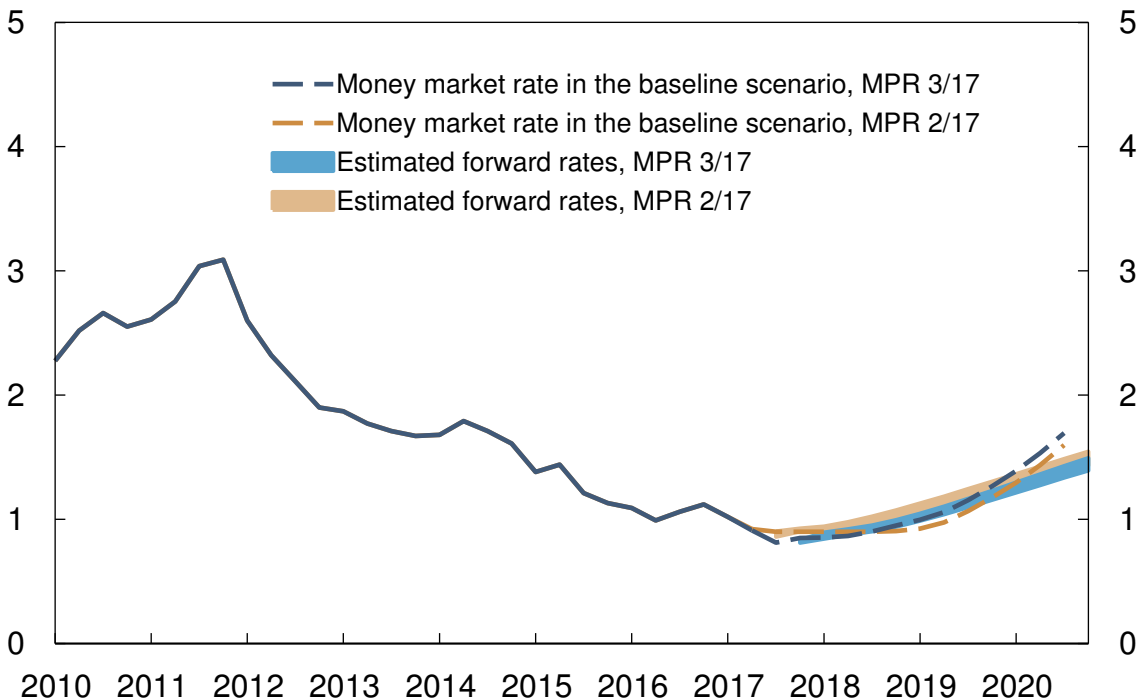


Chart 4.7 Three-month money market rate in the baseline scenario¹⁾ and estimated forward rates²⁾. Percent. 2010 Q1 – 2020 Q4³⁾



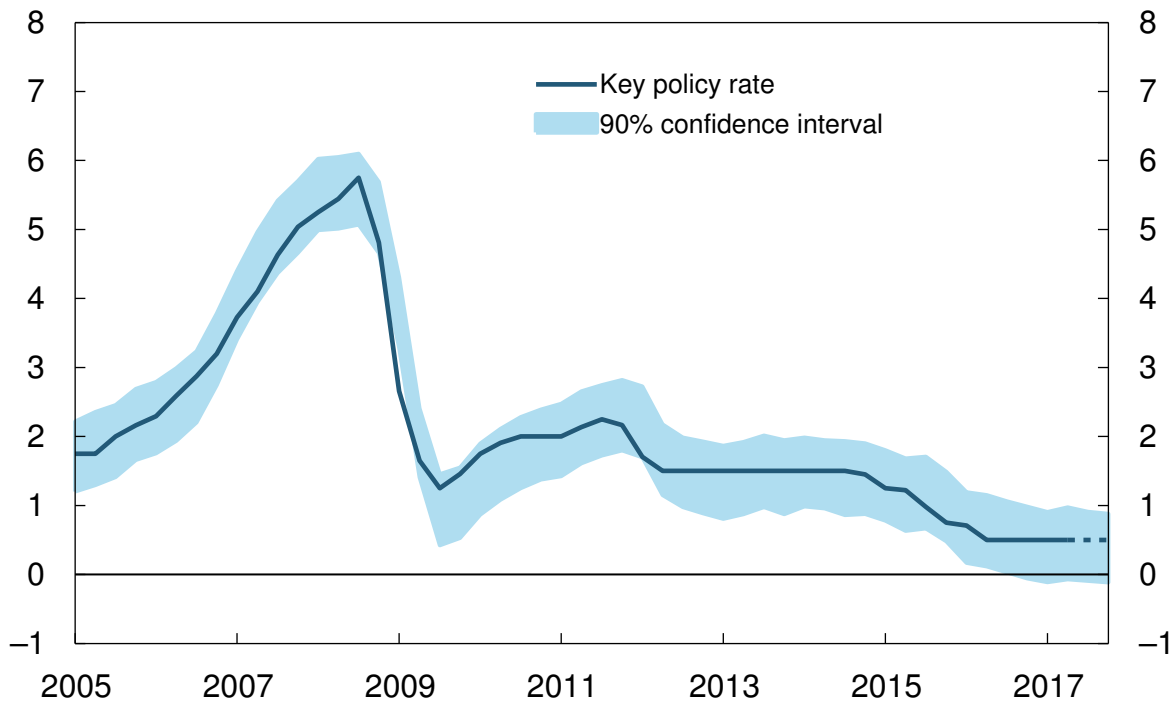
1) Key policy rate in the baseline scenario plus Norwegian money market premiums. The calculations are based on the assumption that the key policy rate forecast is priced into the money market.

2) Forward rates are based on money market rates and interest rate swaps. The orange and blue bands show the highest and lowest rates in the period 5 June – 16 June and 4 September – 15 September, respectively.

3) Projections for 2017 Q3 – 2020 Q4 (broken lines).

Sources: Thomson Reuters and Norges Bank

Chart 4.8 Key policy rate and interest rate path that follows from Norges Bank's average pattern of interest rate setting.¹⁾
 Percent. 2005 Q1 – 2017 Q4²⁾

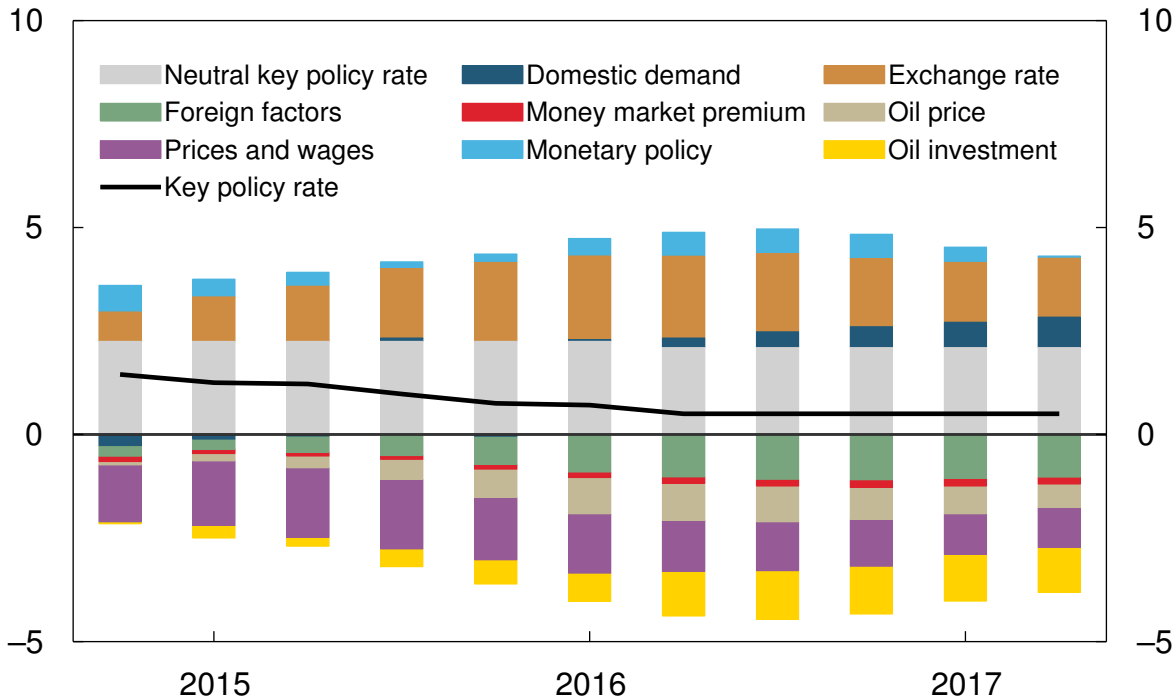


1) Interest rate movements are explained by developments in inflation, mainland GDP growth, wage growth and three-month money market rates among trading partners, as well as the key policy rate in the preceding period. The equation is estimated over the period 1999 Q1 – 2017 Q2. For further discussion, see *Staff Memo 3/2008*, Norges Bank.

2) Projections for 2017 Q3 – 2017 Q4 (broken line).

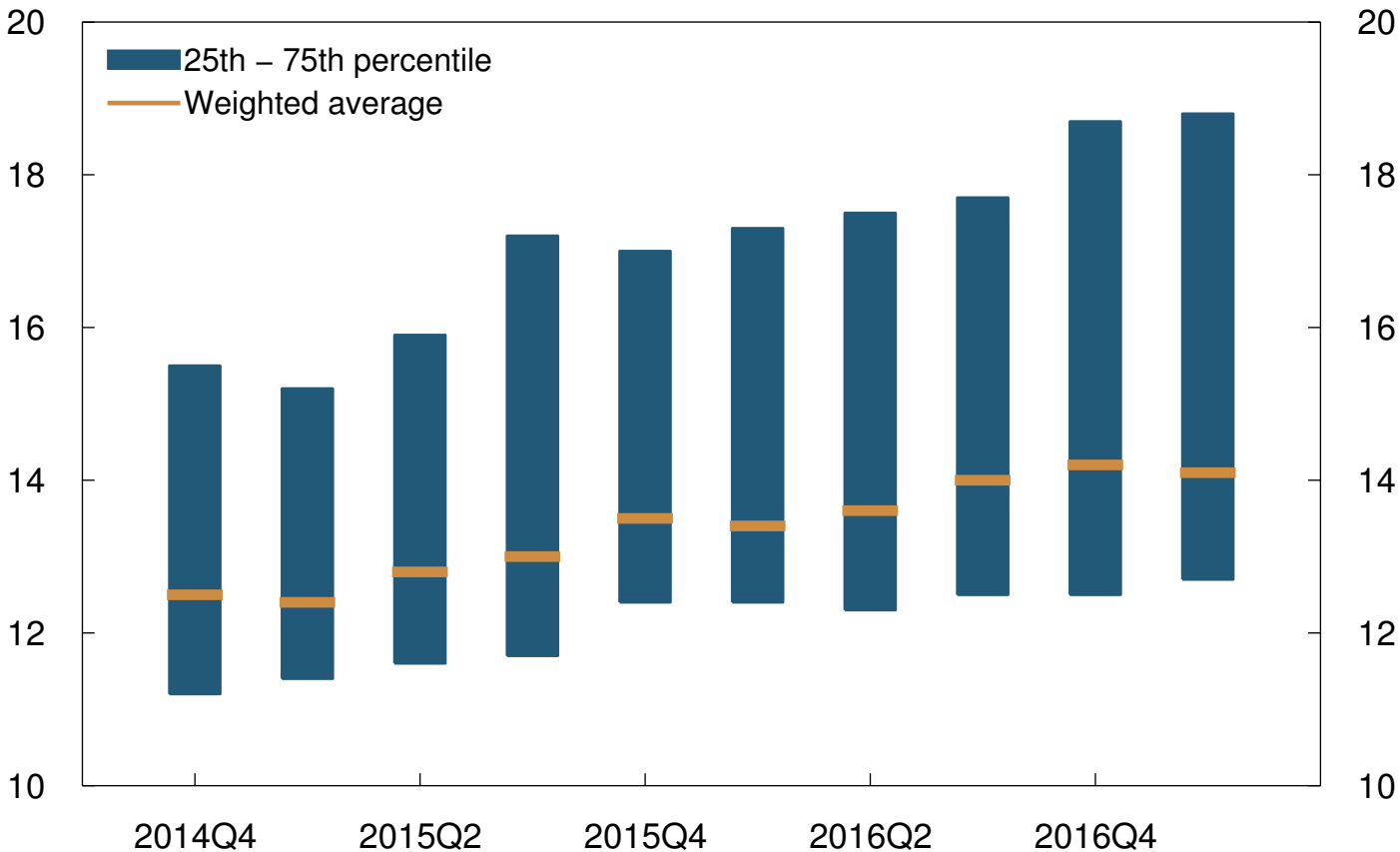
Source: Norges Bank

Chart 1 Shock decomposition of the key policy rate.¹⁾ In percentage units.
2014 Q4 – 2017 Q2



1) In NEMO, 26 observable variables are used for identifying 26 different types of shock. In the chart, shocks are sorted into categories to simplify the presentation.

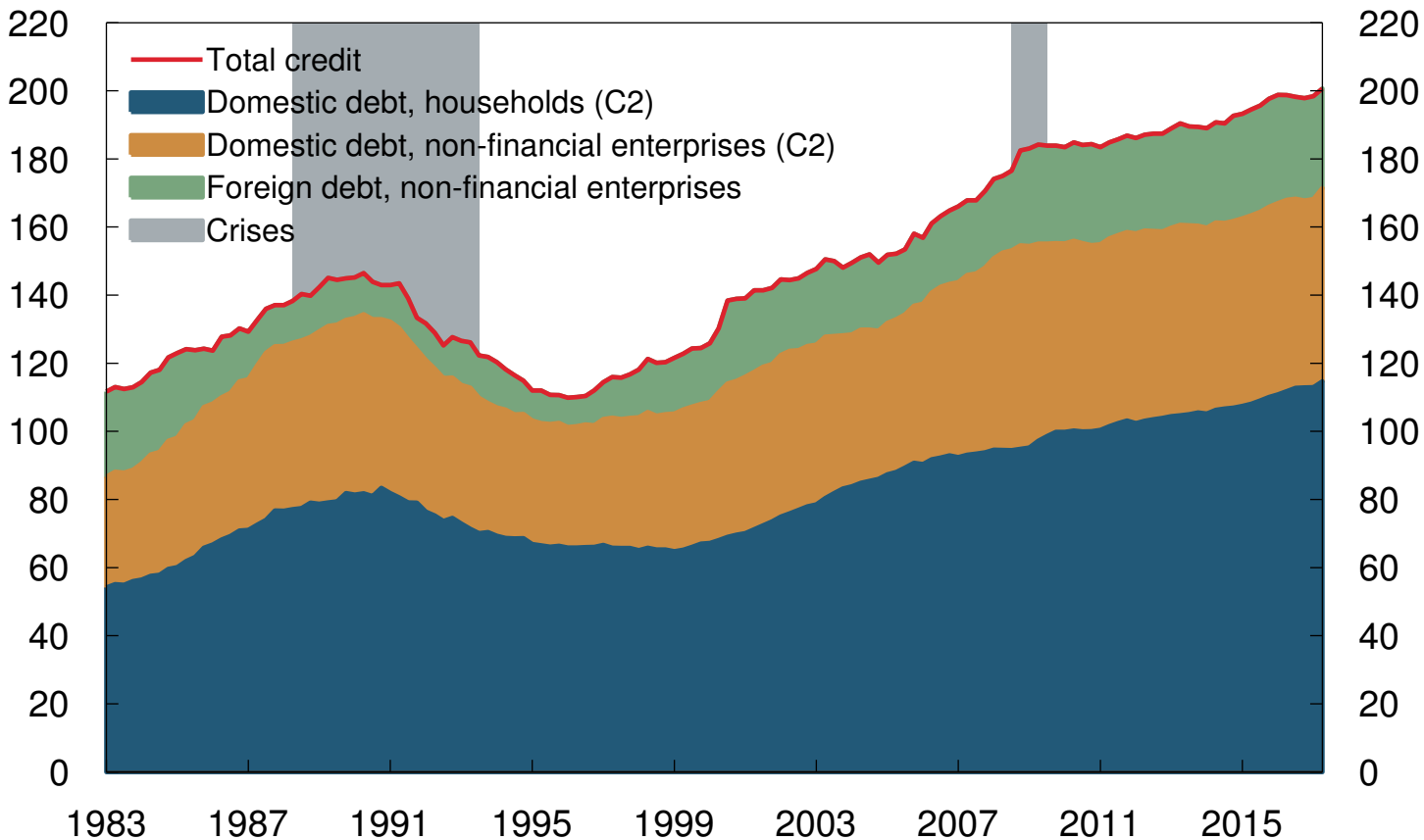
Chart 5.1 Common Equity Tier 1 (CET1) capital ratios for the largest EU banks.¹⁾
Percent. 2014 Q4 – 2017 Q1



1) Based on 189 banks.

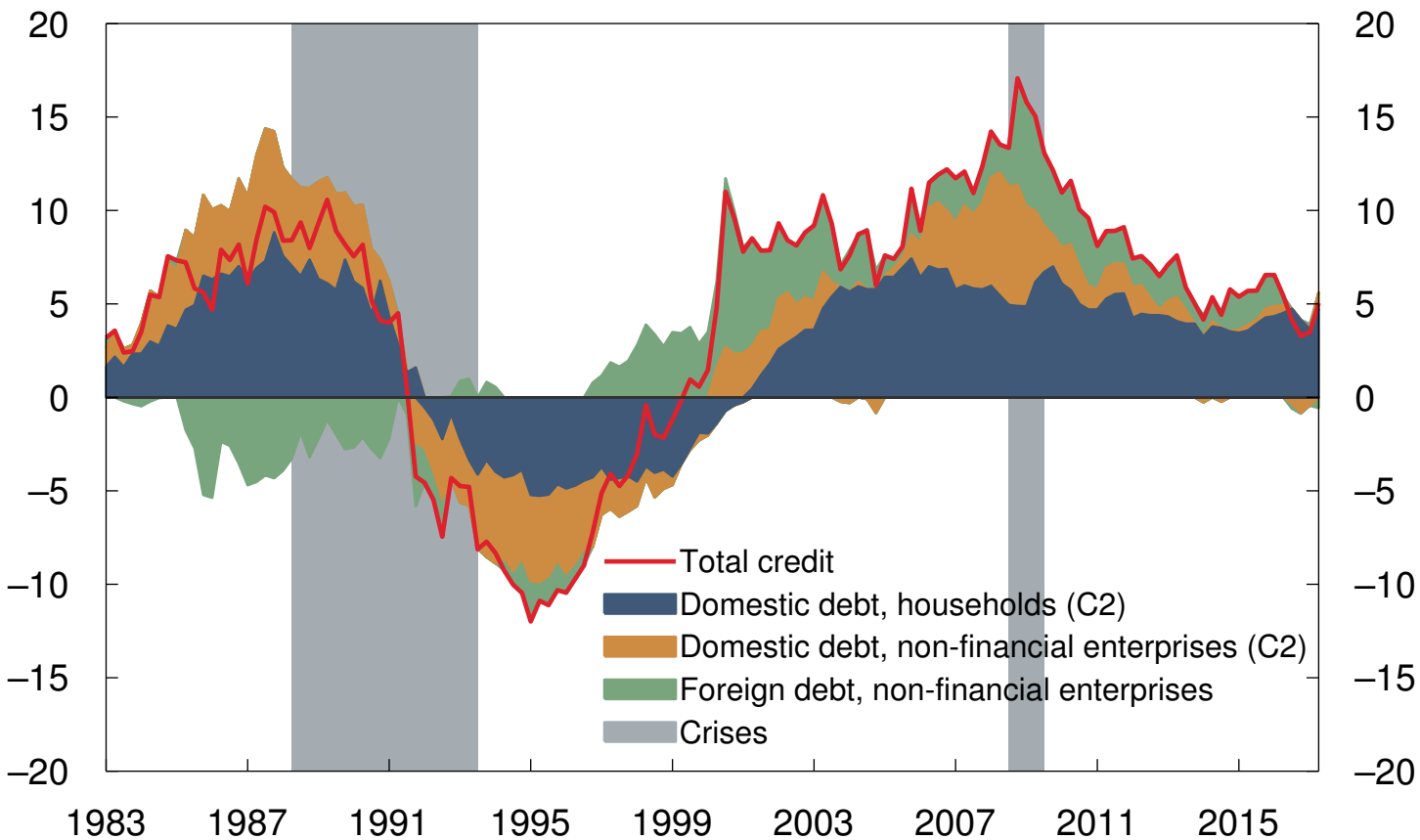
Chart 5.2 Credit mainland Norway as a share of mainland GDP.

Percent. 1983 Q1 – 2017 Q2



Sources: IMF, Statistics Norway and Norges Bank

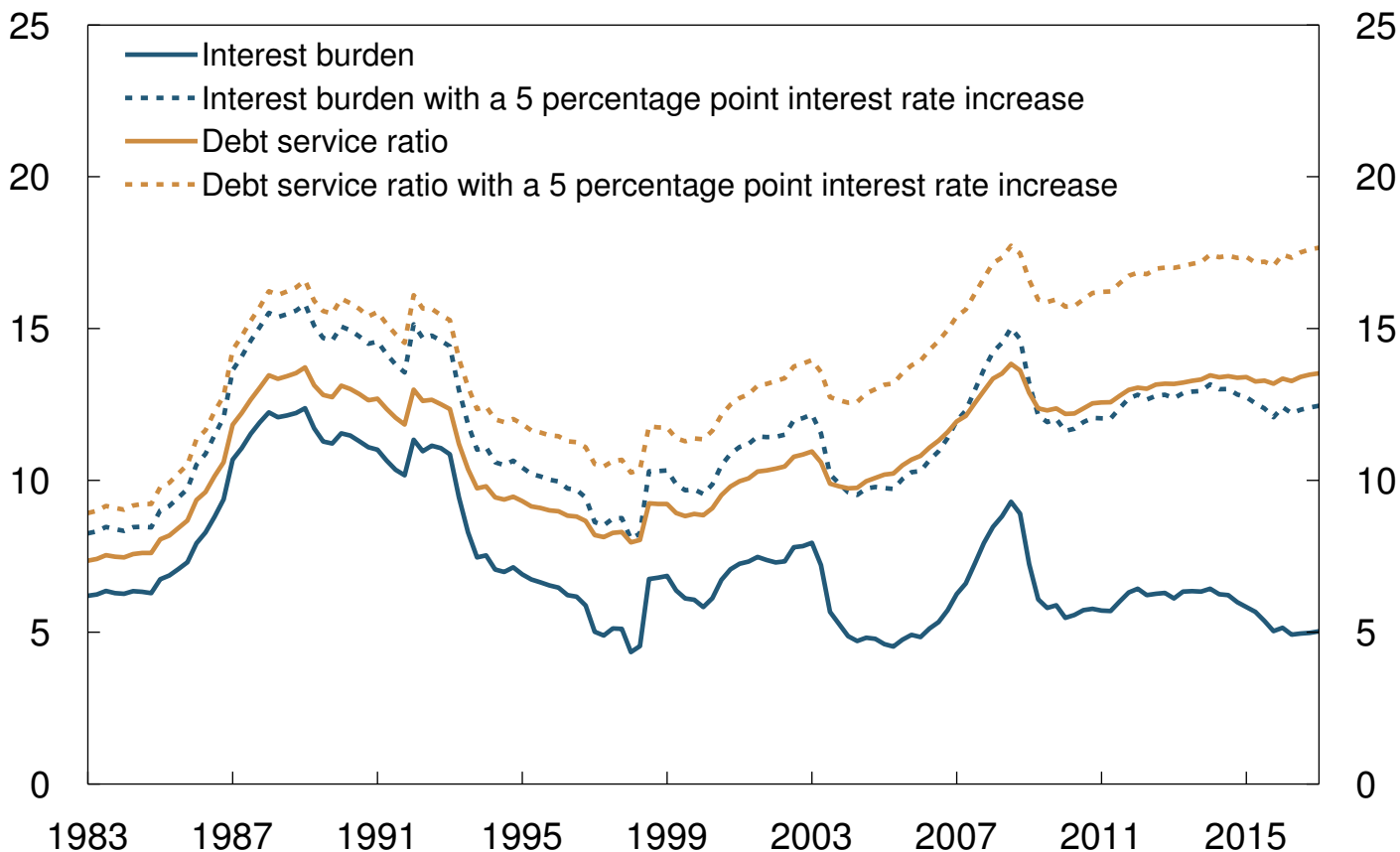
Chart 5.3 Decomposed credit gap. Credit mainland Norway as a share of mainland GDP. Deviation from trend with augmented HP filter.¹⁾
 Percentage points. 1983 Q1 – 2017 Q2



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

Chart 5.4 Household interest burden and debt service ratio.¹⁾

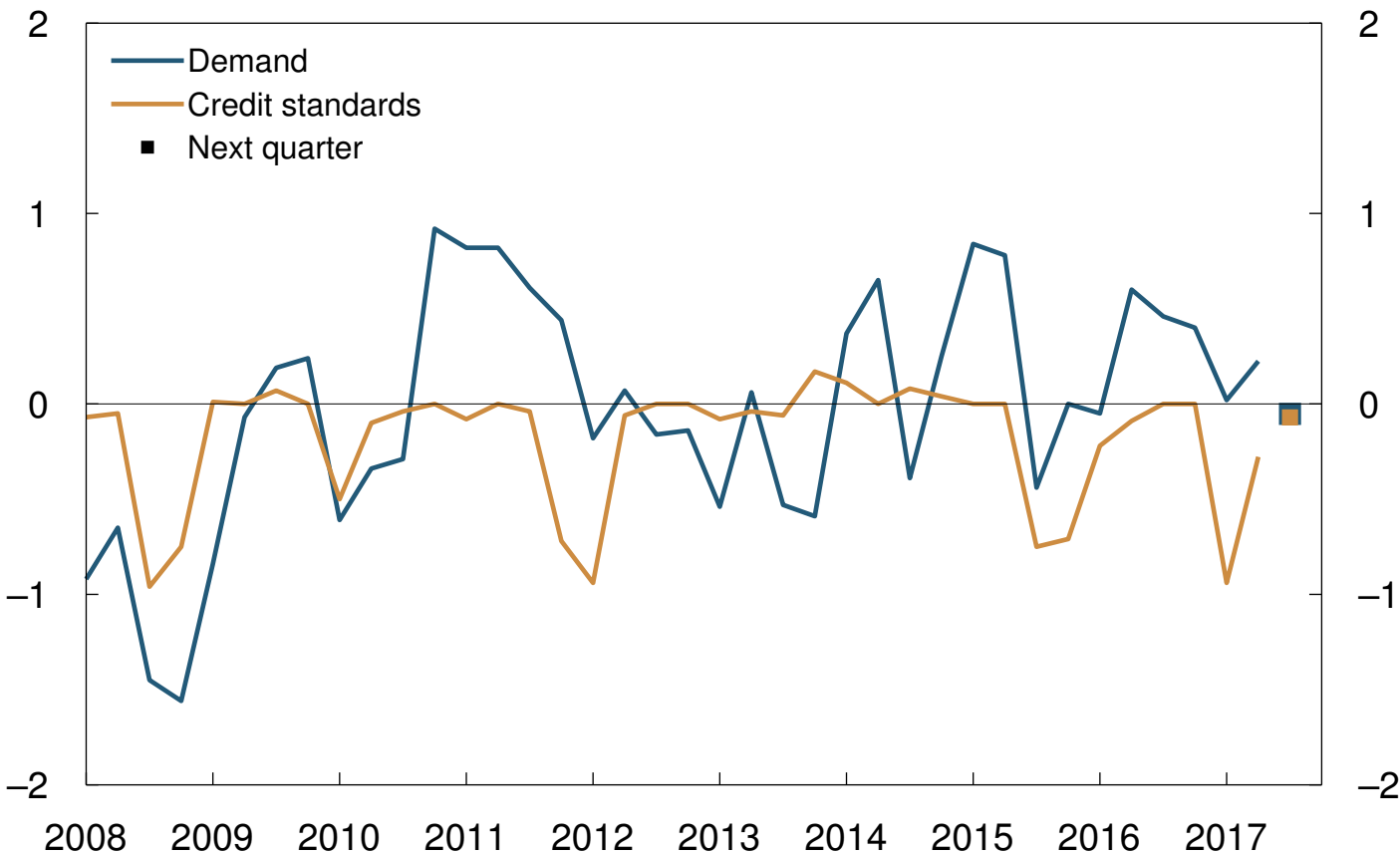
Percent. 1983 Q1 – 2017 Q1



1) The interest burden is calculated as interest expenses as a percentage of disposable income plus interest expenses. The debt service ratio also includes estimated principal payments on an 18-year mortgage. Disposable income is adjusted for estimated reinvested dividend income for 2003 – 2005 and reduction of equity capital for 2006 Q1 – 2012 Q3. Growth in disposable income excluding dividend income is used for the period 2015 Q1 – 2017 Q1.

Sources: Statistics Norway and Norges Bank

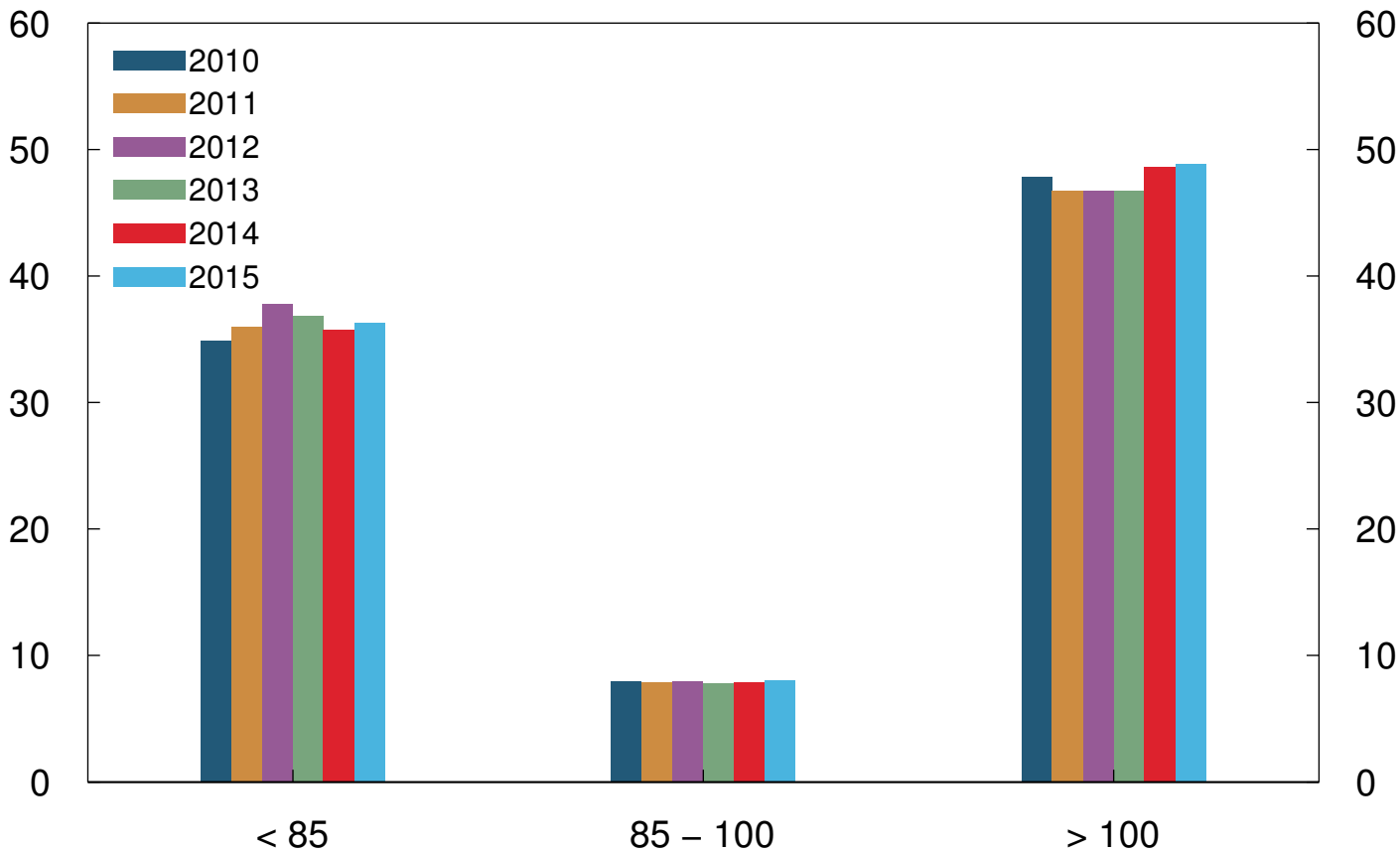
Chart 5.5 Credit demand and banks' credit standards.¹⁾
Change from previous quarter. Households. 2008 Q1 – 2017 Q2



1) The banks respond on a scale of +/-2. In the aggregated figures, banks are weighted by the size of their balance sheets. Negative values denote lower demand or tighter credit standards.

Source: Norges Bank's Survey of Bank Lending

Chart 5.6 Distribution of debt by loan-to-value ratio.¹⁾ Share of loan volume.²⁾
Percent. 2010 – 2015

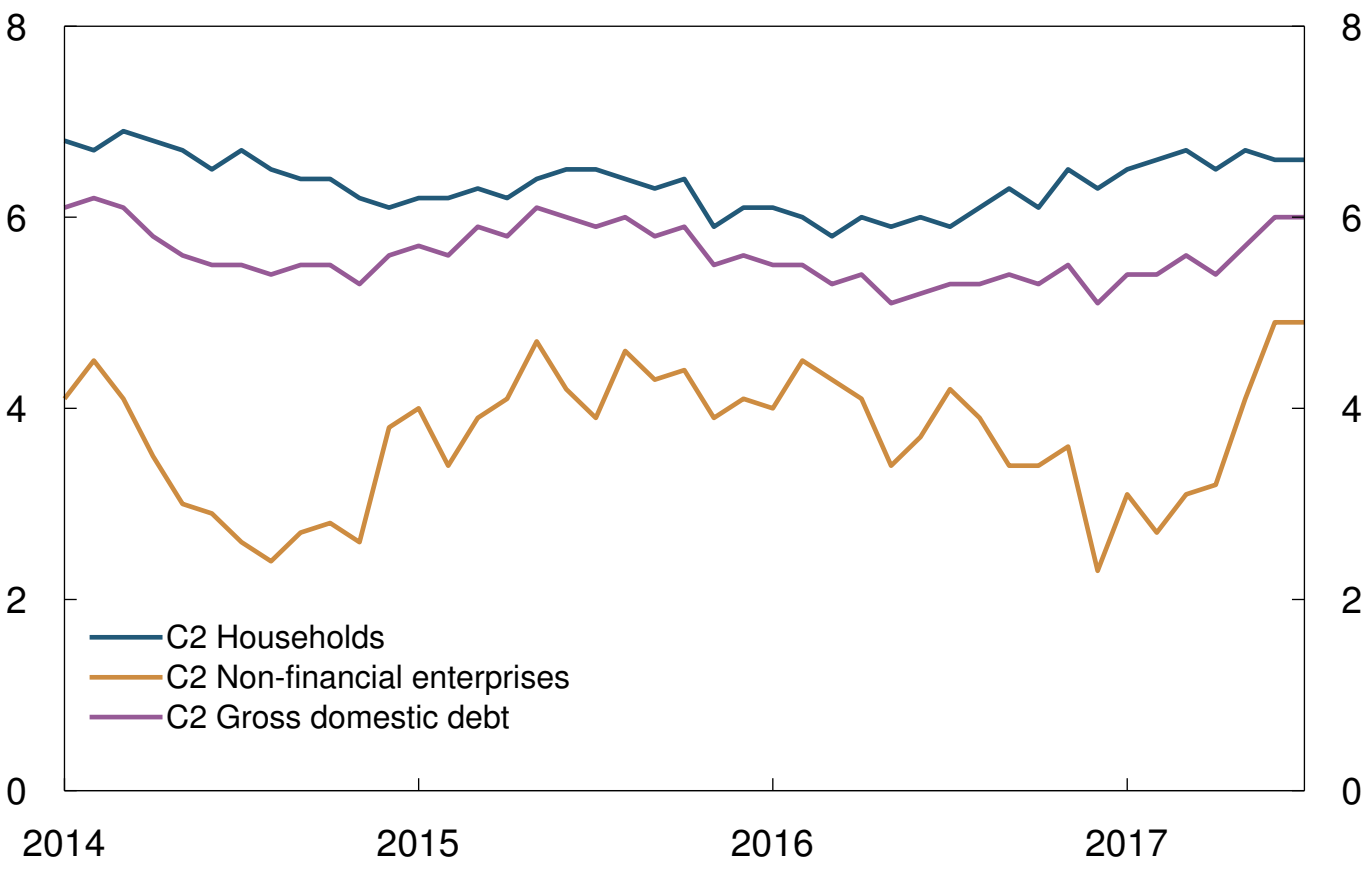


1) Total debt excluding student loans.

2) Non-homeowning households with debt are not included. Hence, the bars do not sum up to 100 for each year.

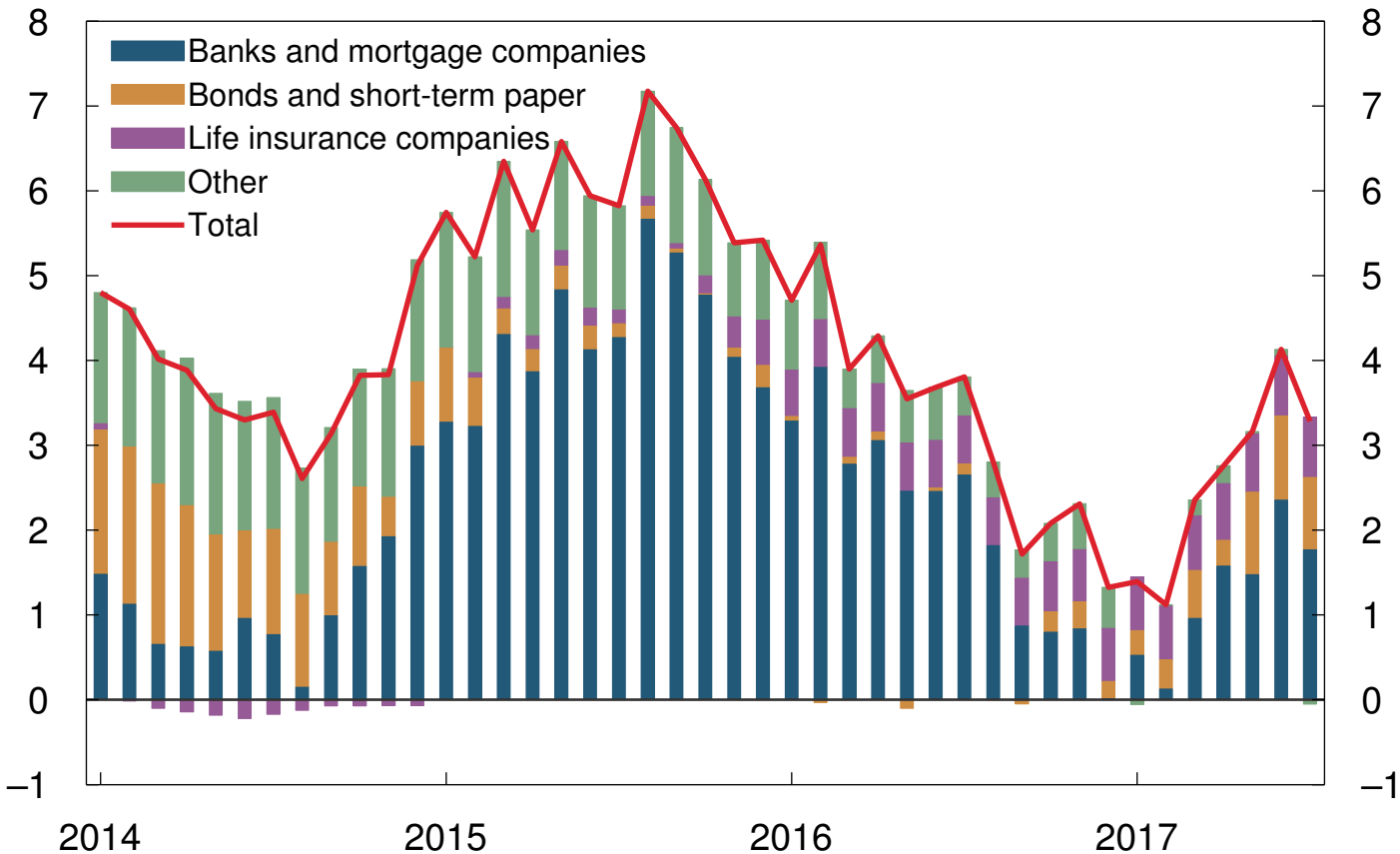
Sources: Norwegian Tax Administration and Norges Bank

Chart 5.7 Credit to households and non-financial enterprises in mainland Norway. Twelve-month change. Percent. January 2014 – July 2017



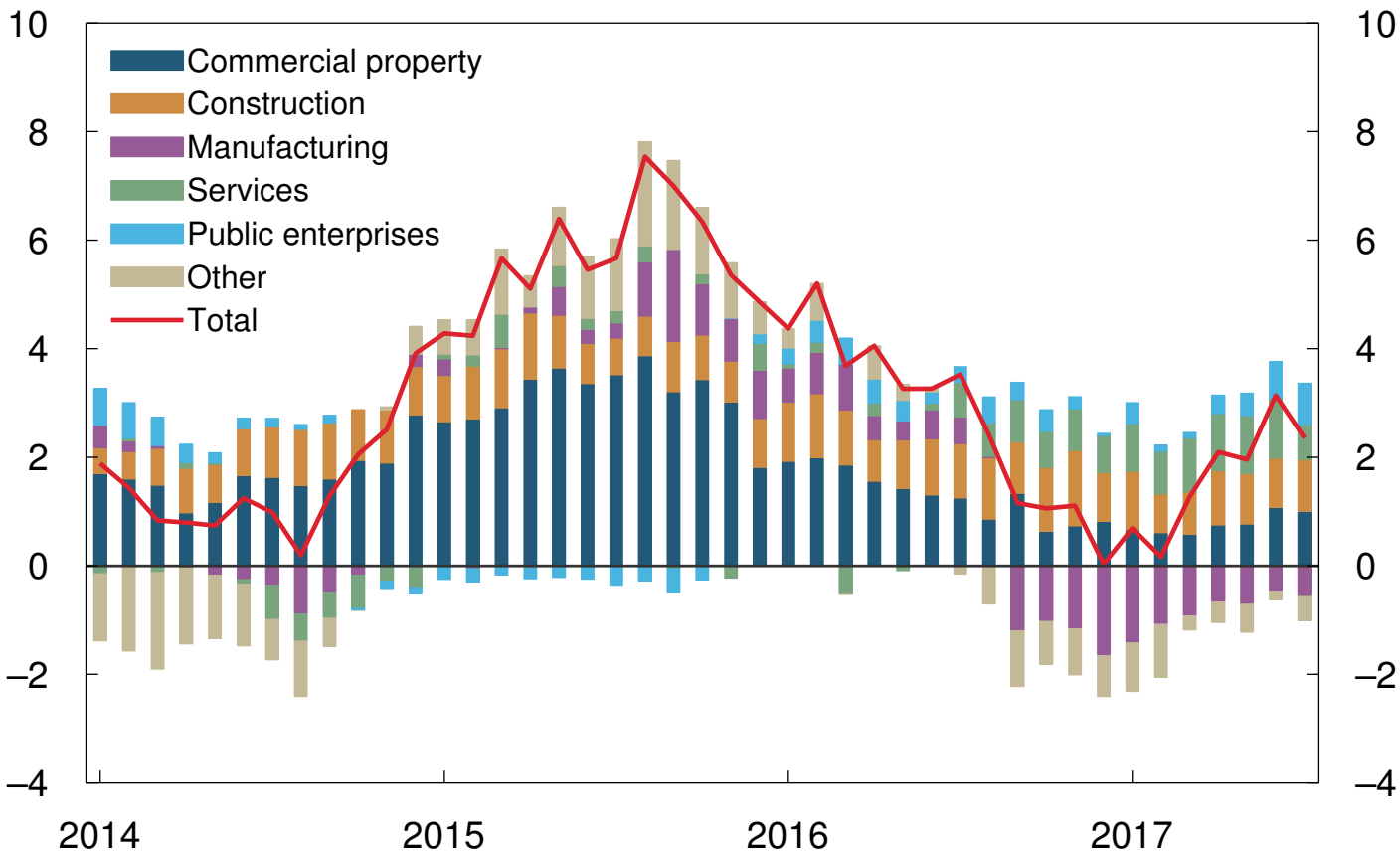
Sources: Statistics Norway and Norges Bank

Chart 5.8 Credit to non-financial enterprises, by source.
 Stock. Twelve-month change. Percent. January 2014 – July 2017



Source: Statistics Norway

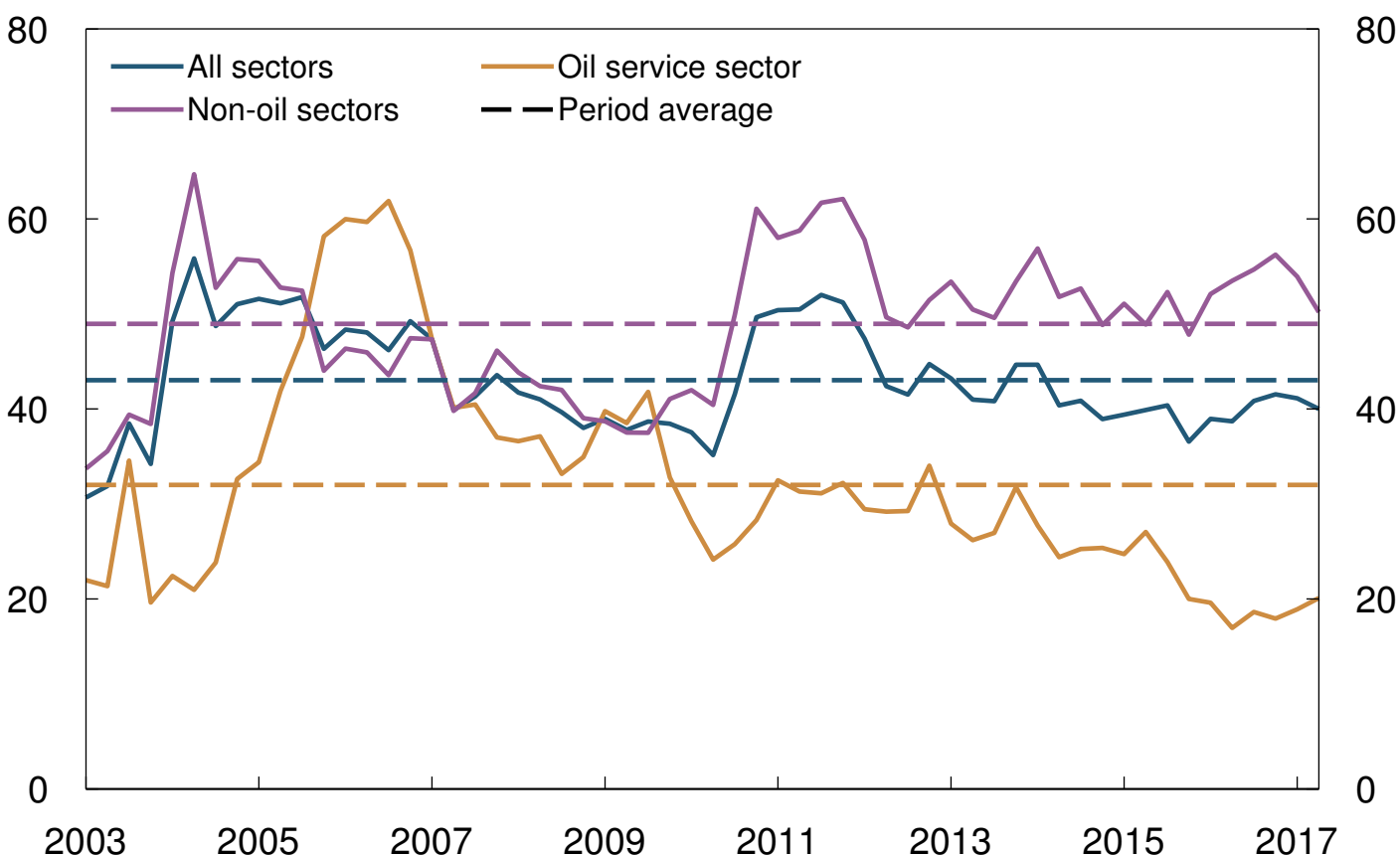
Chart 5.9 Credit from banks and mortgage companies, by sector.
 Stock. Twelve-month change. Percent. January 2014 – July 2017



Sources: Statistics Norway and Norges Bank

Chart 5.10 Debt-servicing capacity¹⁾ and historical averages.

Listed companies.²⁾ Percent. 2003 Q1 – 2017 Q2



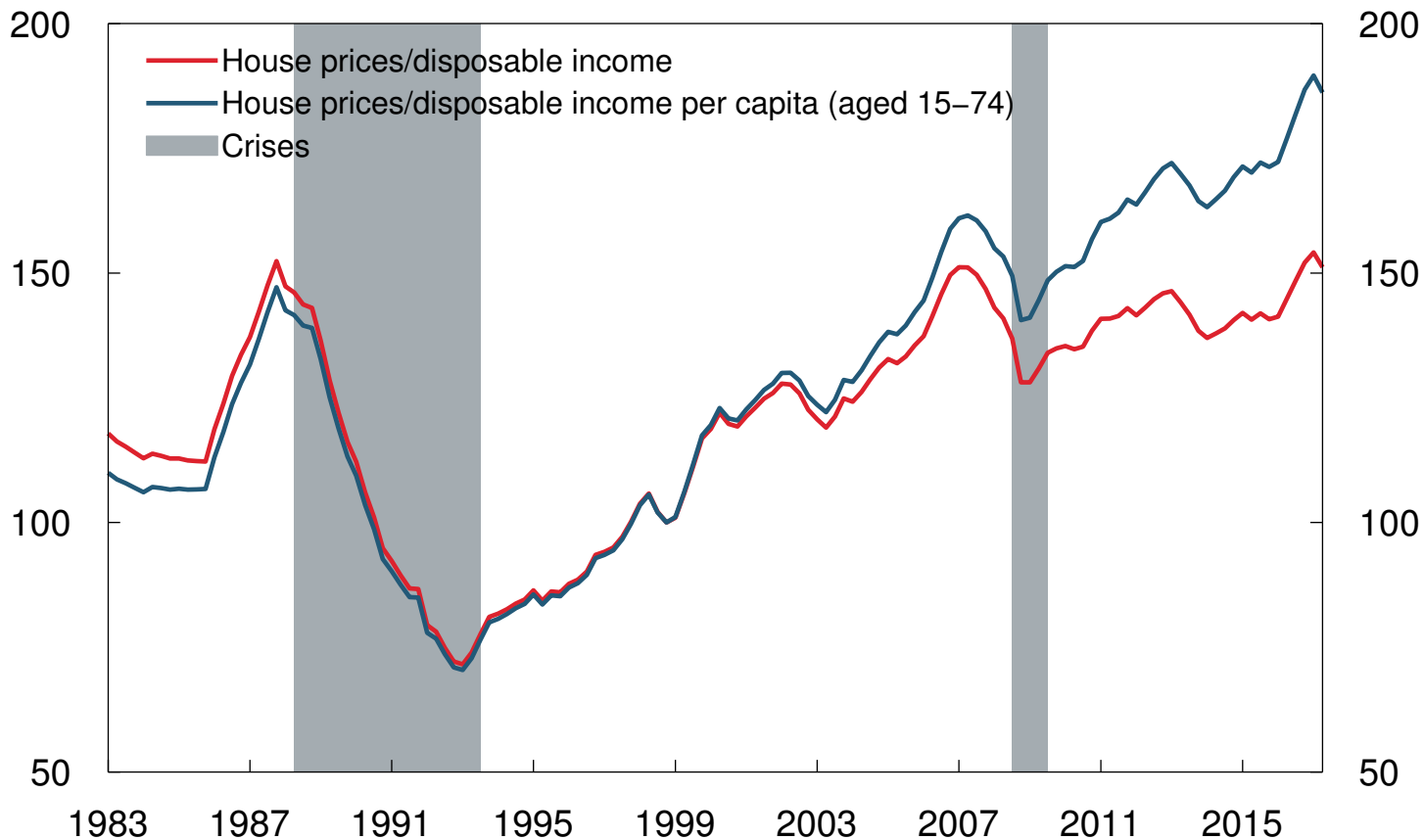
1) Earnings before interest, tax, depreciation and amortisation (EBITDA) for the previous four quarters as a percentage of net-interest bearing debt.

2) Norwegian non-financial companies listed on Oslo Børs, excluding oil and gas extraction. Norsk Hydro is excluded to end-2007 Q3.

Sources: Bloomberg and Norges Bank

Chart 5.11 House prices relative to disposable income.¹⁾

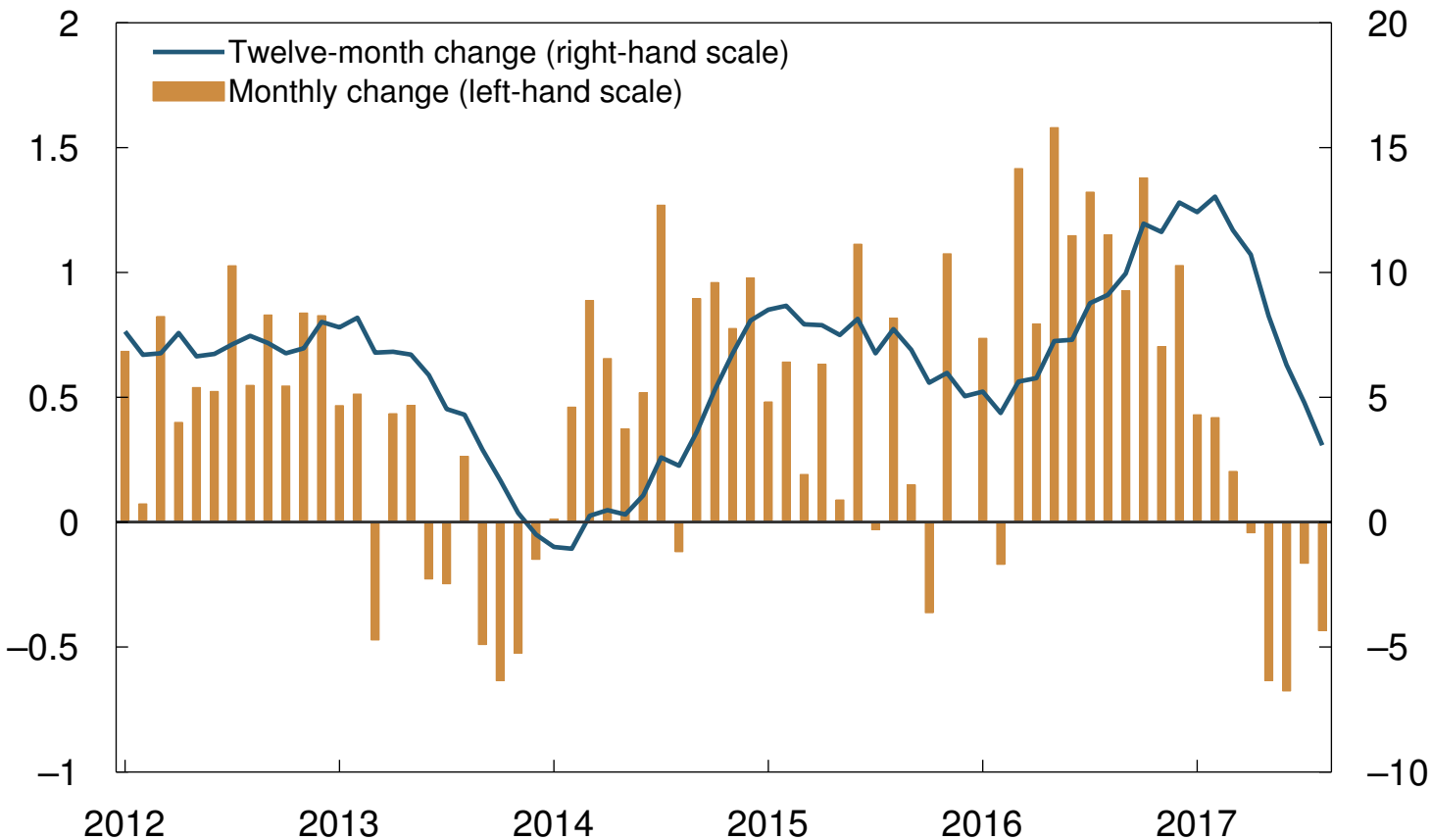
Index. 1998 Q4 = 100. 1983 Q1 – 2017 Q2



1) Disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and reduction of equity capital for 2006 Q1 – 2012 Q3. Growth in disposable income excluding dividend income is used for 2015 Q1 – 2017 Q2.

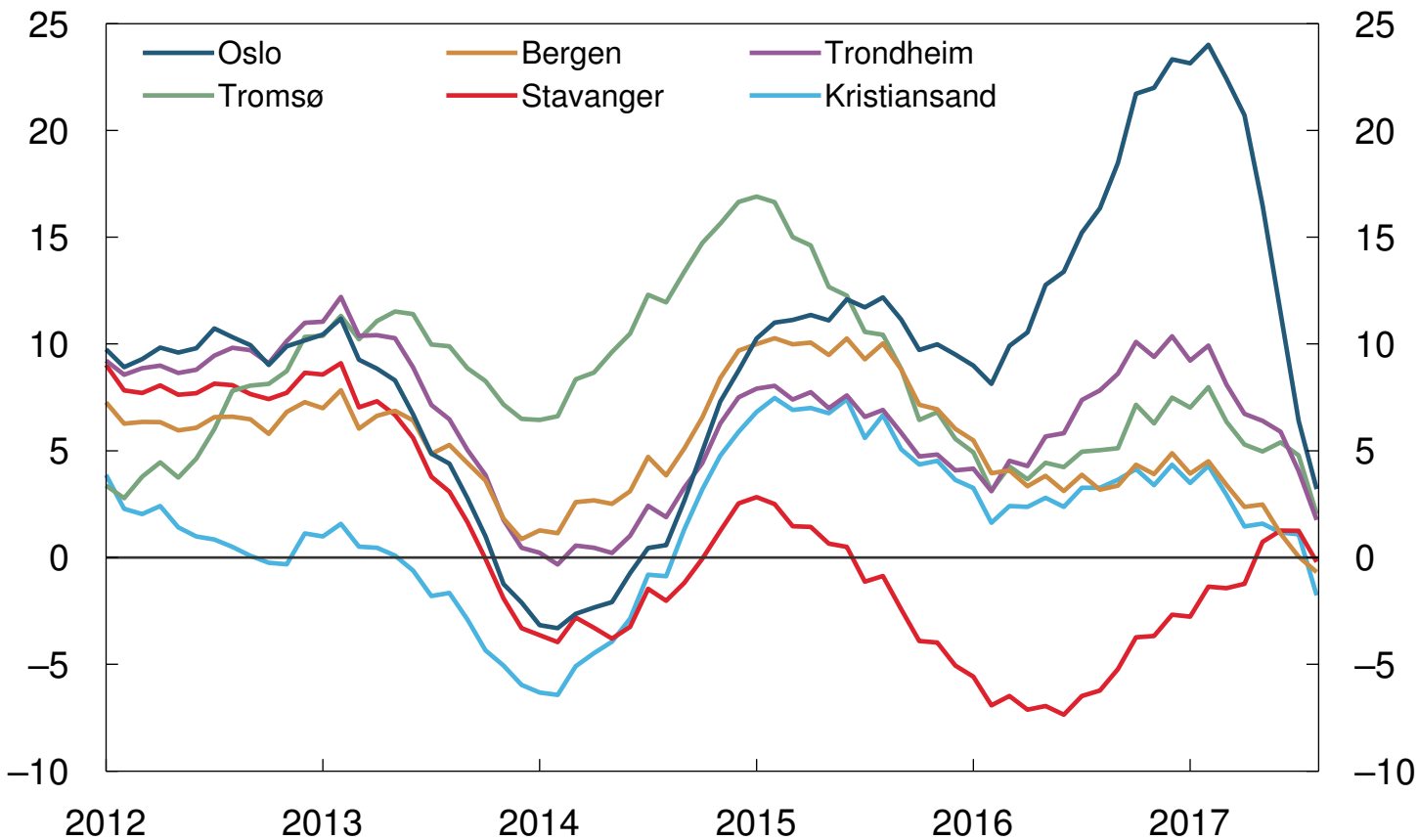
Sources: Eiendomsverdi, Finn.no, Norwegian Association of Real Estate Agents (NEF), Real Estate Norway, Statistics Norway and Norges Bank

Chart 5.12 House prices. Twelve-month change and seasonally adjusted monthly change. Percent. January 2012 – August 2017



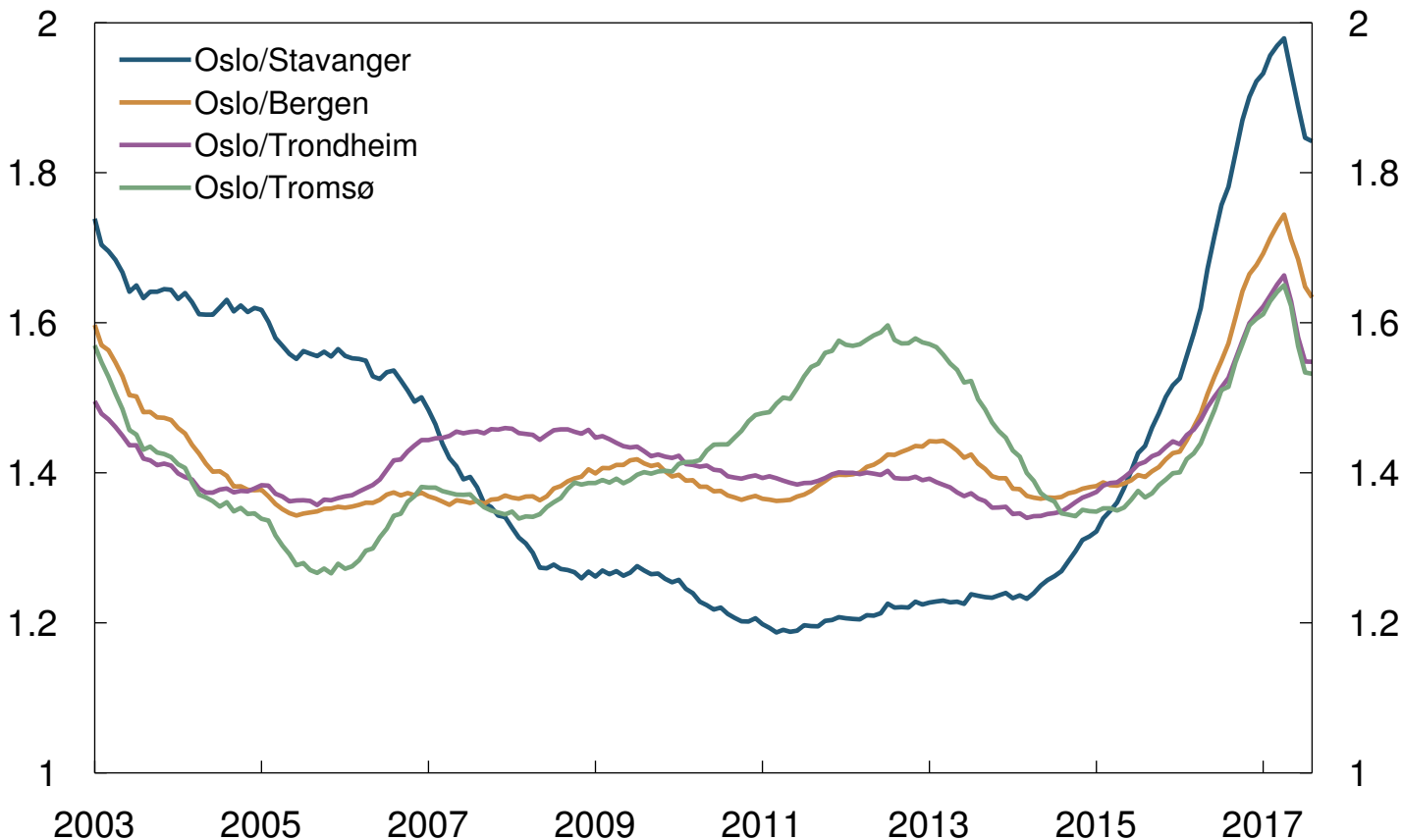
Sources: Eiendomsverdi, Finn.no and Real Estate Norway

Chart 5.13 House prices. Twelve-month change.
Percent. January 2012 – August 2017



Sources: Eiendomsverdi, Finn.no and Real Estate Norway

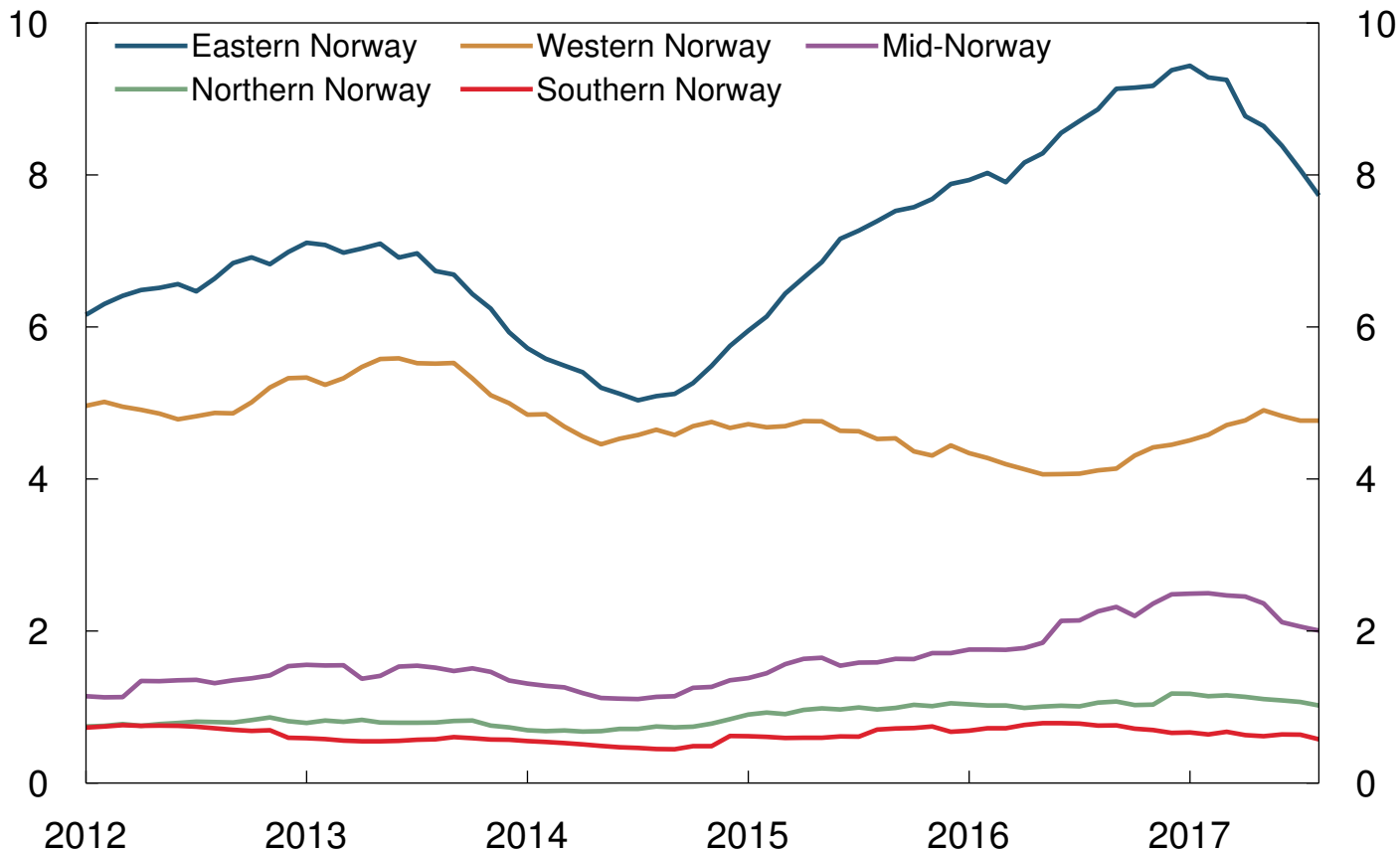
Chart 5.14 Estimated price per square metre in Oslo relative to other cities.¹⁾
January 2003 – August 2017



1) Prices per sq.m. by end-August are based on observations from the past six months. Prices per sq.m. are extended by using past growth in the house price index of the relevant city.

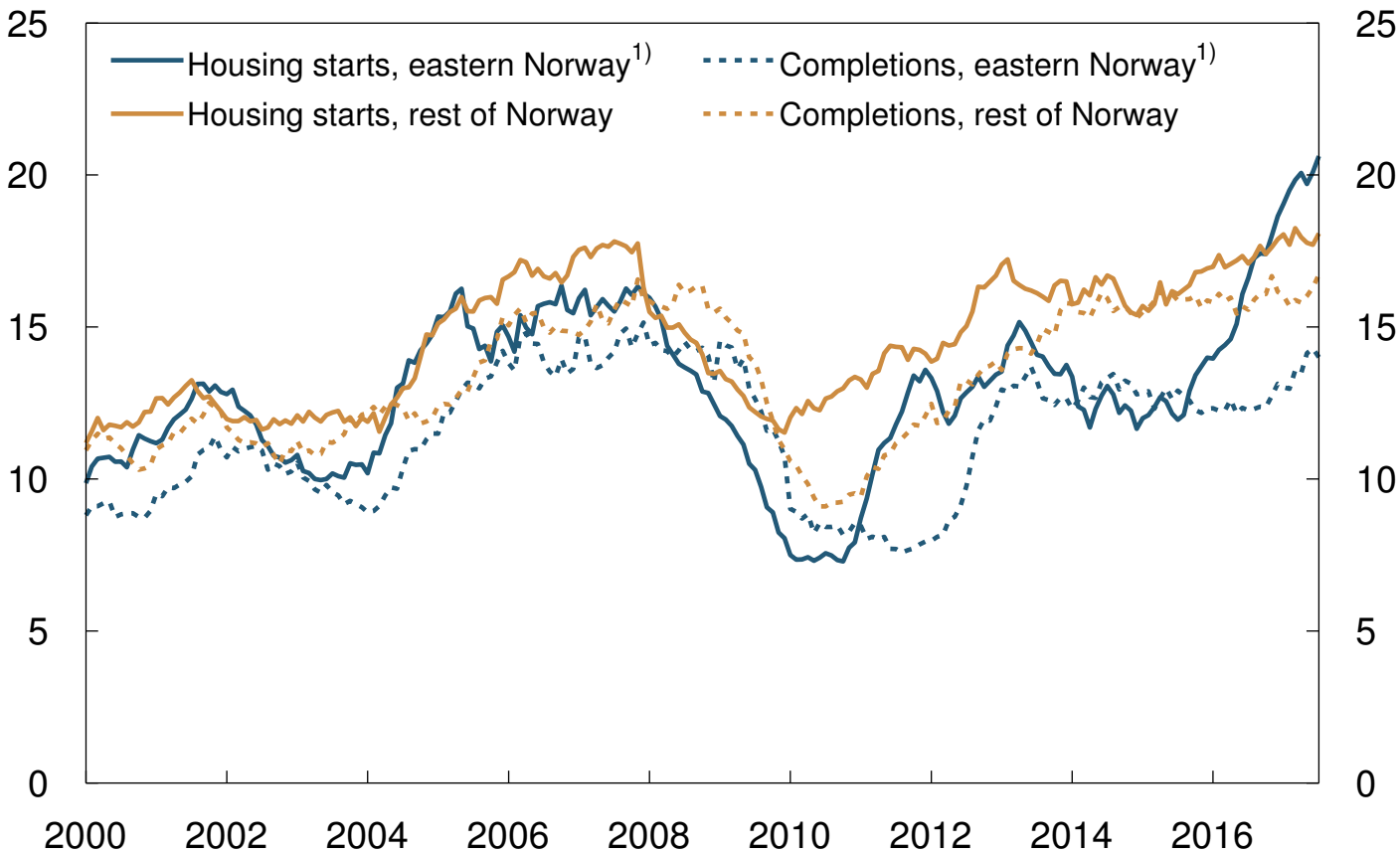
Sources: Eiendomsverdi, Finn.no and Real Estate Norway

Chart 5.15 New home sales. In thousands. Sum past twelve months.
January 2012 – August 2017



Sources: Norwegian Home Builders' Association, Prognosesenteret and Norges Bank

Chart 5.16 Housing starts and completions. In thousands.
Sum past twelve months. January 2000 – July 2017

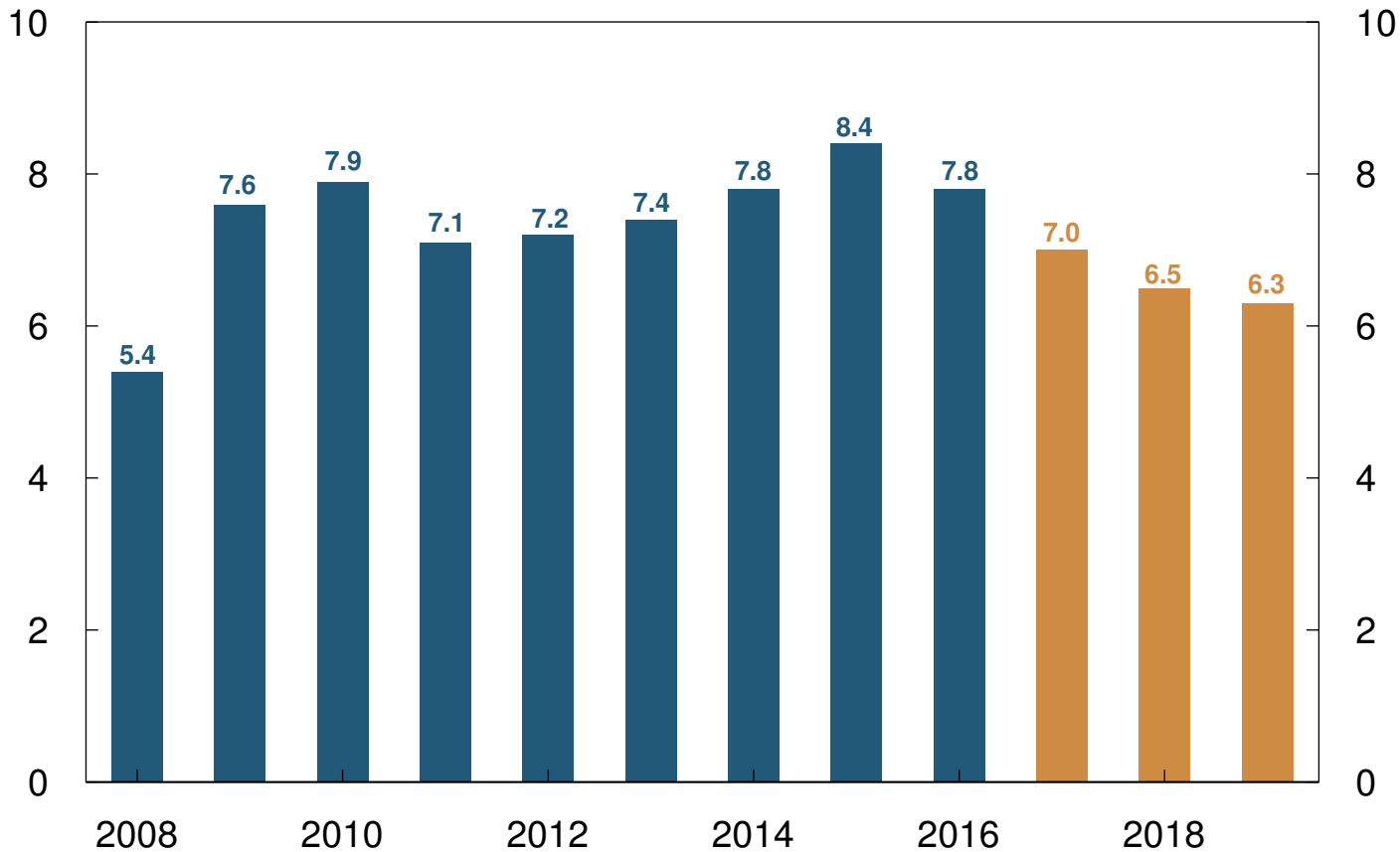


1) Akershus, Buskerud, Hedmark, Oppland, Oslo, Telemark, Vestfold and Østfold.

Sources: Statistics Norway and Norges Bank

Chart 5.17 Office vacancy rates in Oslo and Bærum at year-end.¹⁾

Percent. 2008 – 2019²⁾

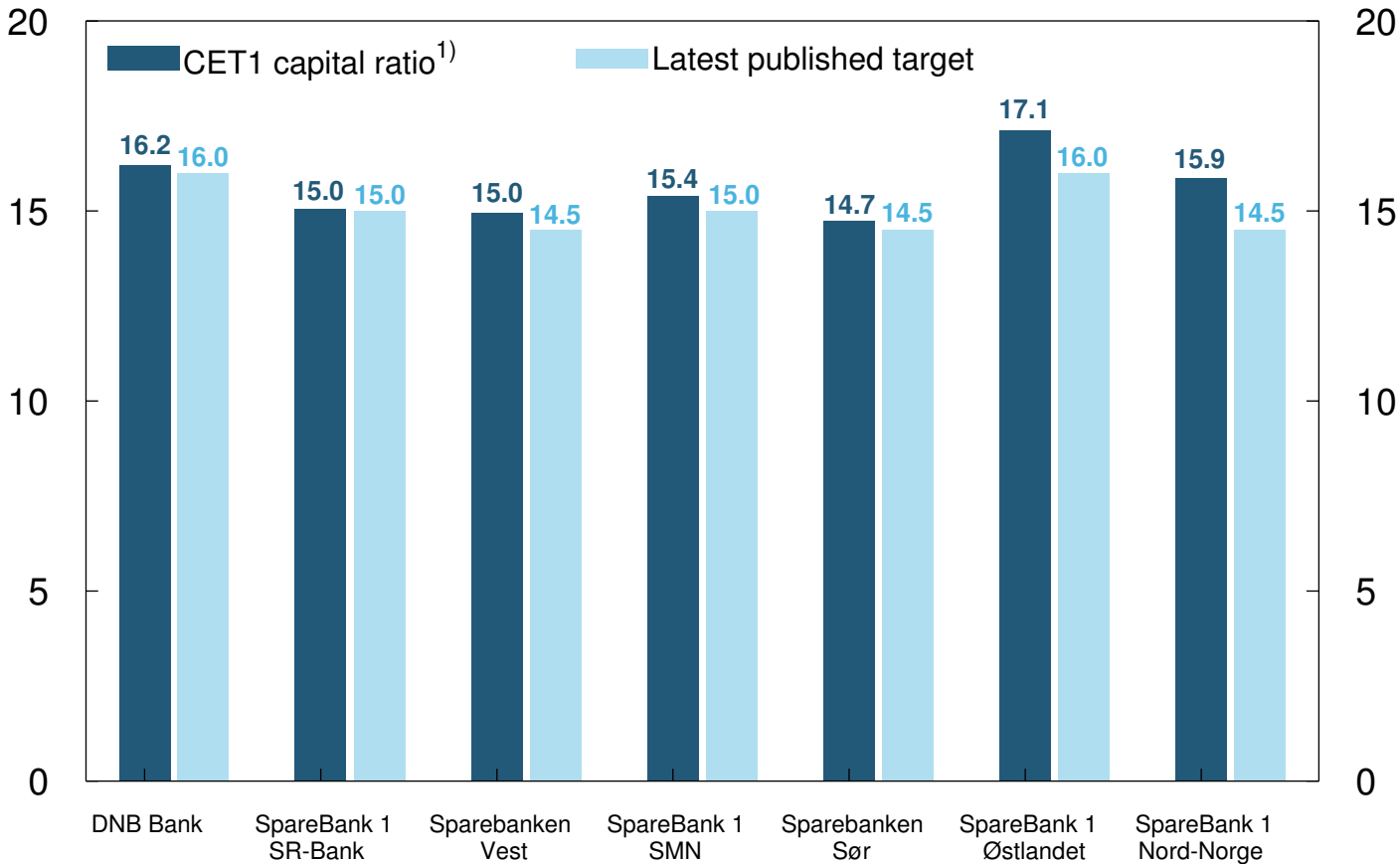


1) Calculated as the average of projections from different analysts at 30 June 2017.

2) Projections for 2017 – 2019.

Source: Entra

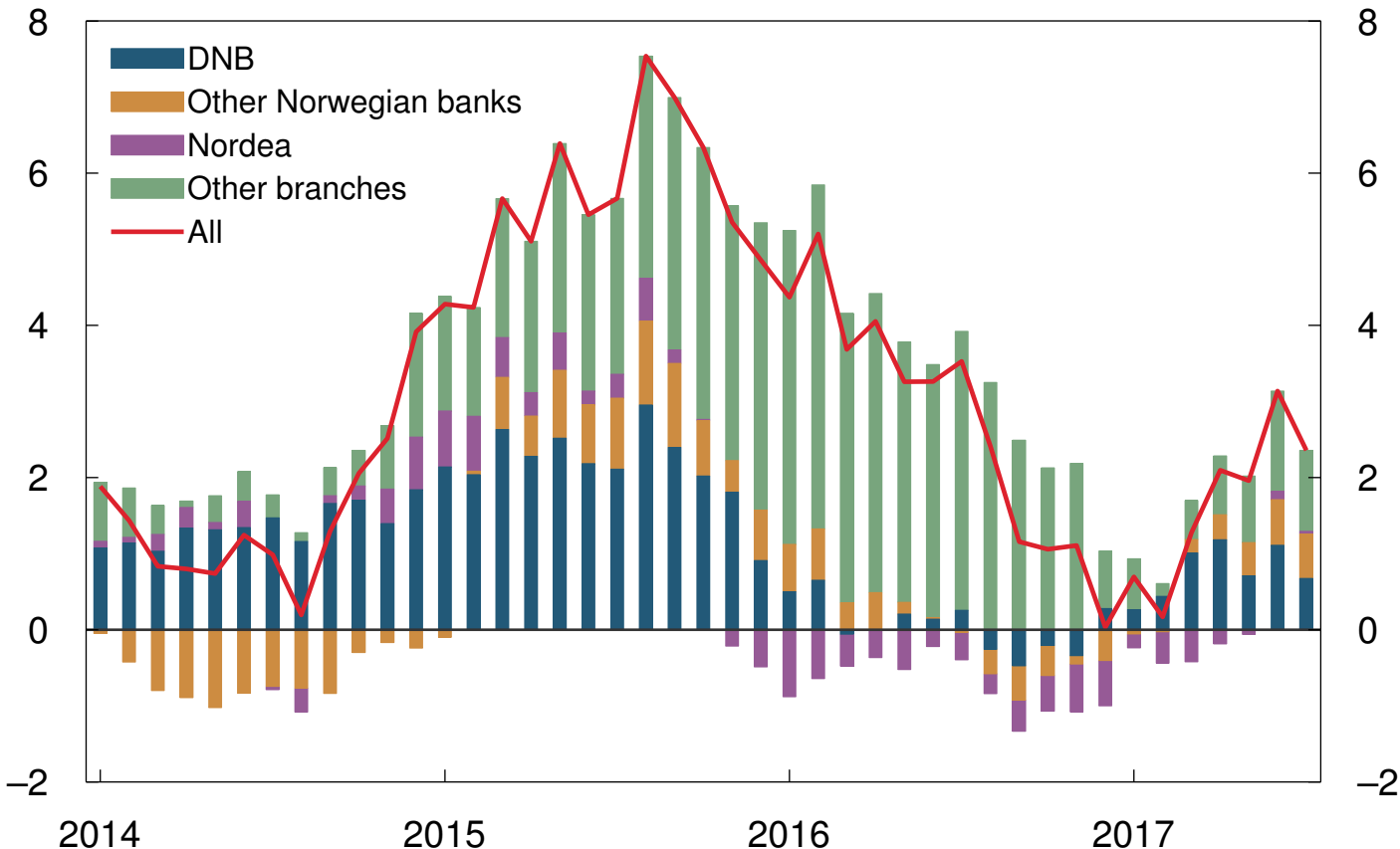
Chart 5.18 Common Equity Tier 1 (CET1) capital ratios and targets for large Norwegian banks at 2017 Q2. Percent



1) Includes complete result for 2017 H1.

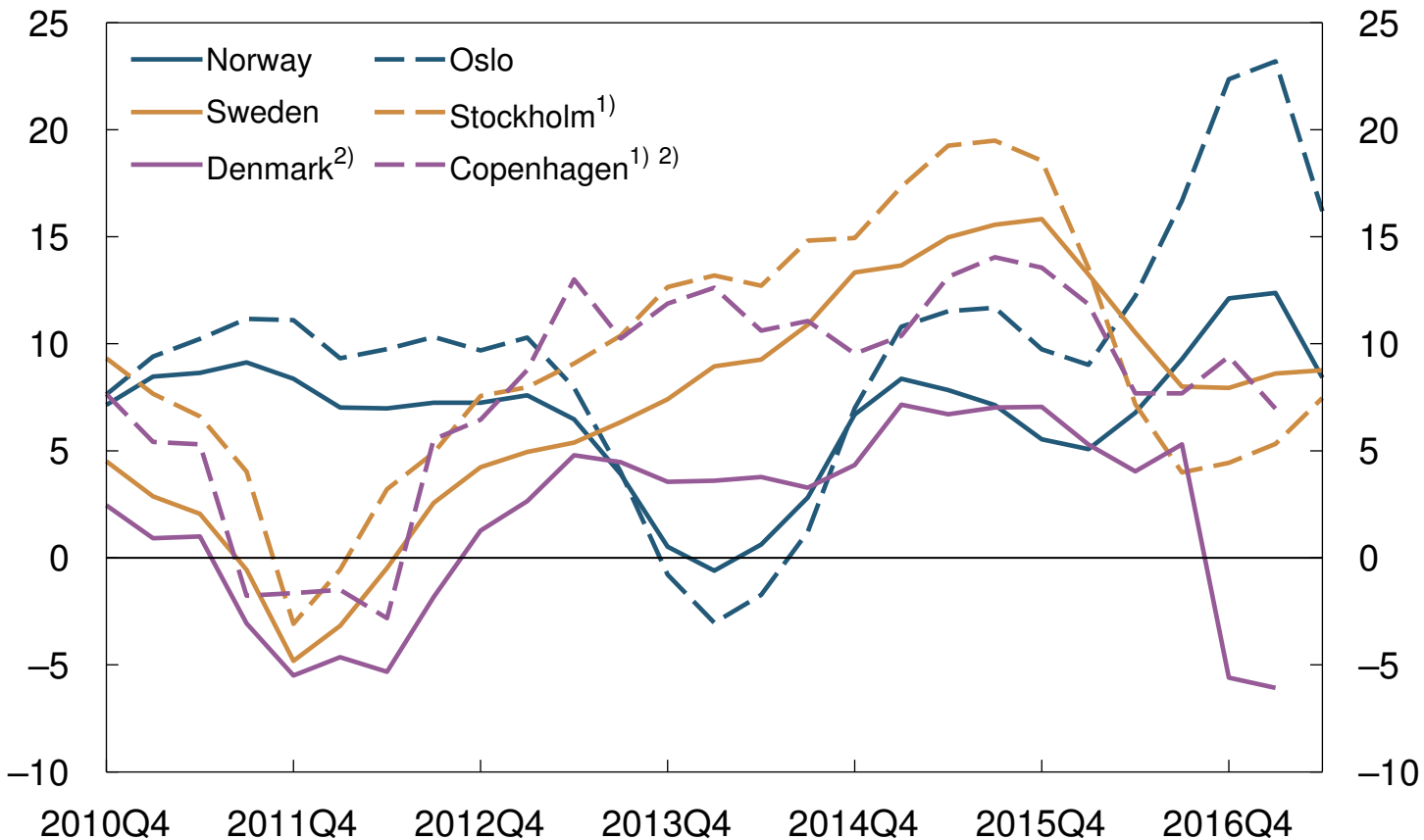
Sources: Banks' quarterly reports and Norges Bank

Chart 5.19 Corporate lending by banks and mortgage companies. Stock. Twelve-month change. Percent. January 2014 – July 2017



Source: Norges Bank

Chart 5.20 House prices in selected countries and capitals.
 Four-quarter change. Percent. 2010 Q4 – 2017 Q2

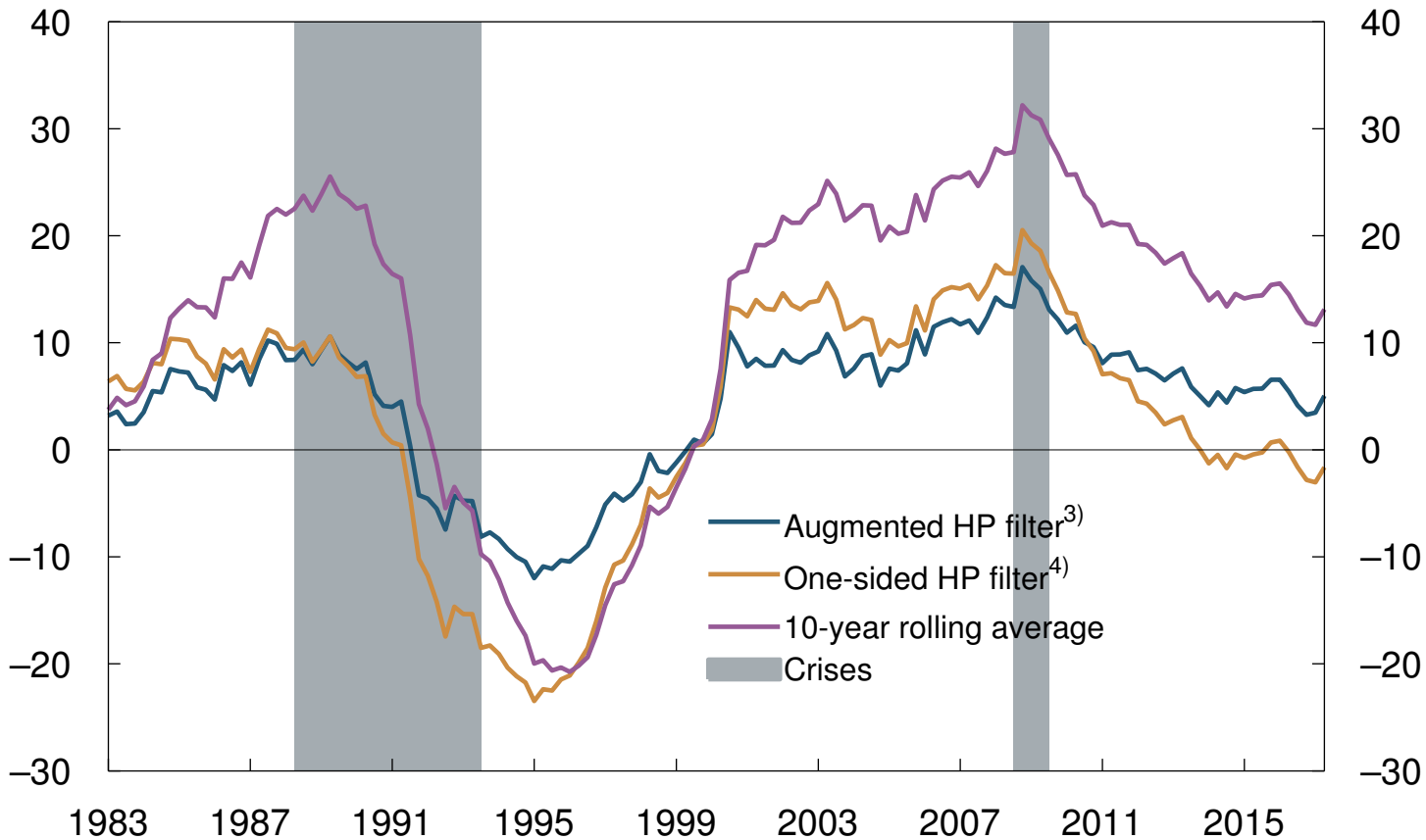


1) Flats only.

2) The latest observation is 2017 Q1.

Sources: Eiendomsverdi, Finn.no, Real Estate Norway, Statistics Denmark and Valueguard

Chart 5.21 Credit gap. Total credit mainland Norway¹⁾ as a share of mainland GDP. Deviation from estimated trends.²⁾ Percentage points. 1983 Q1 – 2017 Q2



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.

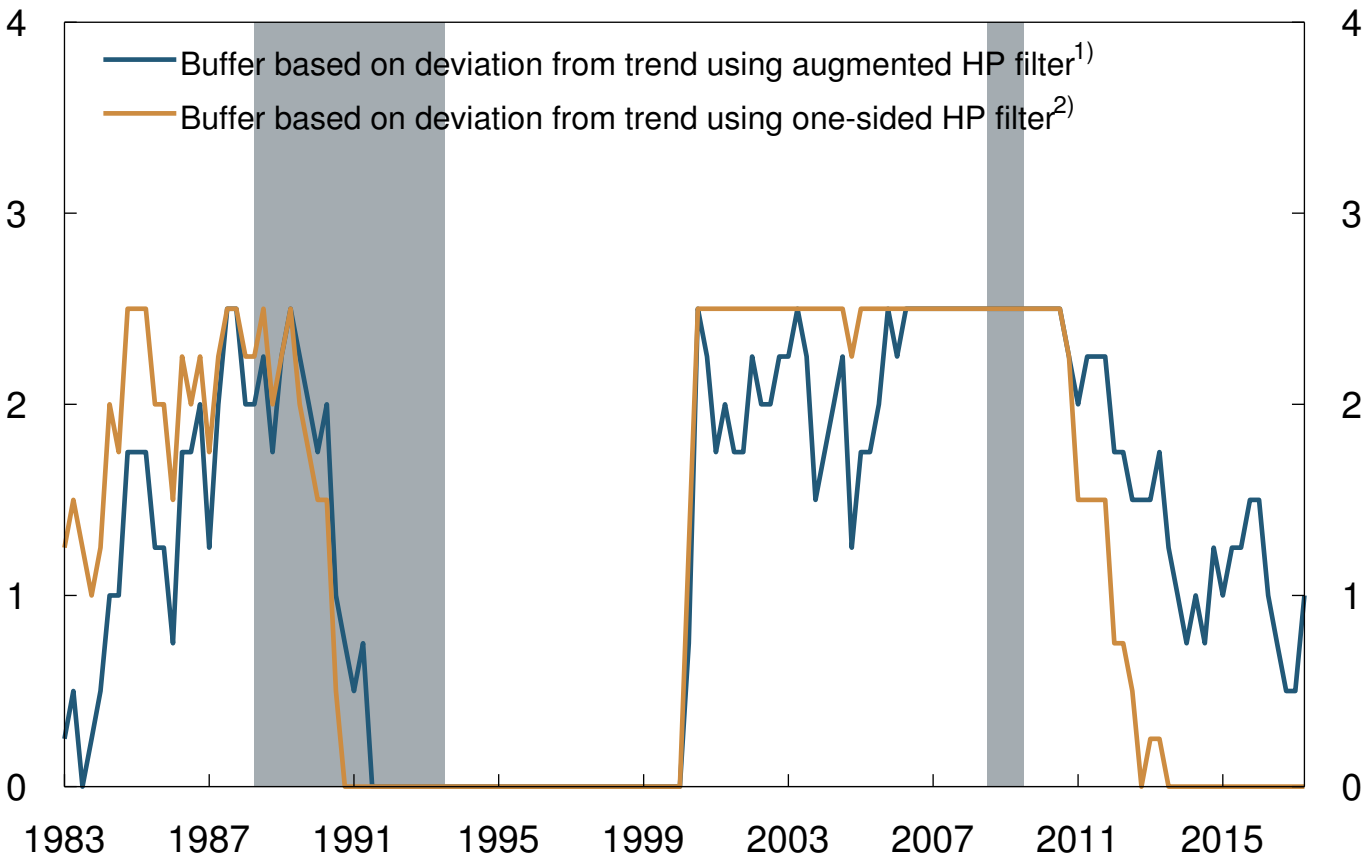
2) The trends are estimated based on data from 1975 Q4 onwards.

3) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.

4) One-sided Hodrick-Prescott filter. Lambda = 400 000.

Sources: IMF, Statistics Norway and Norges Bank

Chart 5.22 Reference rates for the countercyclical capital buffer under alternative trend estimates. Percent. 1983 Q1 – 2017 Q2

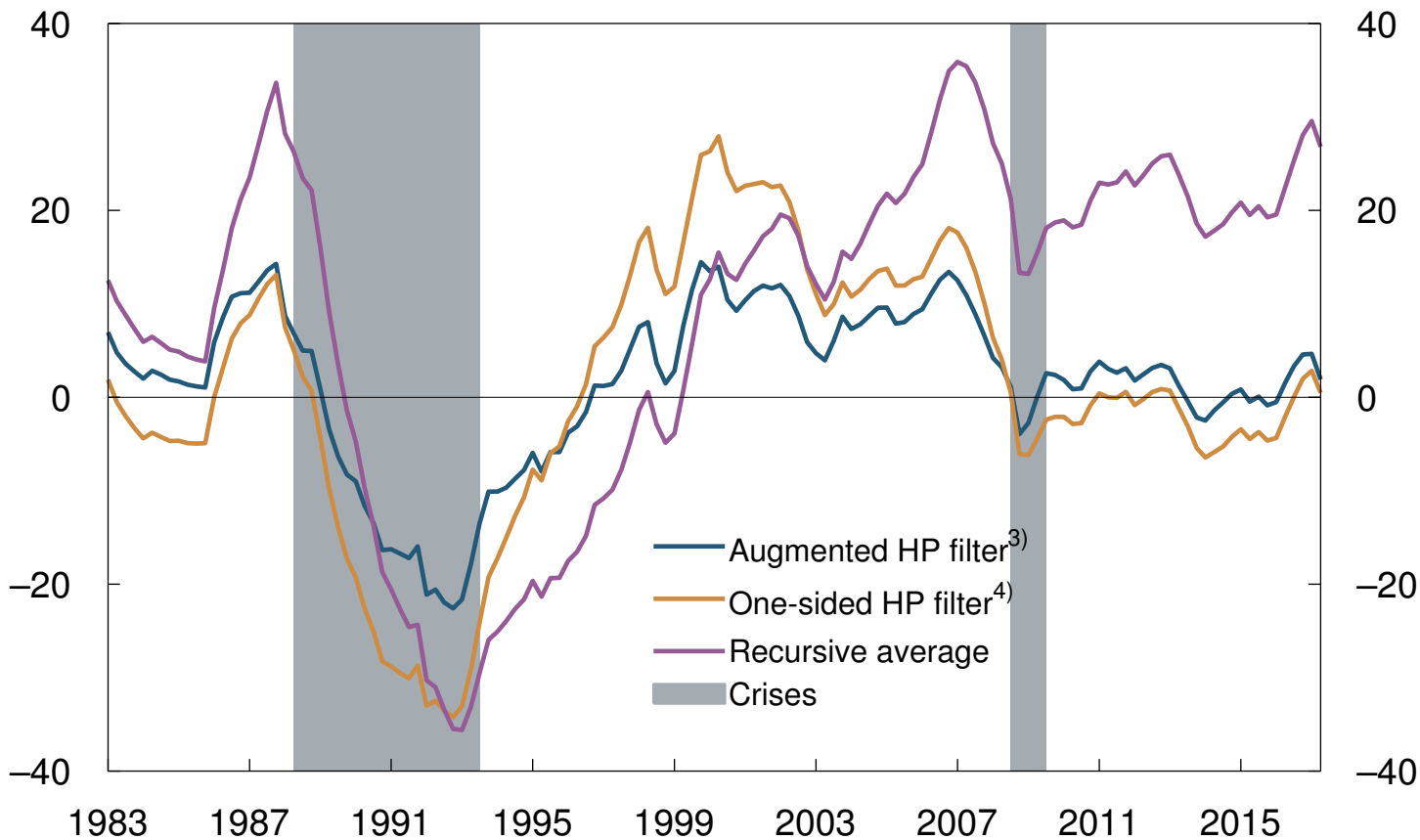


1) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.

2) One-sided Hodrick-Prescott filter. Lambda = 400 000.

Sources: IMF, Statistics Norway and Norges Bank

Chart 5.23 House price gap. House prices relative to disposable income¹⁾ as deviation from estimated trends.²⁾ Percent. 1983 Q1 – 2017 Q2



1) Disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and reduction of equity capital for 2006 Q1 – 2012 Q3. Growth in disposable income excluding dividend income is used for 2015 Q1 – 2017 Q2.

2) The trends are estimated based on data from 1978 Q4 onwards.

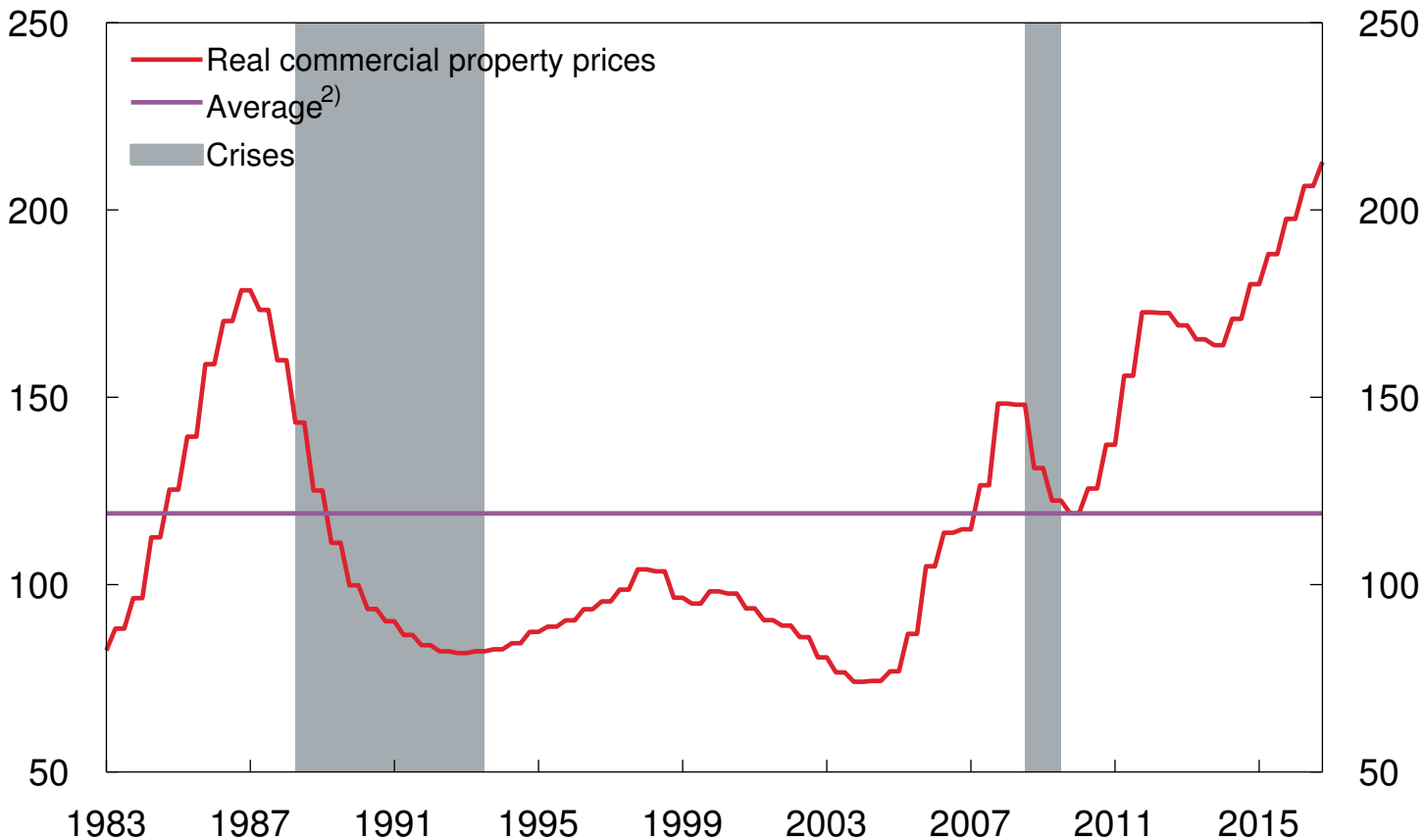
3) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.

4) One-sided Hodrick-Prescott filter. Lambda = 400 000.

Sources: Eiendomsverdi, Finn.no, Norwegian Association of Real Estate Agents (NEF),

Real Estate Norway, Statistics Norway and Norges Bank

Chart 5.24 Real commercial property prices.¹⁾
Index. 1998 = 100. 1983 Q1 – 2016 Q4

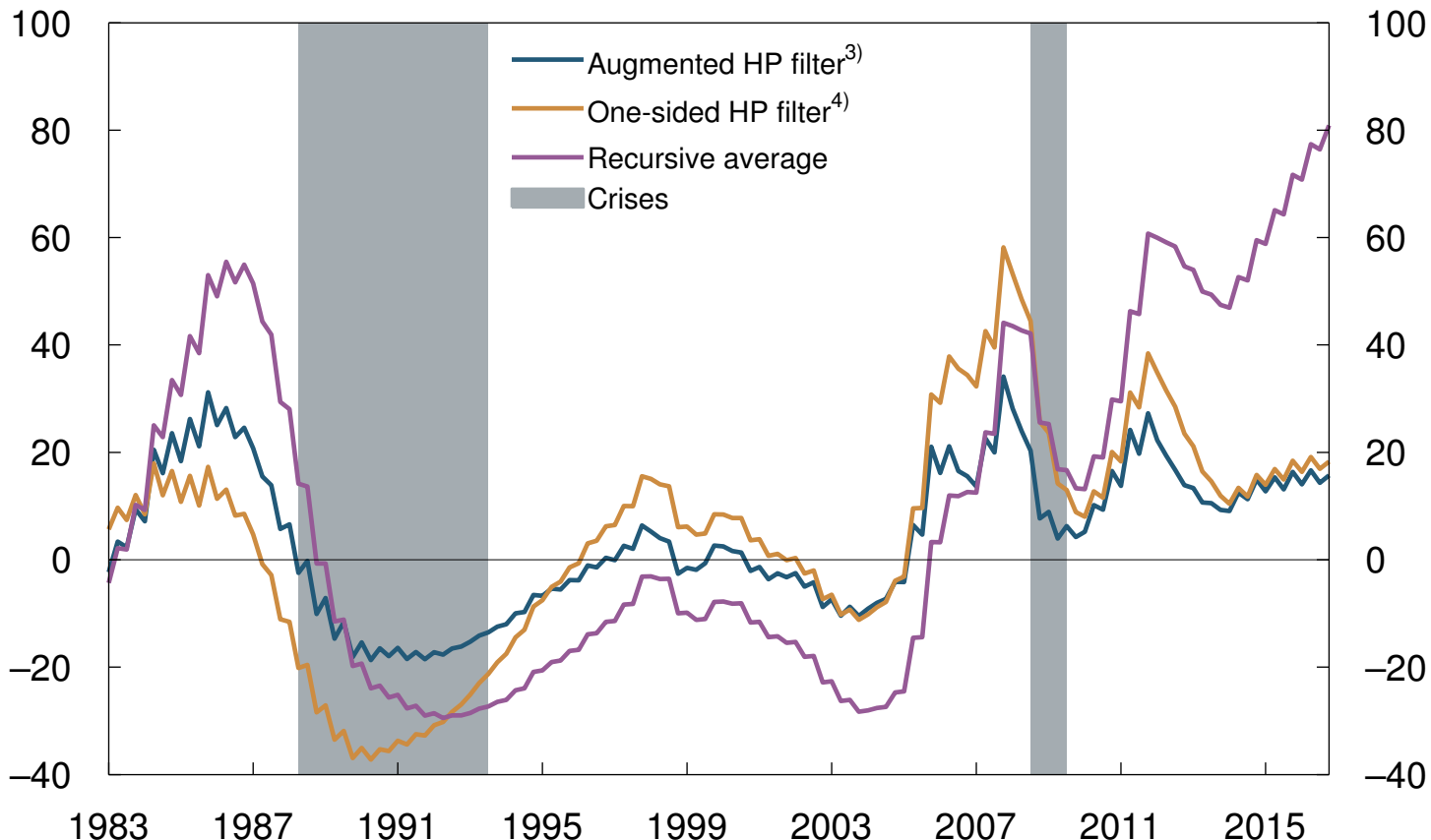


1) Estimated selling prices for centrally located high-standard office space in Oslo. Deflated by the GDP deflator for mainland Norway.

2) Based on data from 1981 Q2 onwards.

Sources: Dagens Næringsliv, OPAK, Statistics Norway and Norges Bank

Chart 5.25 Commercial property price gap. Real commercial property prices¹⁾ as deviation from estimated trends.²⁾ Percent. 1983 Q1 – 2016 Q4



1) Estimated selling prices for high-standard office space in Oslo deflated by the GDP deflator for mainland Norway.

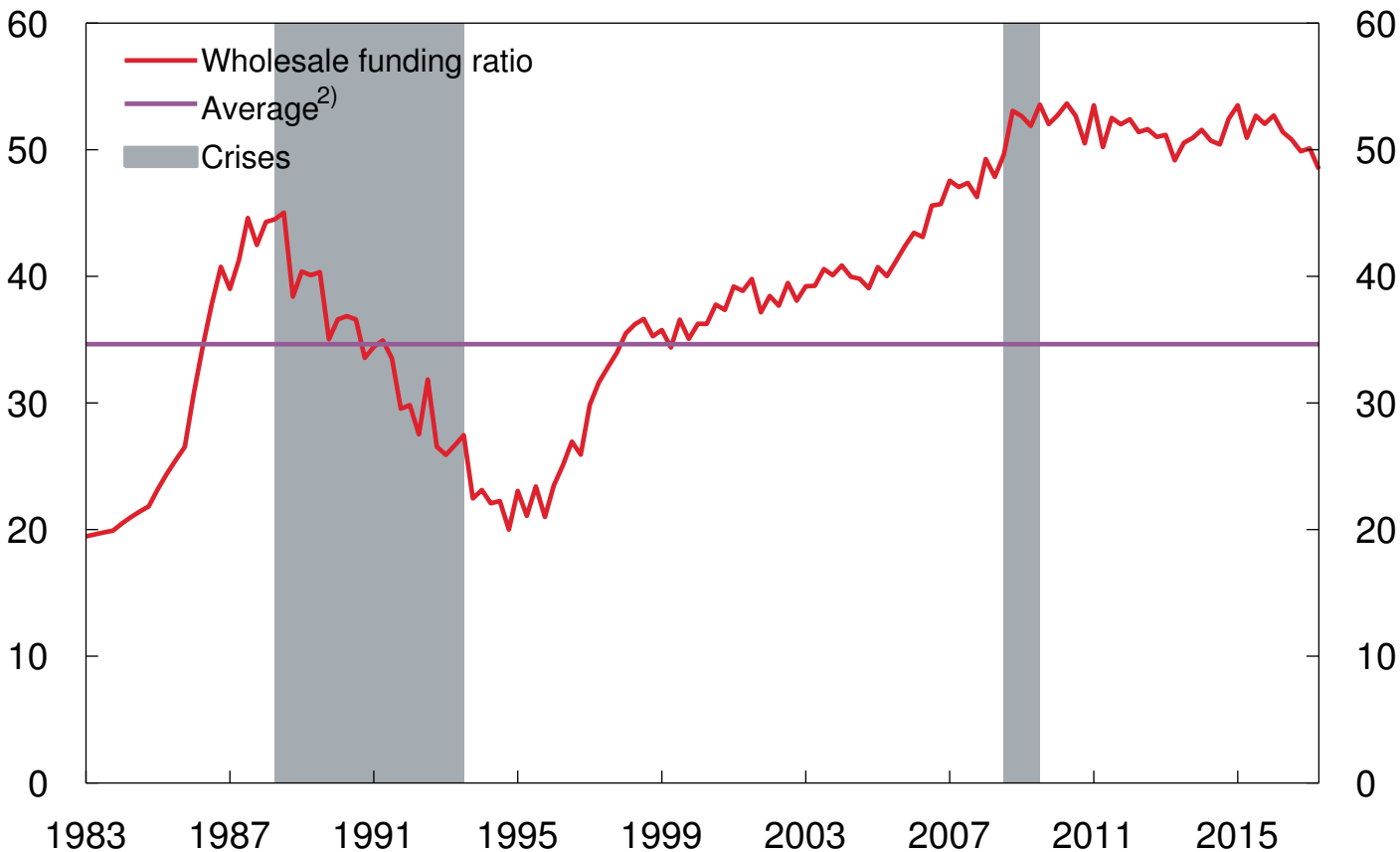
2) The trends are estimated based on data from 1981 Q2 onwards.

3) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.

4) One-sided Hodrick-Prescott filter. Lambda = 400 000.

Sources: Dagens Næringsliv, OPAK, Statistics Norway and Norges Bank

Chart 5.26 Banks' ¹⁾ wholesale funding ratio.
Percent. 1983 Q1 – 2017 Q2

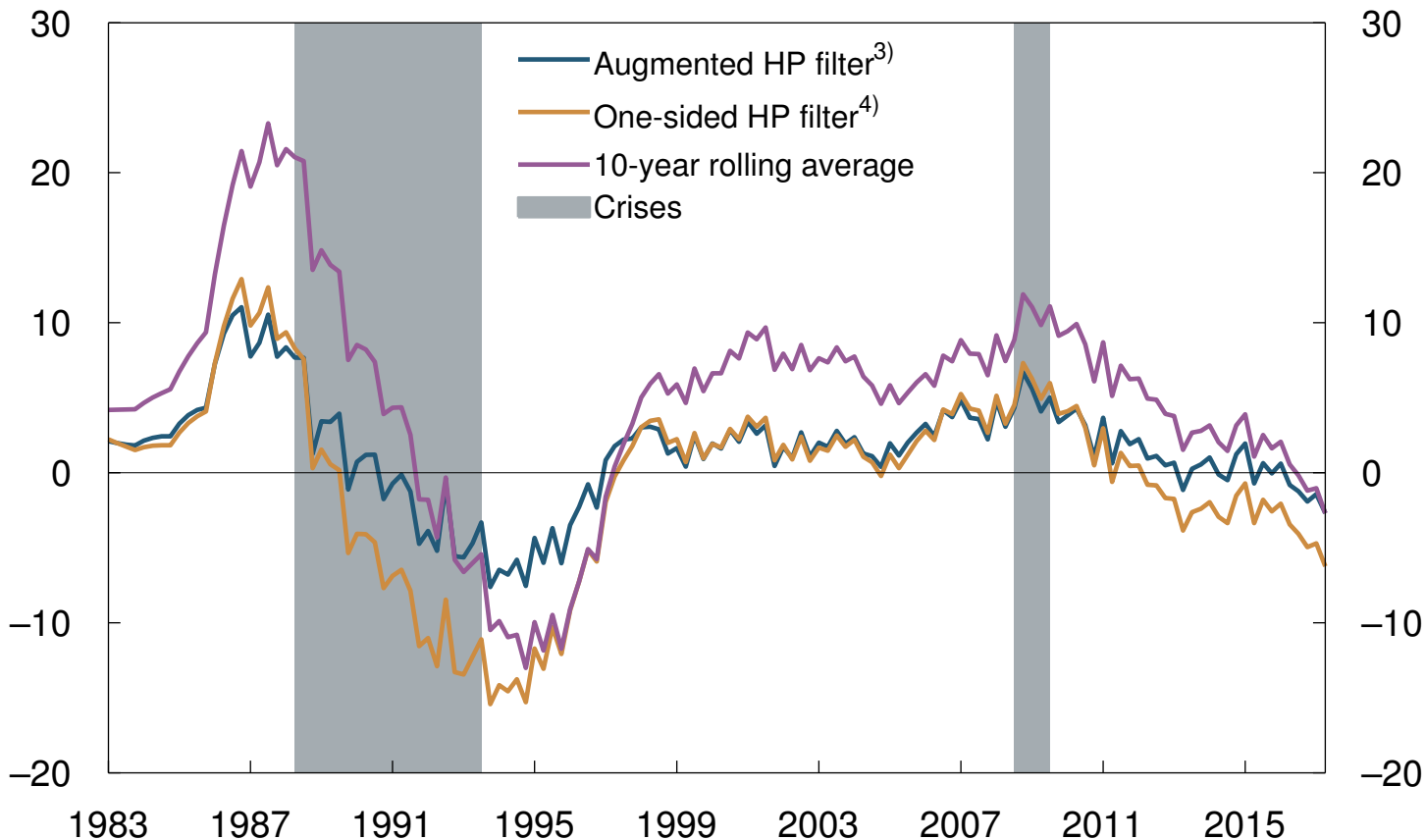


1) All banks and covered bond mortgage companies in Norway except branches and subsidiaries of foreign banks.

2) Based on data from 1975 Q4 onwards.

Source: Norges Bank

Chart 5.27 Wholesale funding gap. Banks¹⁾ wholesale funding ratio as deviation from estimated trends.²⁾ Percentage points. 1983 Q1 – 2017 Q2



1) All banks and covered bond mortgage companies in Norway except branches and subsidiaries of foreign banks.

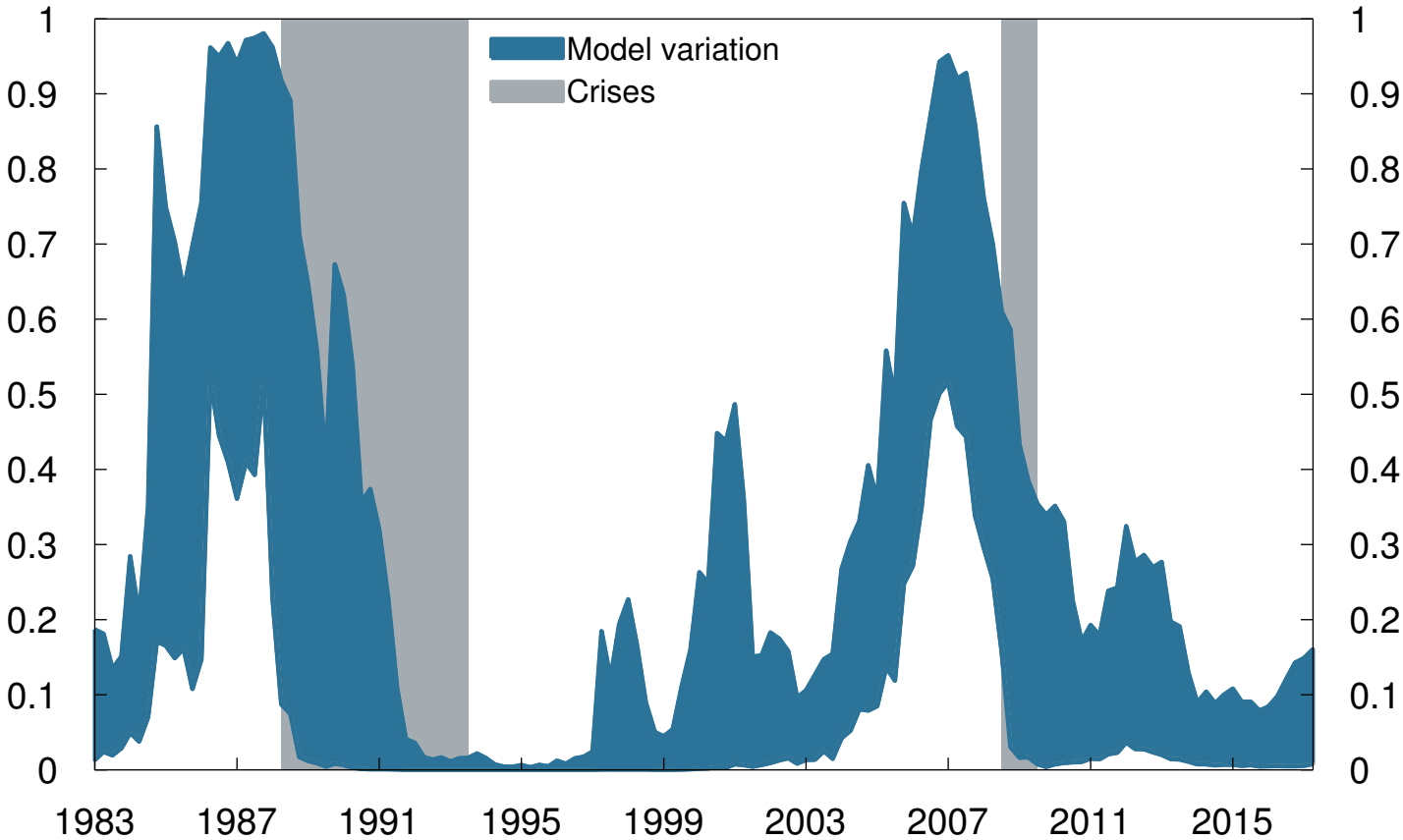
2) The trends are estimated based on data from 1975 Q4 onwards.

3) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.

4) One-sided Hodrick-Prescott filter. Lambda = 400 000.

Source: Norges Bank

Chart 5.28 Estimated crisis probabilities based on various model specifications. 1983 Q1 – 2017 Q2



Source: Norges Bank