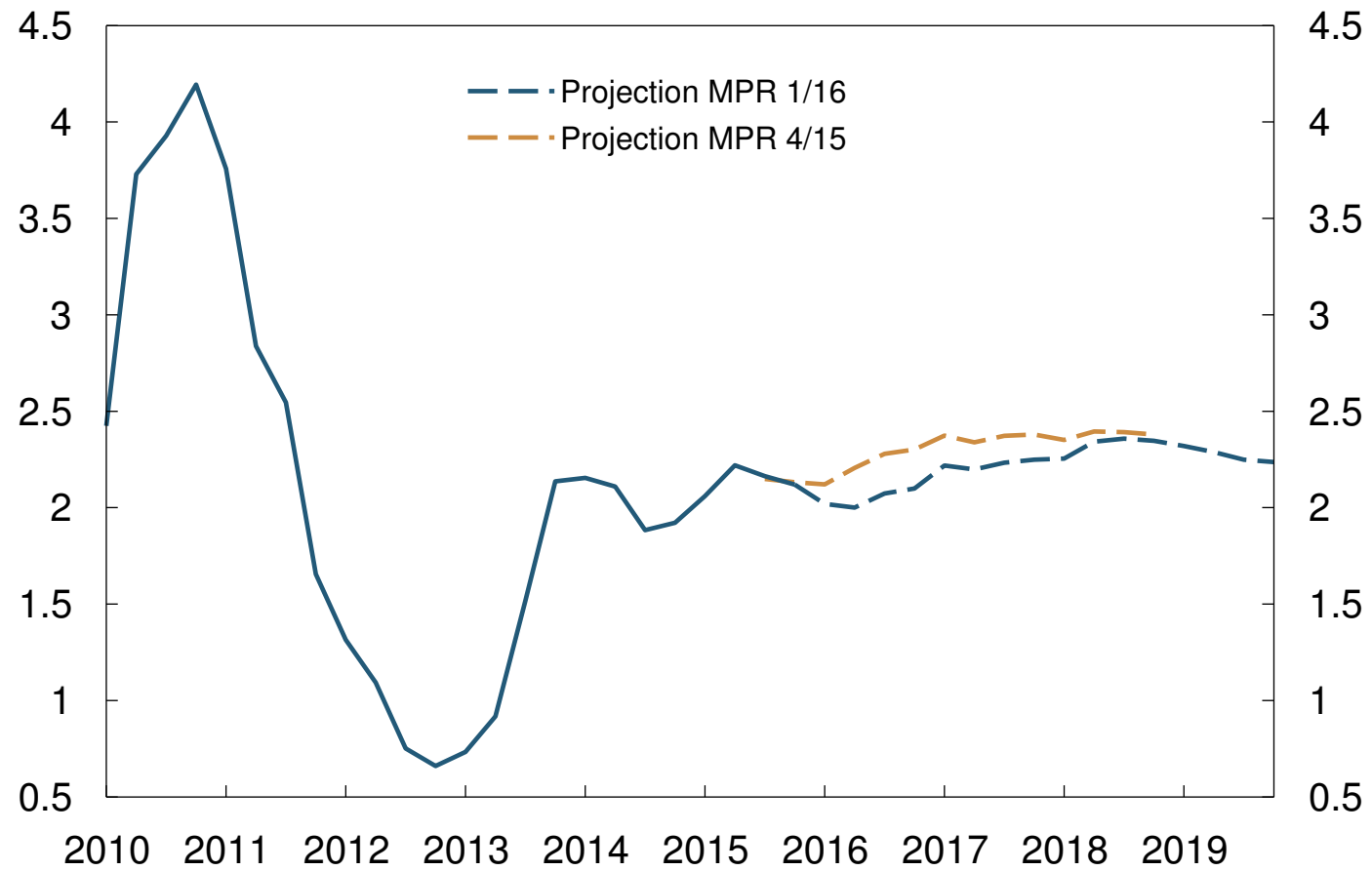


Chart 1.1 GDP for trading partners. Volume.

Four-quarter change. Percent. Export weights. 2010 Q1 – 2019 Q4¹⁾

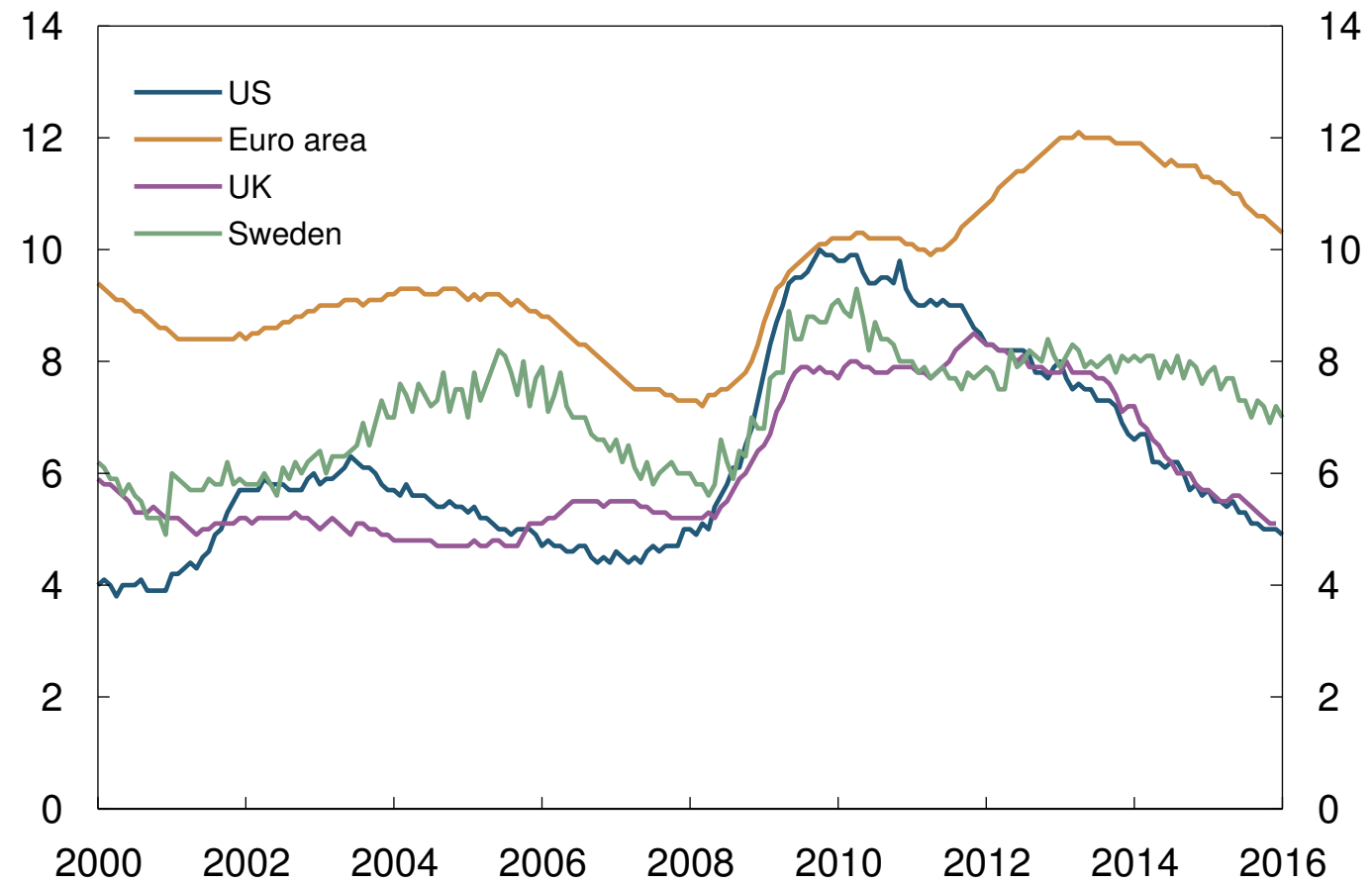


1) Projection for 2015 Q4 – 2019 Q4 (broken lines).

Sources: Thomson Reuters and Norges Bank

Chart 1.2 Unemployment rate.

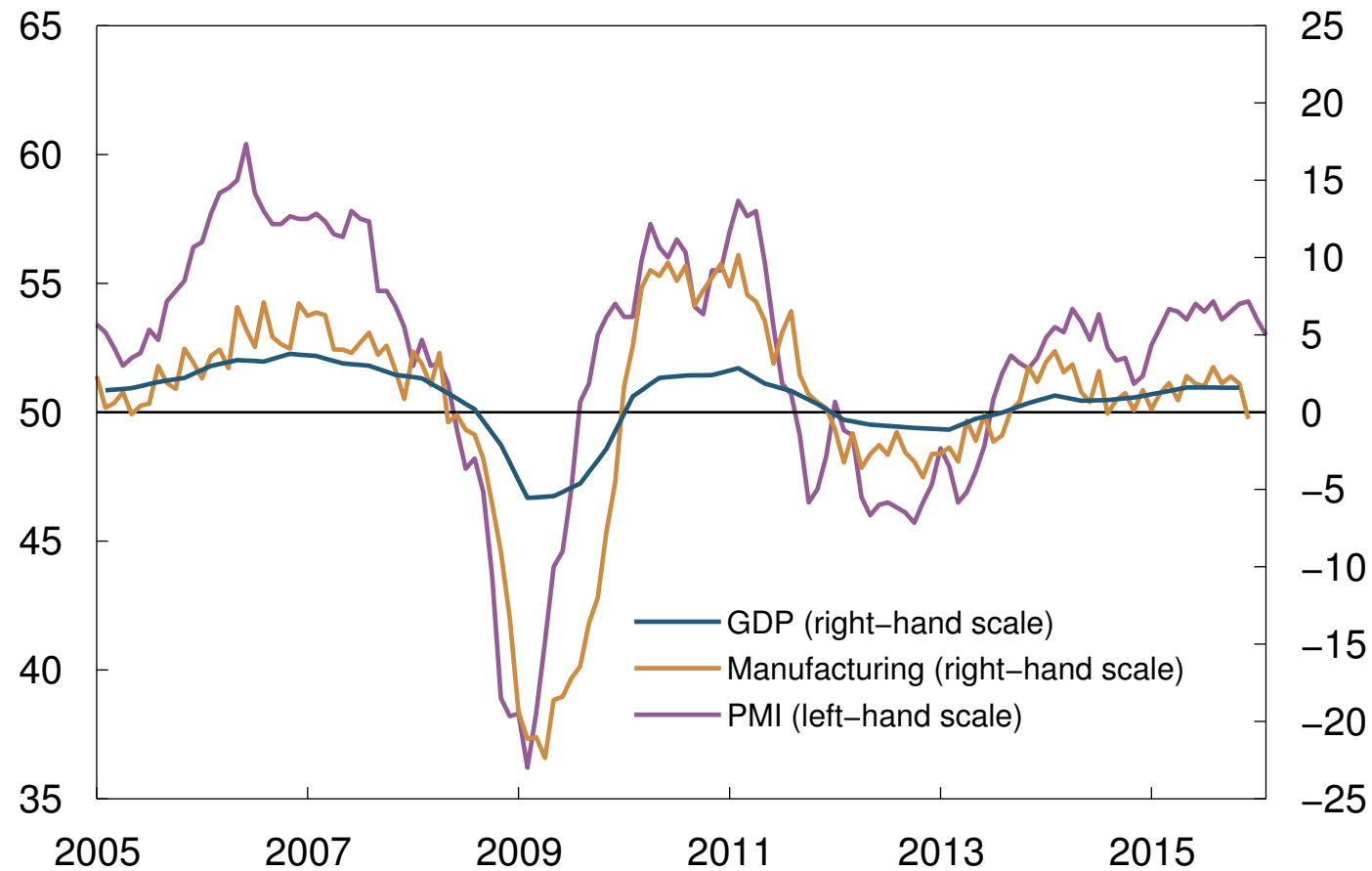
Seasonally adjusted. Percent. January 2000 – January 2016¹⁾



1) Latest observation for the UK is December.

Source: Thomson Reuters

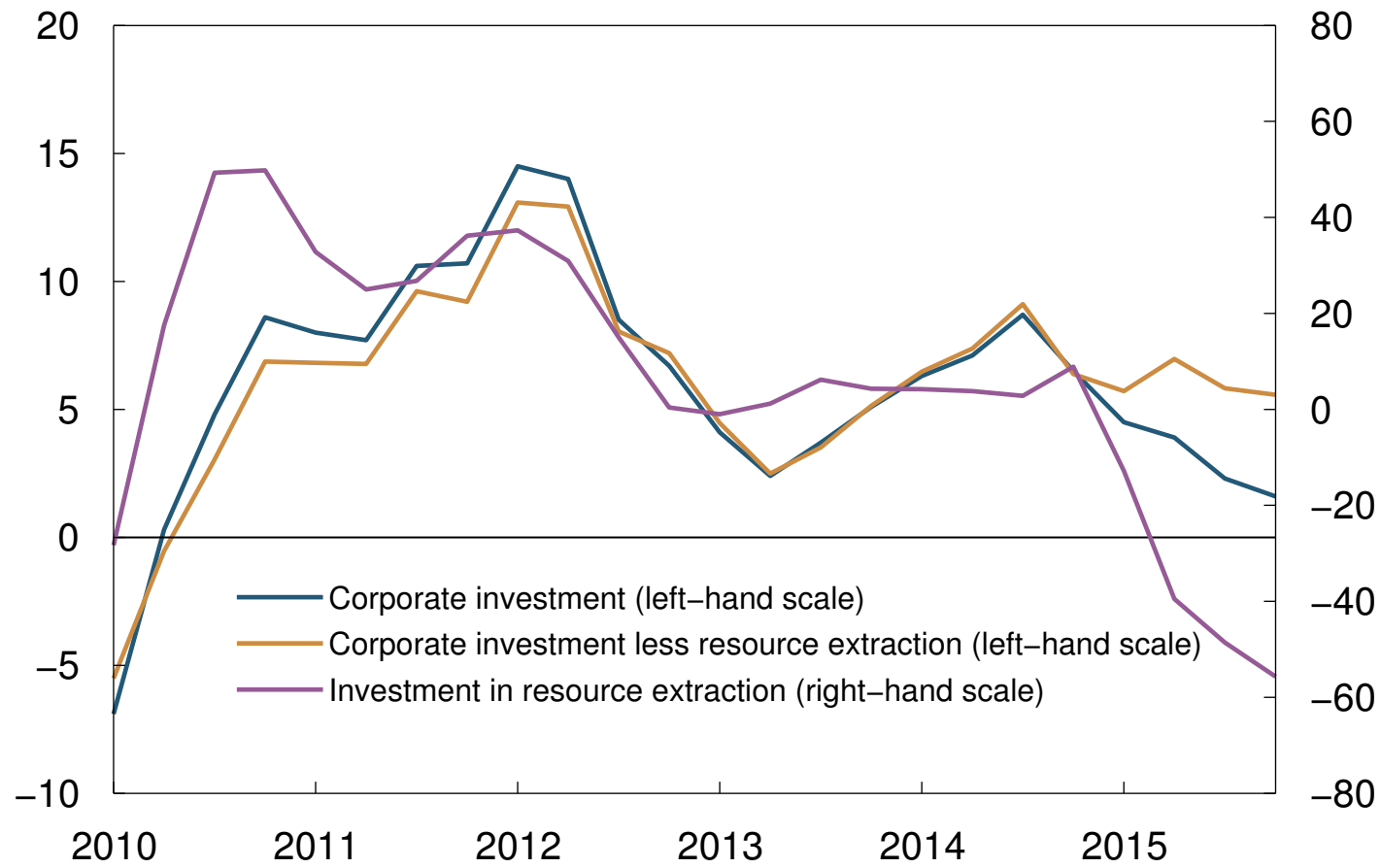
Chart 1.3 Economic developments in the euro area.
 Four-quarter change in GDP. Twelve-month change in manufacturing output.
 Percent. Purchasing Managers' Index (PMI). January 2005 – February 2016¹⁾



1) Latest observation for GDP is 2015 Q4. Latest observation for manufacturing output is December 2015.

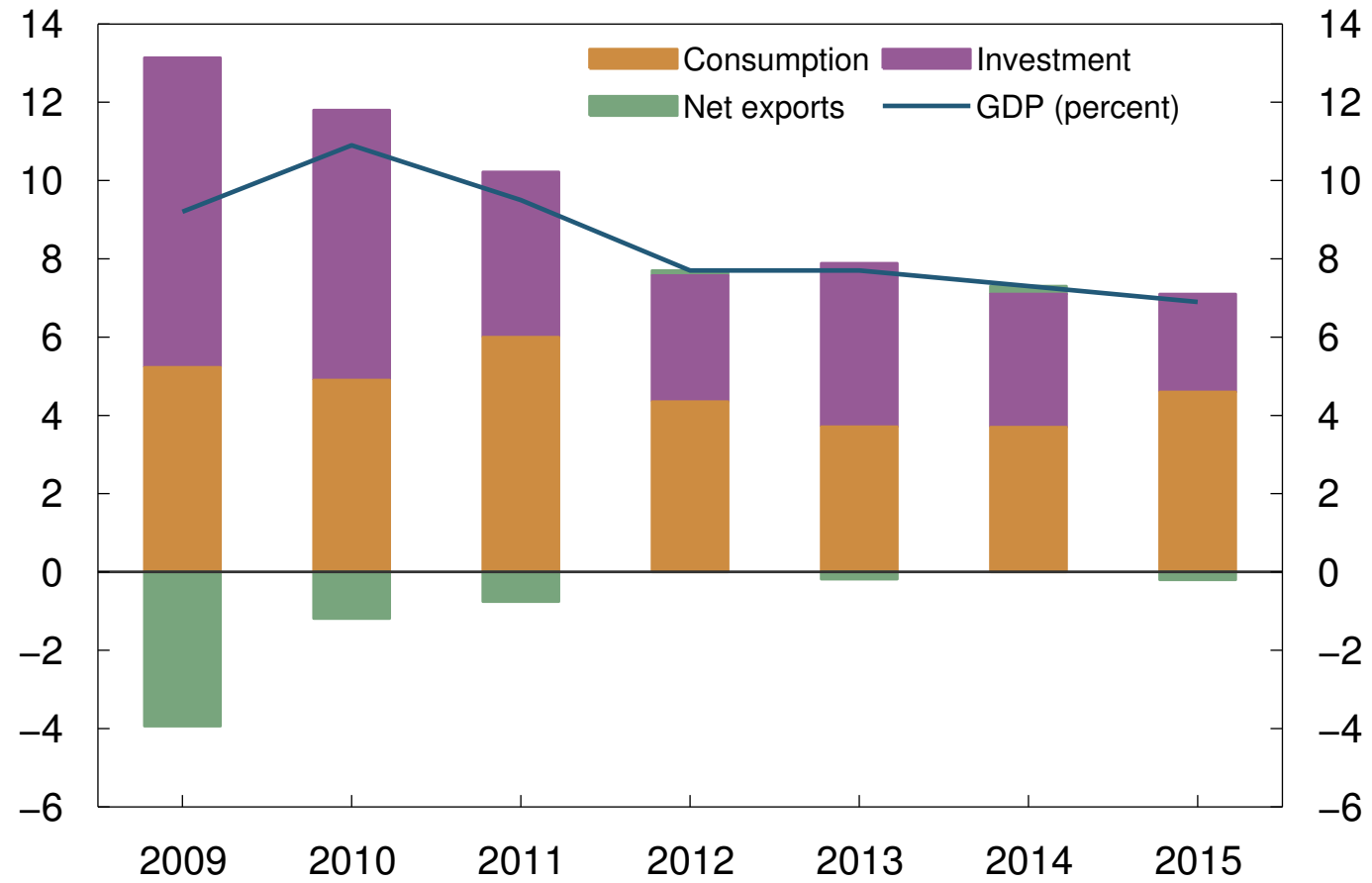
Source: Thomson Reuters

Chart 1.4 US corporate investment.
 Four-quarter change. Percent. 2010 Q1 – 2015 Q4



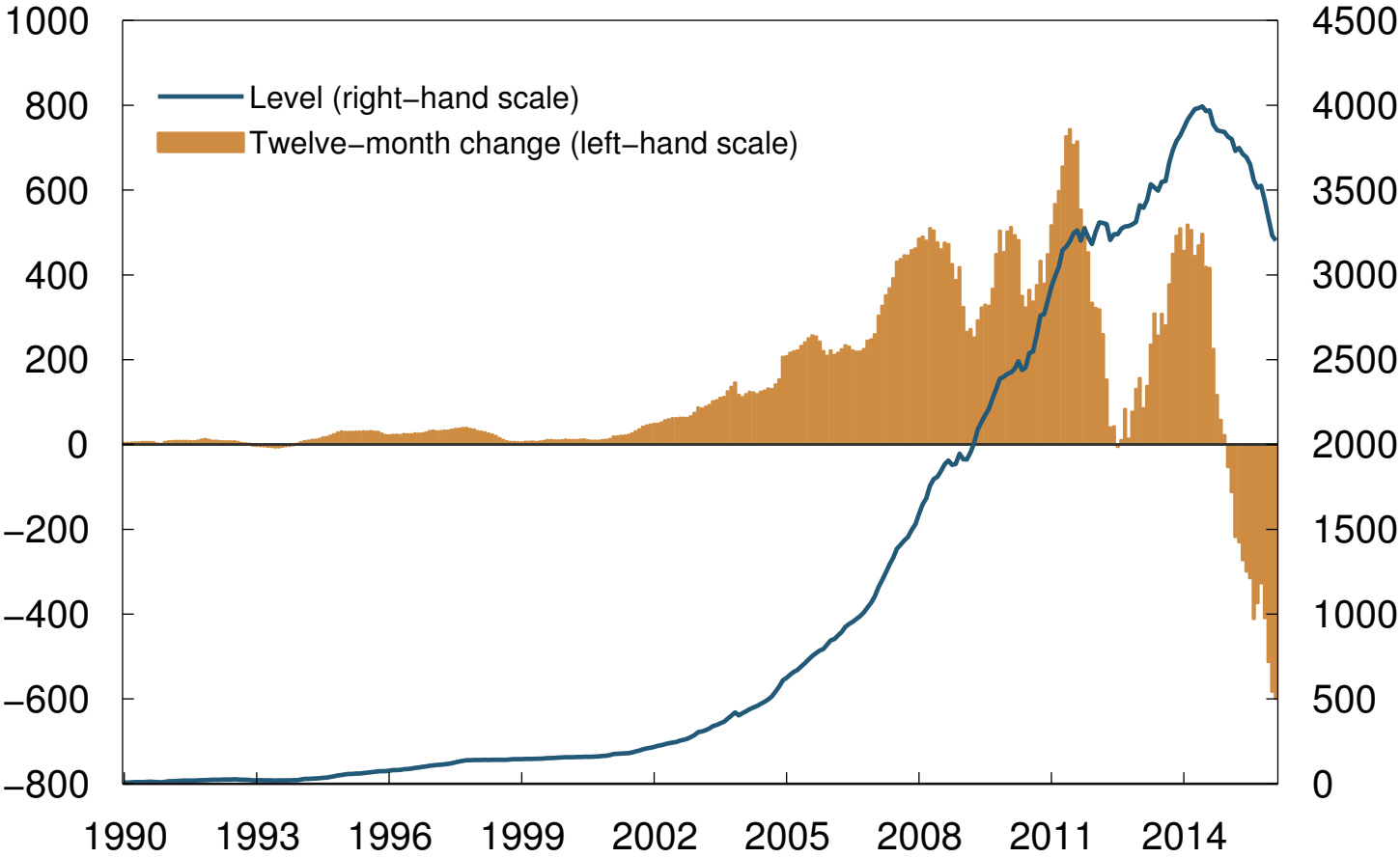
Source: Thomson Reuters

Chart 1.5 Contribution to GDP growth in China.
Percentage points. 2009 – 2015



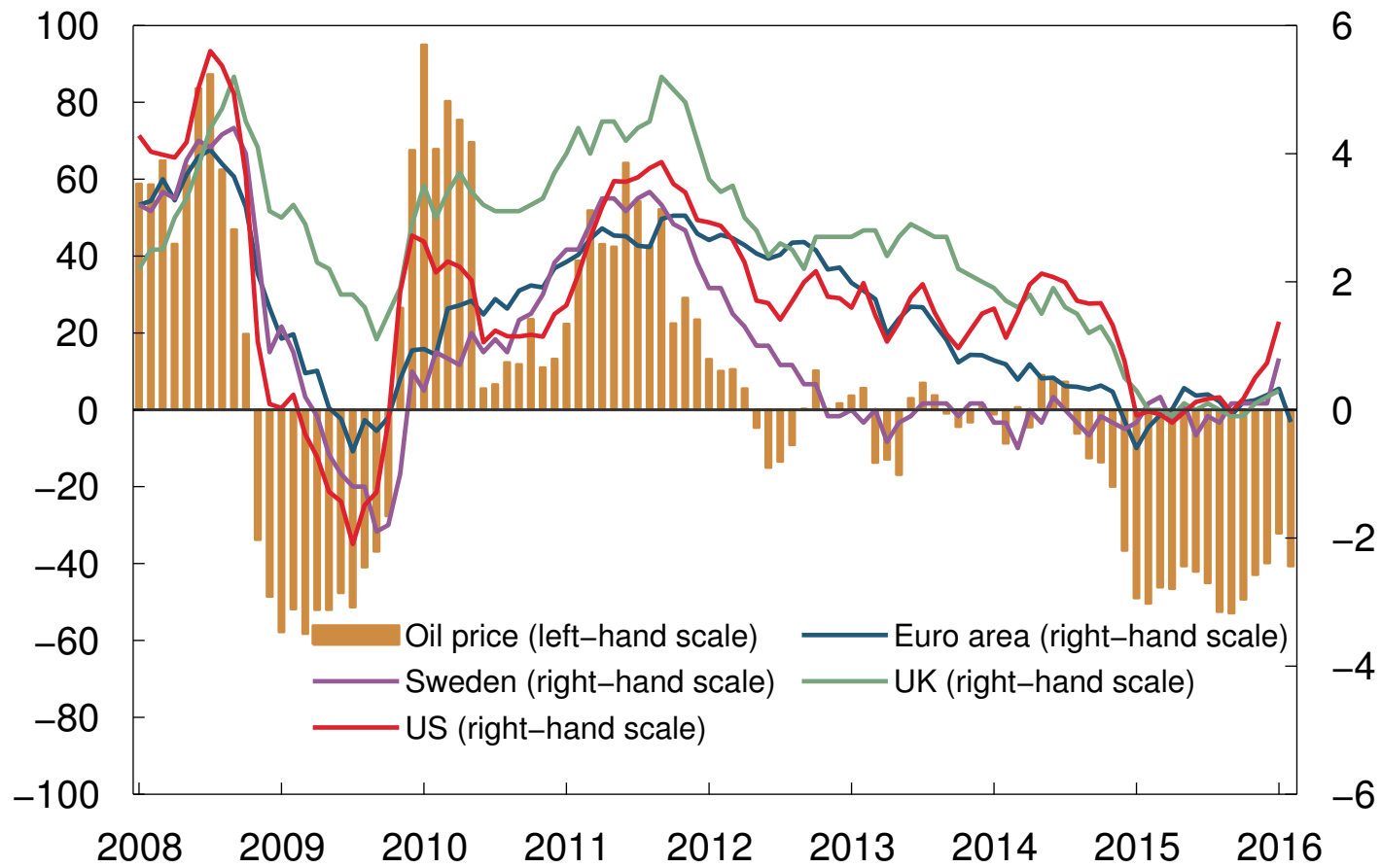
Sources: CEIC, Thomson Reuters and Norges Bank

Chart 1.6 Chinese currency reserves.
In billions of USD. January 1990 – February 2016



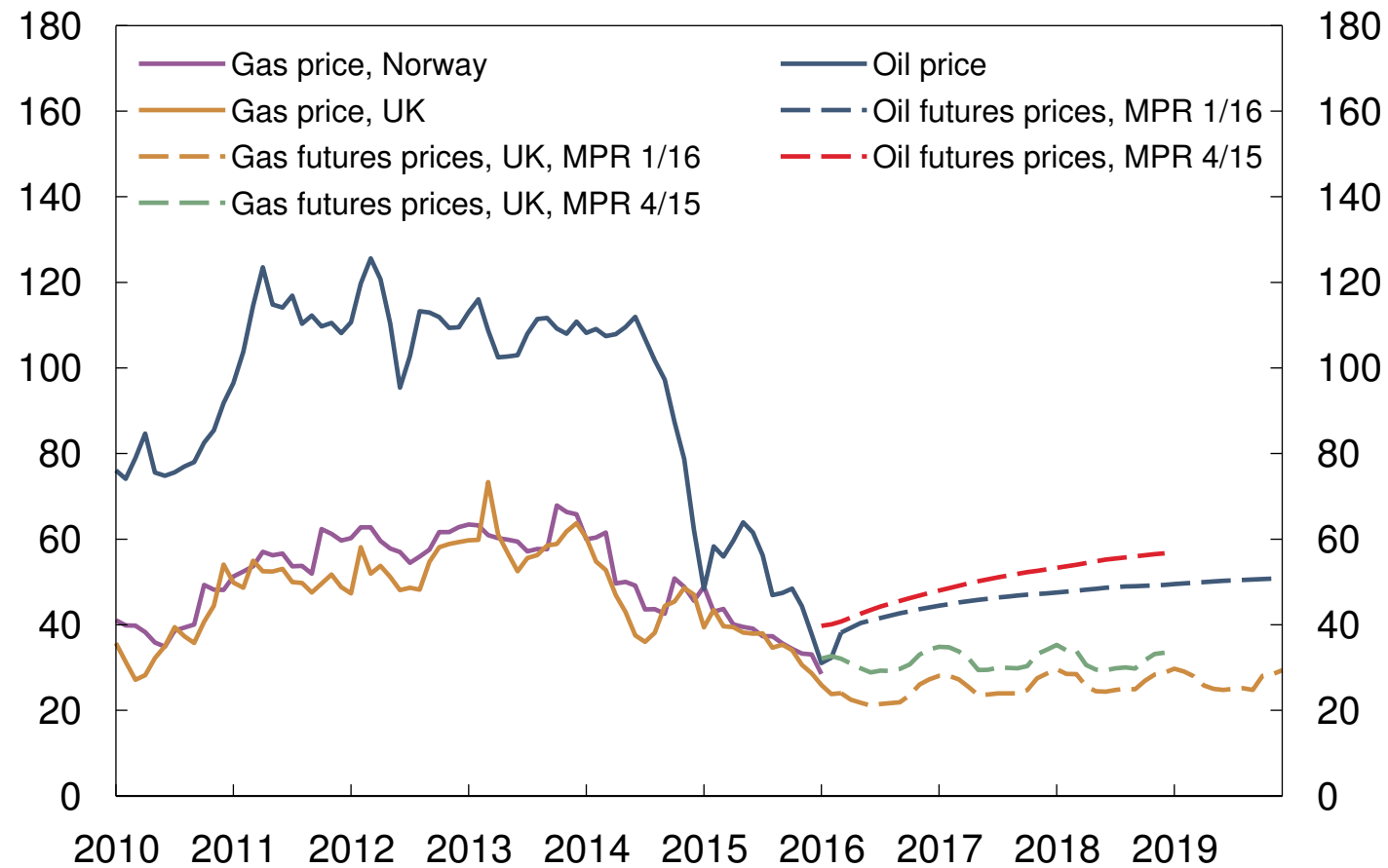
Sources: CEIC, Barclays and Norges Bank

Chart 1.7 Oil price and consumer prices among trading partners.
 Twelve-month change. Percent. January 2008 – February 2016¹⁾



1) Latest observation for the US, the UK and Sweden is January 2016.
 Source: Thomson Reuters

Chart 1.8 Crude oil and natural gas prices.
 USD/barrel. January 2010 – December 2019 ¹⁾



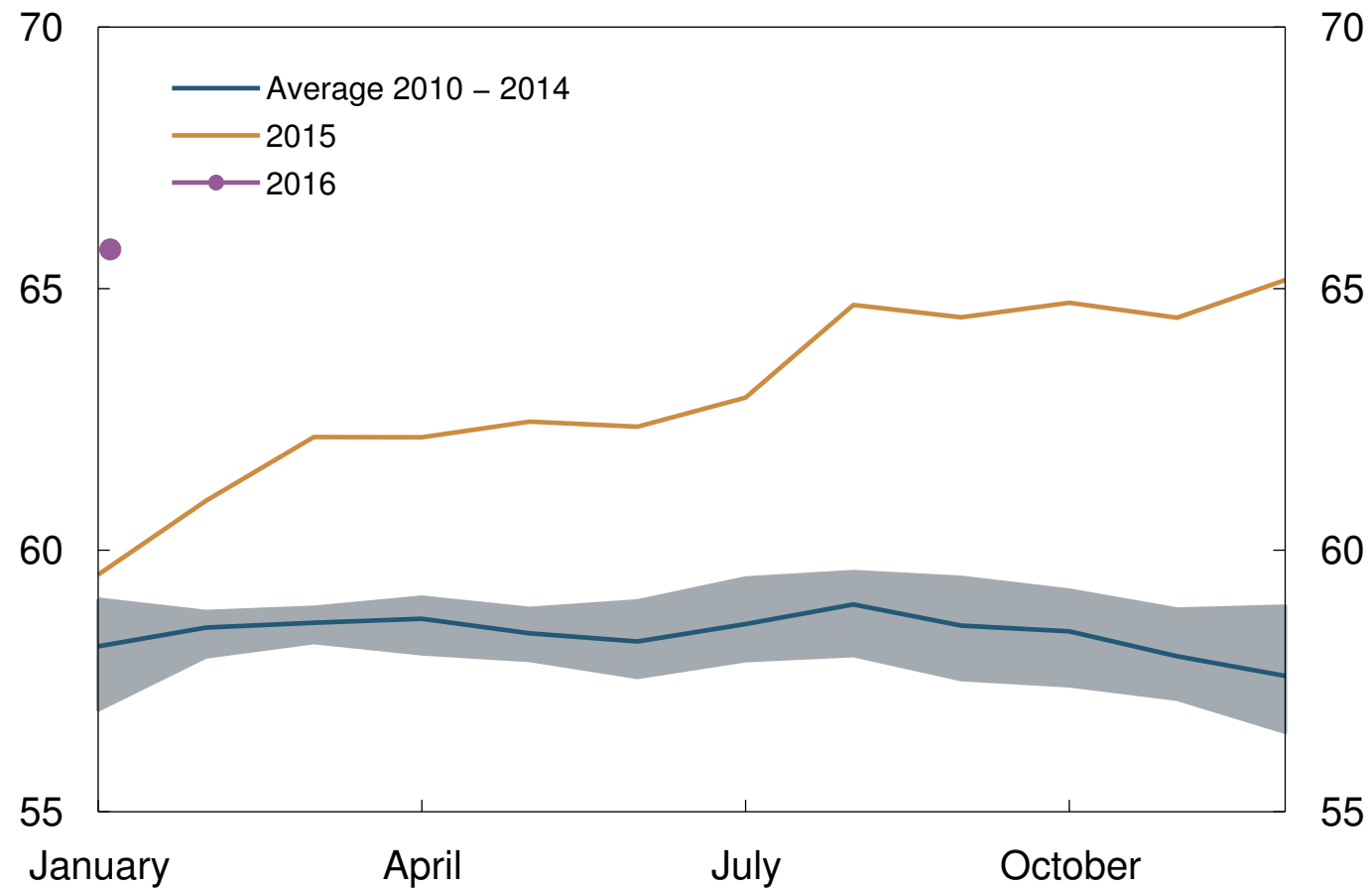
1) Futures prices (broken lines) for oil and UK gas are the average of futures prices in the period 7–11 September 2015 for MPR 4/15 and 7–11 March 2016 for MPR 1/16.

Sources: Thomson Reuters, Statistics Norway and Norges Bank

Chart 1.9 Oil inventories in OECD countries.

Total oil inventories in number of days of consumption.¹⁾

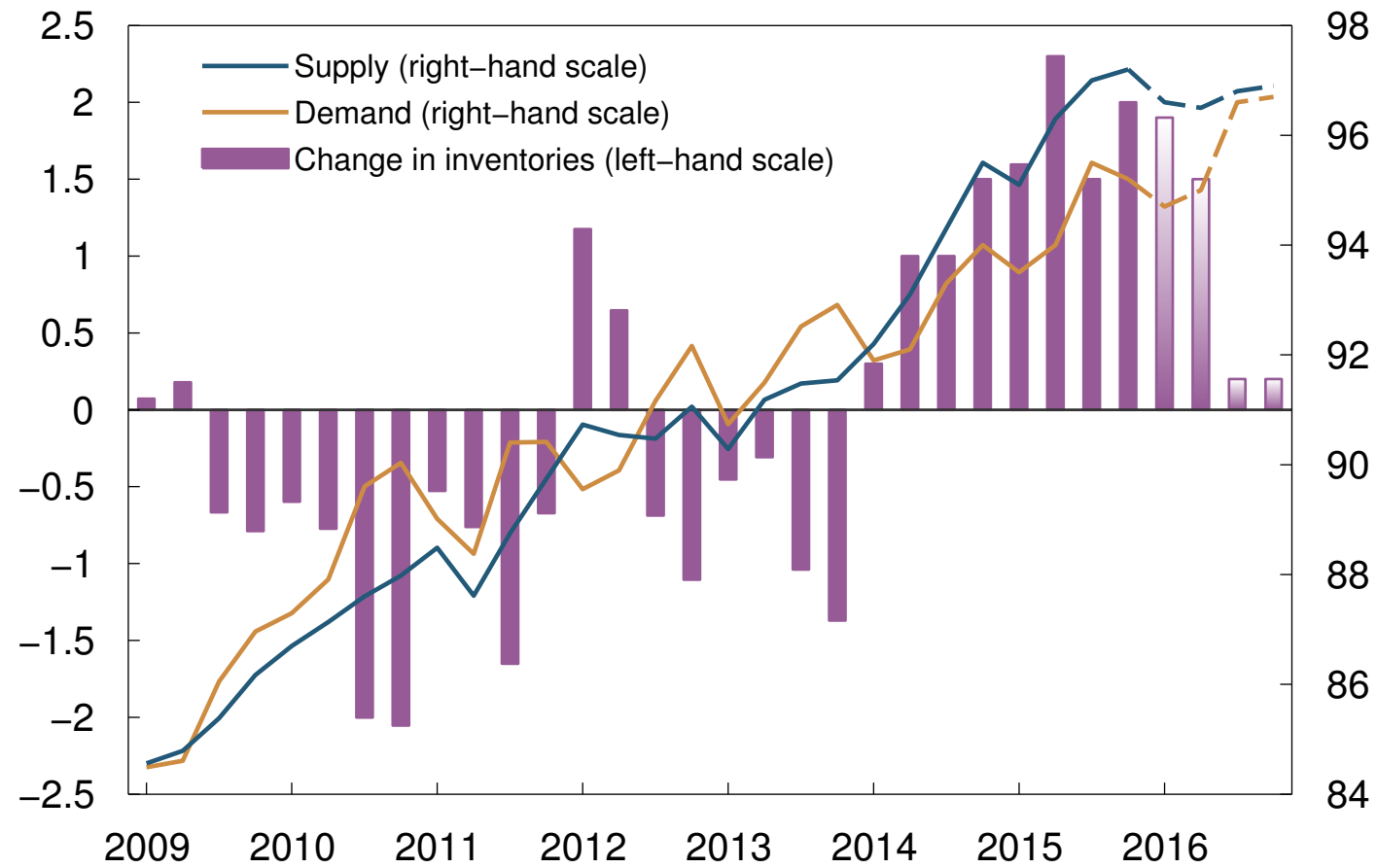
January 2015 – January 2016



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

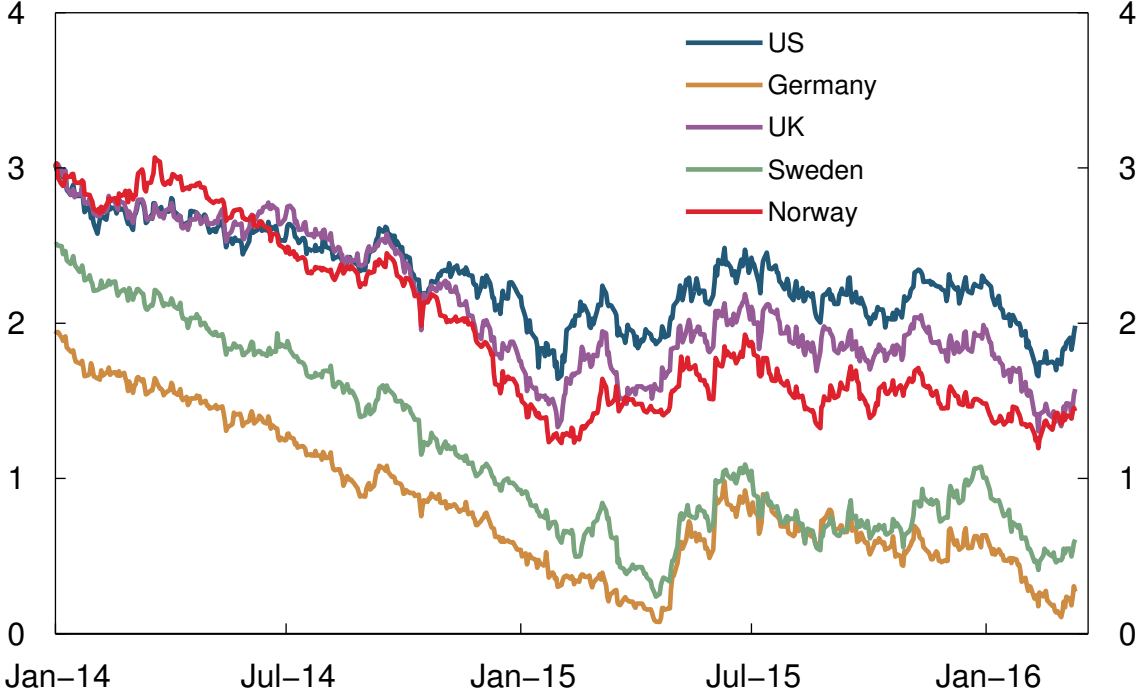
Sources: IEA and Norges Bank

Chart 1.10 Supply and demand in the oil market.
 Million barrels per day. 2009 Q1 – 2016 Q4¹⁾



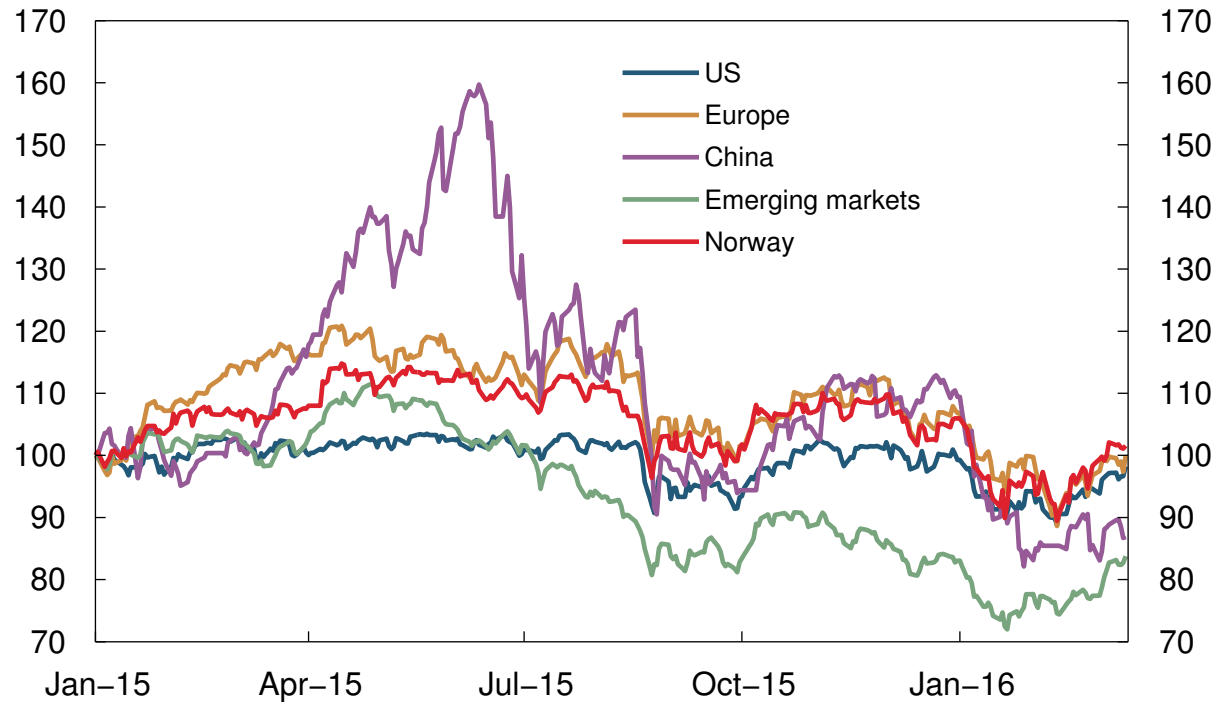
1) Projections for 2016 Q1 – 2016 4Q.
 Source: IEA

Chart 1.11 Yields on 10-year government bonds.
Percent. 1 January 2014 – 11 March 2016



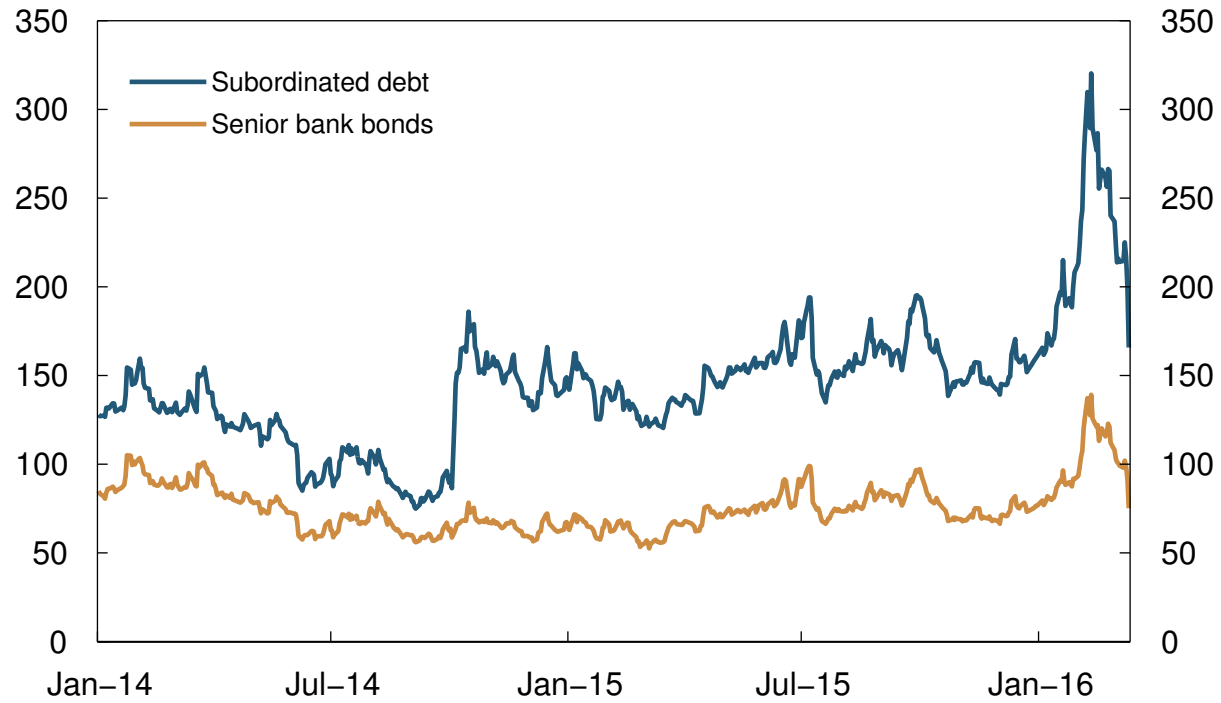
Source: Bloomberg

Chart 1.12 Selected equity price indices.
January 2015=100. 1 January 2015 – 11 March 2016



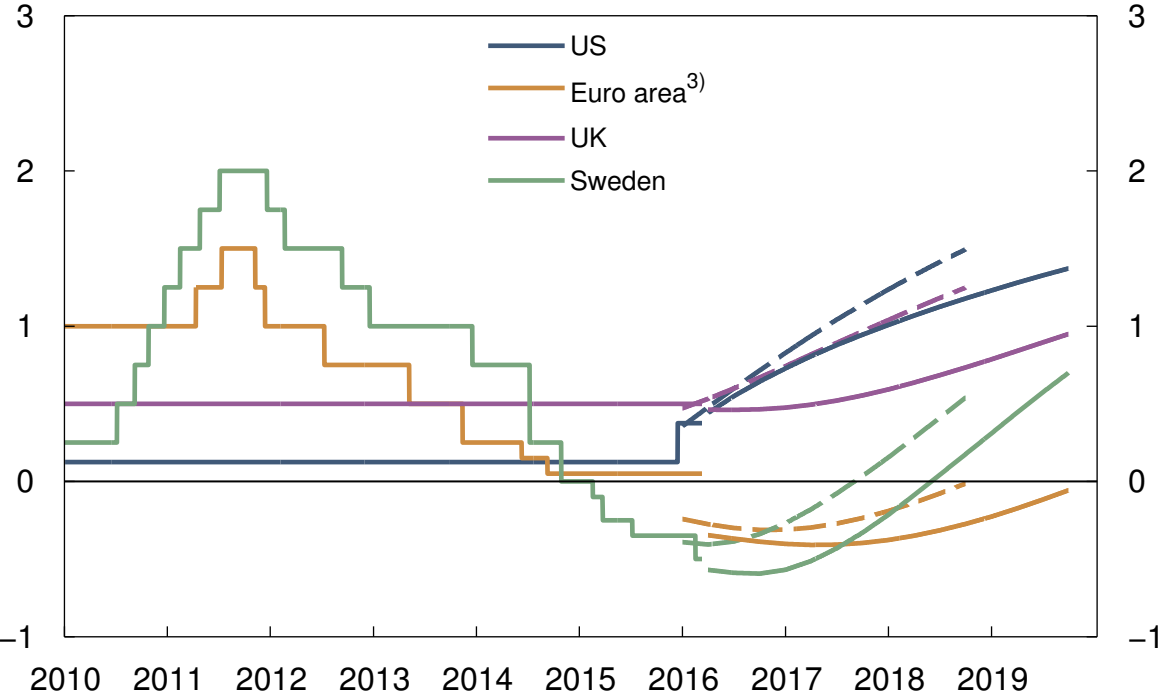
Source: Bloomberg

Chart 1.13 CDS indices for European banking sector.
Basis points. 1 January 2014 – 11 March 2016



Source: Bloomberg

Chart 1.14 Policy rates and estimated forward rates at 11 December 2015 and 11 March 2016 ¹⁾. Percent. 1 January 2010 – 31 December 2019 ²⁾



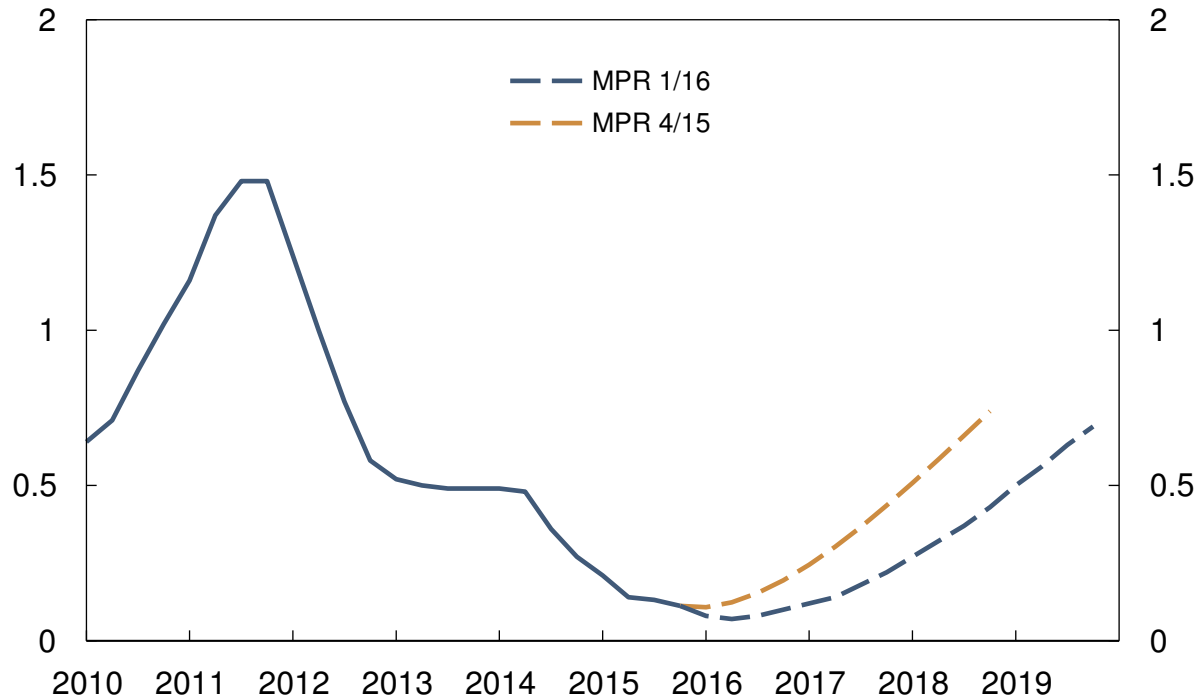
1) Broken lines show estimated forward rates at 11 December 2015. Solid lines show forward rates at 11 March 2016. Forward rates are based on Overnight Index Swap (OIS) rates.

2) Daily data from 1 January 2010 and quarterly data from 1 January 2016.

3) EONIA for the euro area from 2016 Q2.

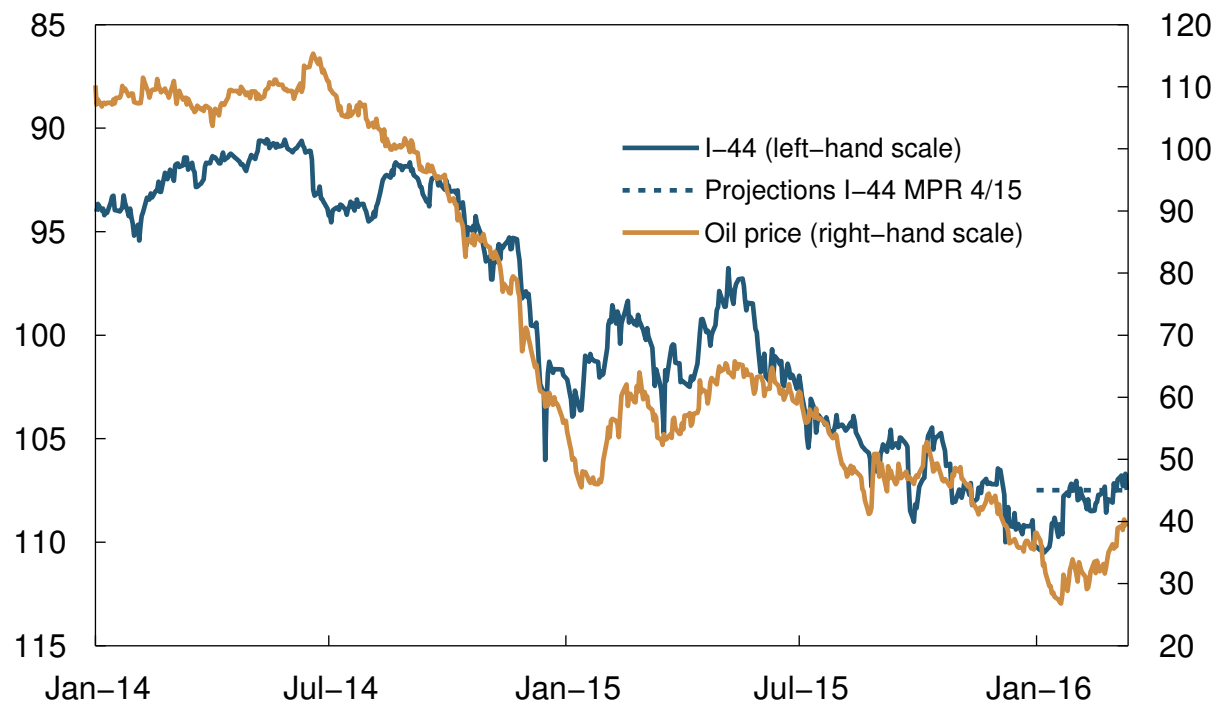
Sources: Bloomberg, Thomson Reuters and Norges Bank

Chart 1.15 Money market rates for trading partners.¹⁾
Percent. 2010 Q1 – 2019 Q4²⁾



1) For information about the aggregate for trading partner interest rates, see *Norges Bank Papers 2/2015*.
2) Blue and orange broken lines show forward rates for 11 March 2016 and 11 December 2015, respectively.
Sources: Thomson Reuters and Norges Bank

Chart 1.16 Oil price¹⁾ and import-weighted exchange rate index (I-44)²⁾.
1 January 2014 – 11 March 2016



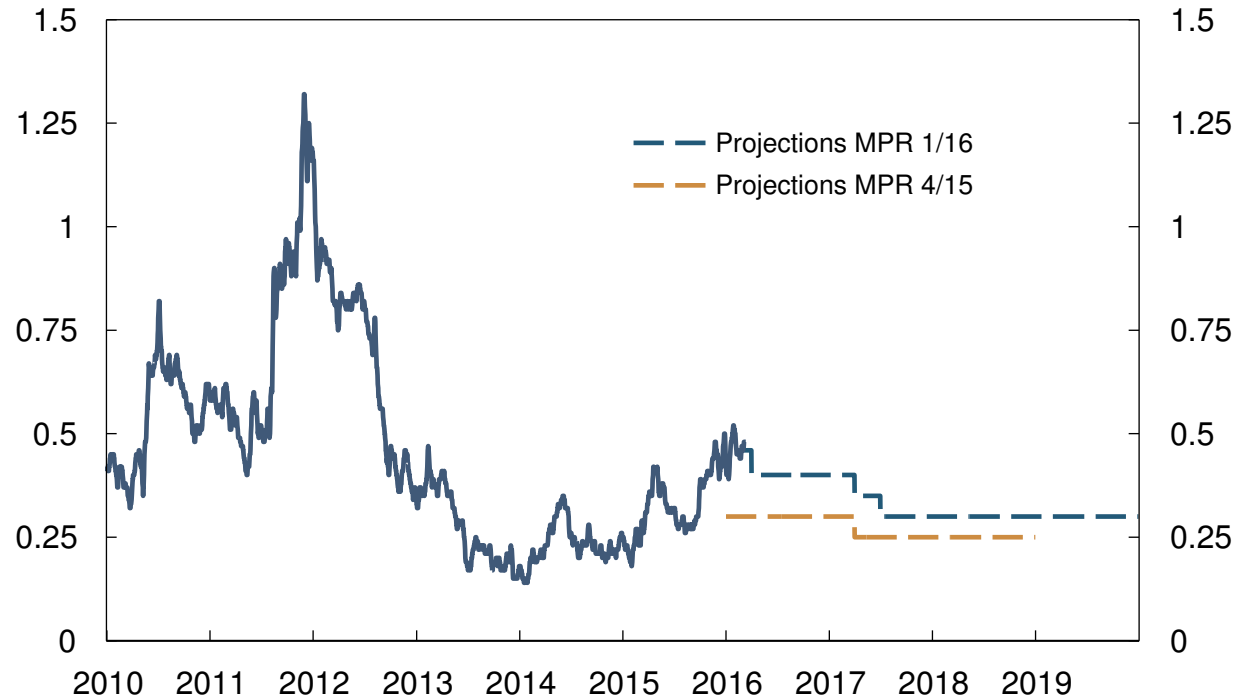
1) USD/barrel.

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

Sources: Thomson Reuters and Norges Bank

Chart 1.17 Three-month Nibor spread.¹⁾

Five-day moving average. Percentage points. January 2010 – December 2019²⁾

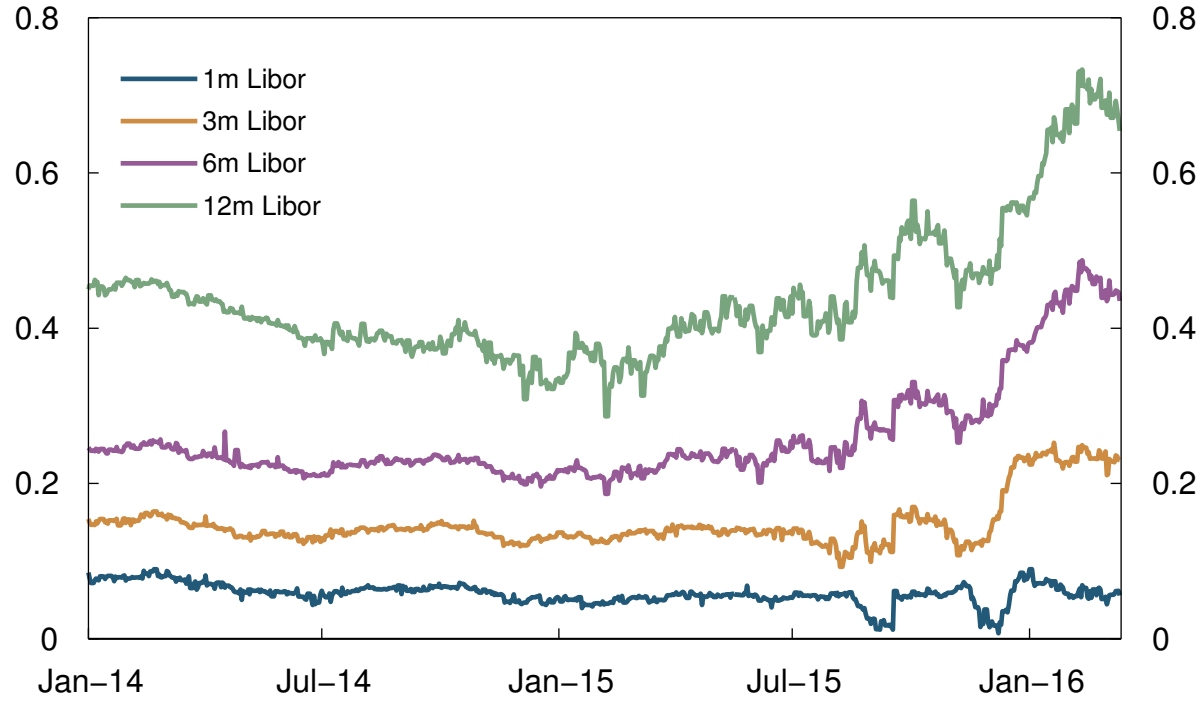


1) Norges Bank estimates of the difference between three-month Nibor and expected key policy rate.

2) Projections for 2016 Q1 – 2019 Q4 (broken lines).

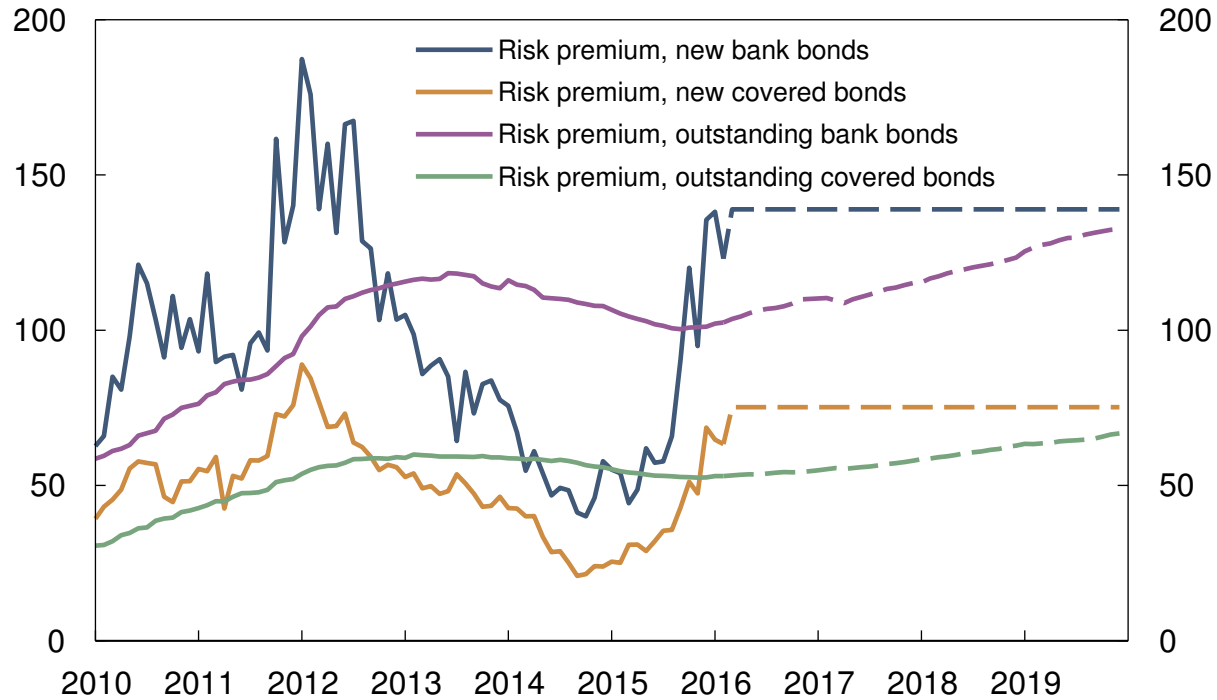
Sources: Thomson Reuters and Norges Bank

Chart 1.18 Premiums on USD Libor.
Spread to expected policy rate. Percentage points. 1 January 2014 – 11 March 2016



Source: Bloomberg

Chart 1.19 Average risk premiums on new and outstanding bond debt for Norwegian banks. Spread to three-month Nibor. Basis points. January 2010 – December 2019^{1) 2)}

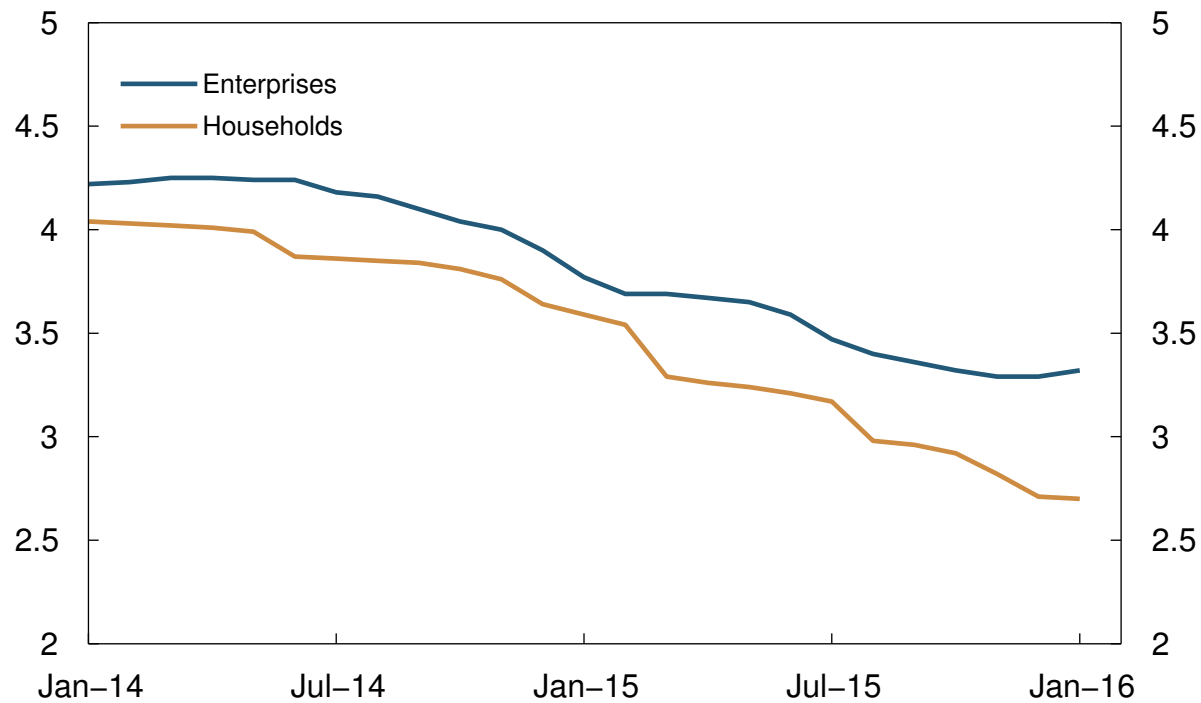


1) Indicative risk premiums up to and including 11 March 2016 are used for March 2016.

2) Projections from March 2016 – December 2019 (broken lines).

Sources: Stamdata, Bloomberg, DNB Markets and Norges Bank

Chart 1.20 Interest rates¹⁾ on loans to non-financial enterprises and households²⁾.
Percent. January 2014 – January 2016

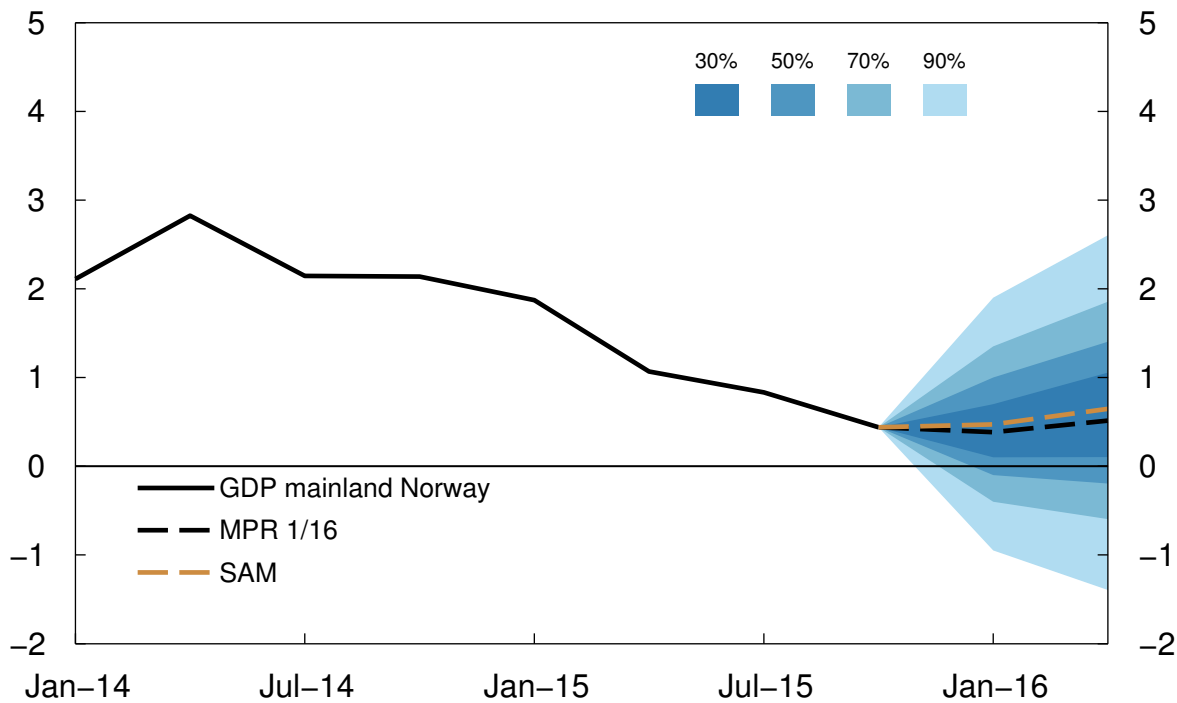


1) Outstanding loans.

2) Lending rate for households applies to total outstanding residential mortgage loans.

Source: Statistics Norway

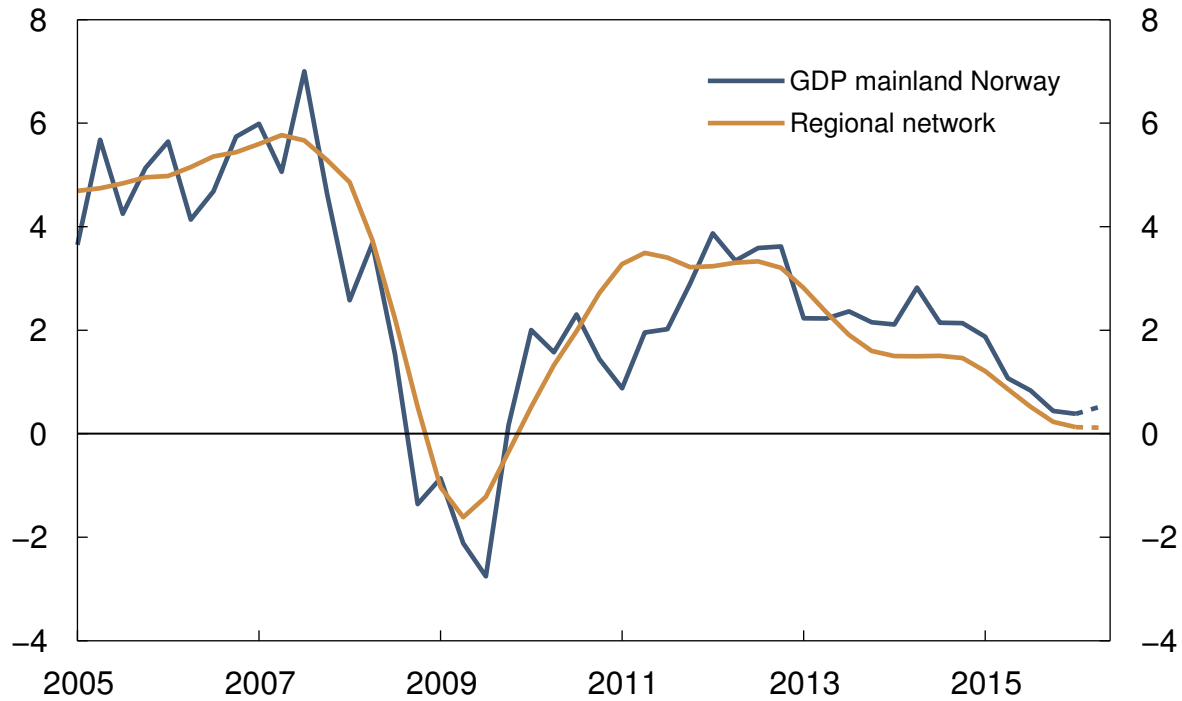
Chart 1.21 GDP for mainland Norway. Actual figures, baseline scenario and projections from SAM¹⁾ with fan chart.
 Four-quarter change. Seasonally adjusted. Volume. Percent. 2014 Q1 – 2016 Q2²⁾



1) System for Averaging short-term Models.
 2) Projections for 2016 Q1 – 2016 Q2 (broken lines).
 Sources: Statistics Norway and Norges Bank

Chart 1.22 GDP for mainland Norway¹⁾ and Norges Bank's regional network indicator of output growth²⁾.

Four-quarter change. Percent. 2005 Q1 – 2016 Q2



1) Projections for 2016 Q1 – 2016 Q2 (broken lines).

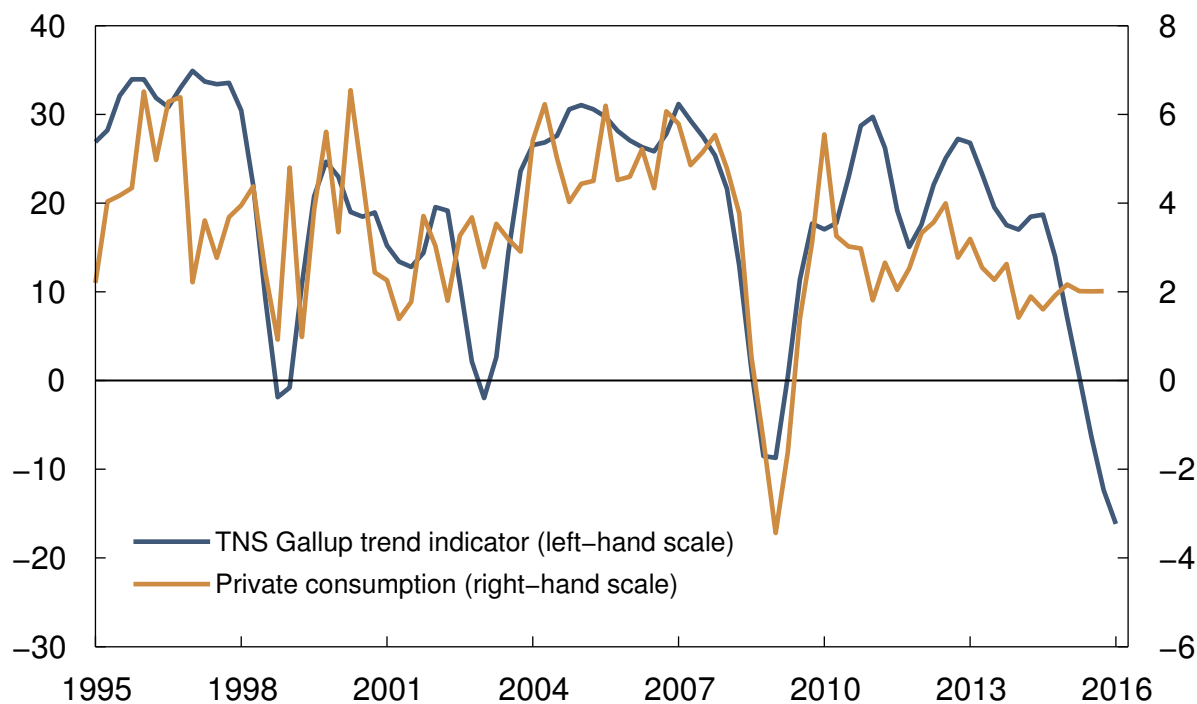
2) Converted to quarterly series.

Sources: Statistics Norway and Norges Bank

Chart 1.23 Consumer confidence and private consumption.

Net values for consumer confidence.¹⁾

Four-quarter change in private consumption. Percent. 1995 Q1 – 2016 Q1²⁾



1) TNS Gallup expectations barometer, adjusted trend indicator.

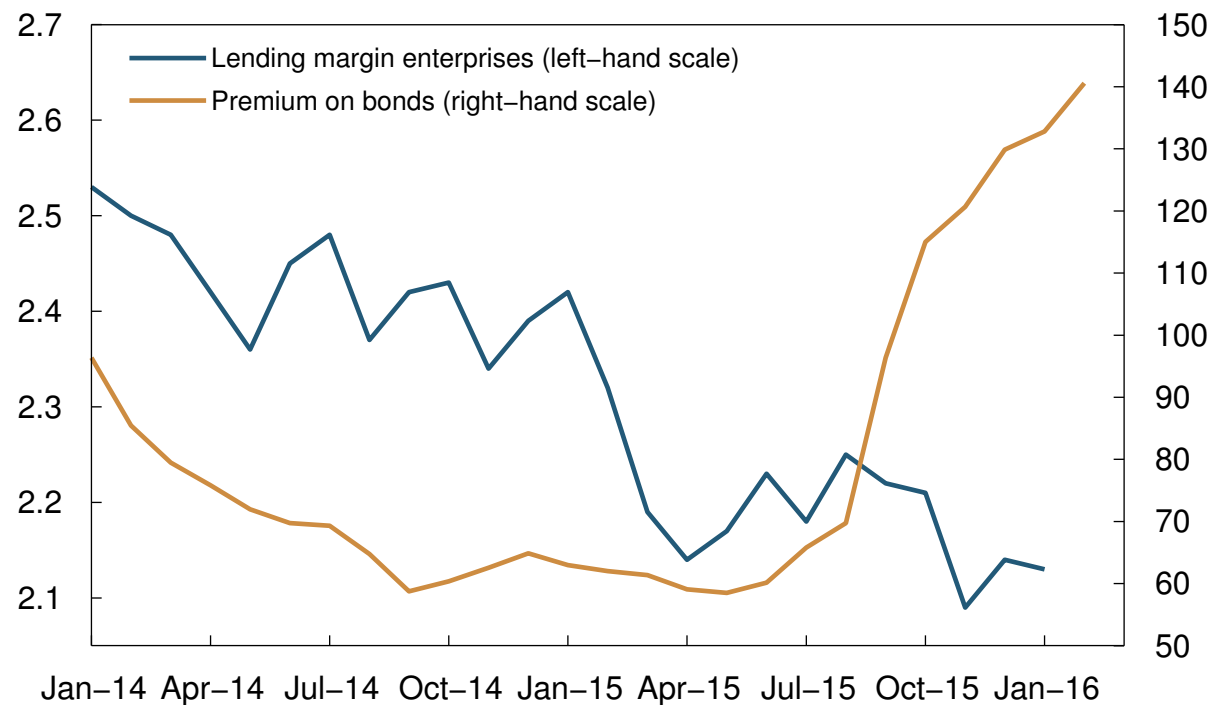
2) Last observation 2015 Q4 for private consumption.

Sources: TNS Gallup, Opinion and Norges Bank

Chart 1.24 Funding costs non-financial enterprises.

Lending margin. Percent. Spread to three-month Nibor.¹⁾ Basis points.

January 2014 – February 2016²⁾

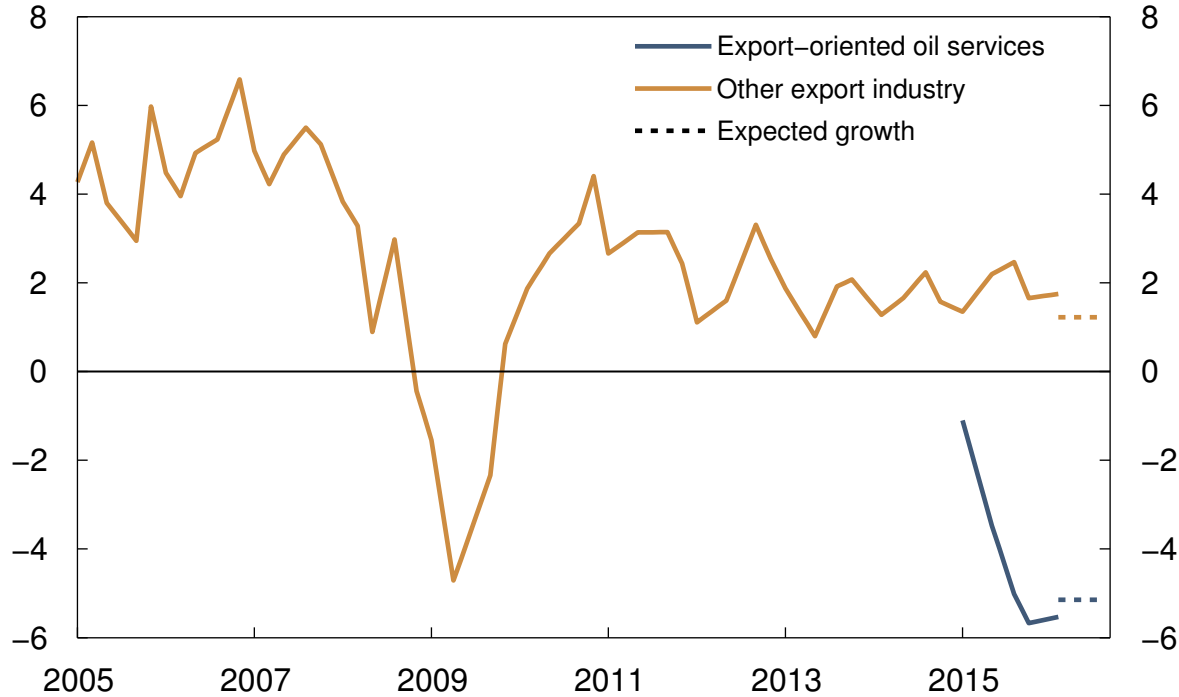


1) For bonds with five-year maturity issued by low-risk manufacturing enterprises.

2) Lending margin until January 2016.

Sources: Statistics Norway and DNB Markets

Chart 1.25 Norges Bank's regional network indicator of annualised output growth past three months and expected output growth next six months.¹⁾
 Percent.²⁾ January 2005 – August 2016³⁾



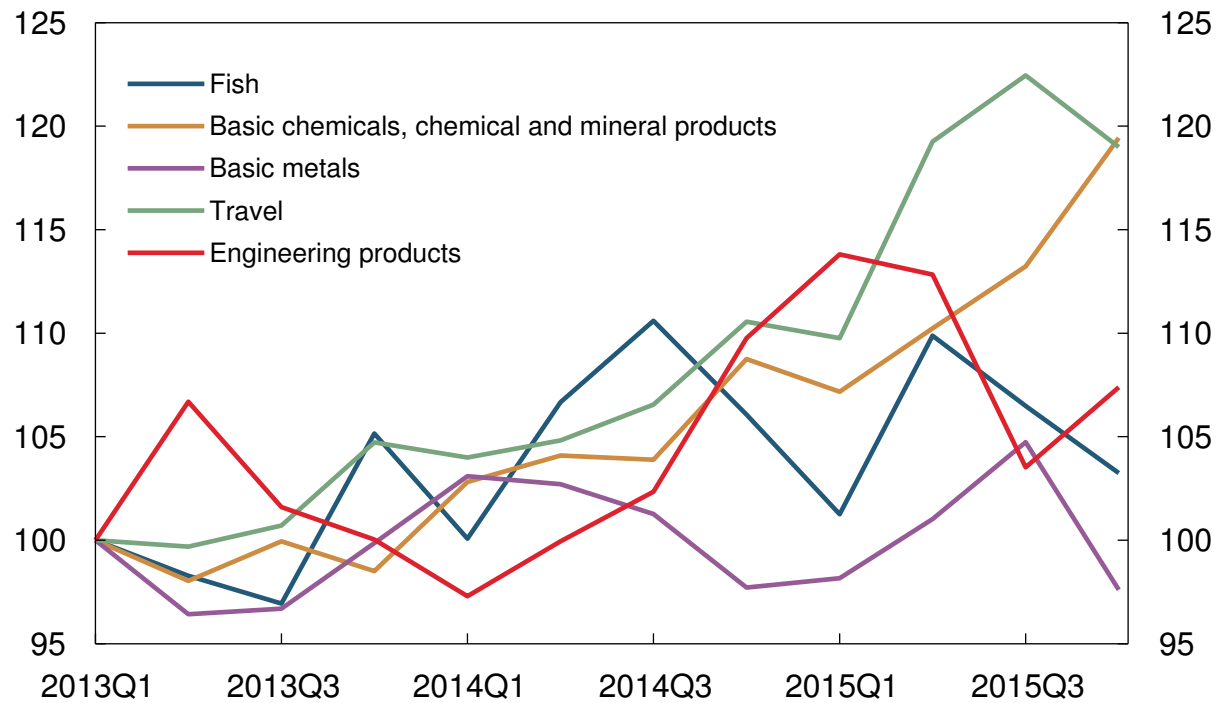
1) New sector classification results in a break in the series for the export industry from 2015.

2) The network uses an index from -5 to +5, where -5 indicates that production is expected to decline by 10 percent or more annualised. Several oil service enterprises expect production to decline by more than 10 percent in the next six months. This is not reflected in the chart due to the limitations of the index.

3) Reported growth to February 2016. Expected growth for February 2016 – August 2016.

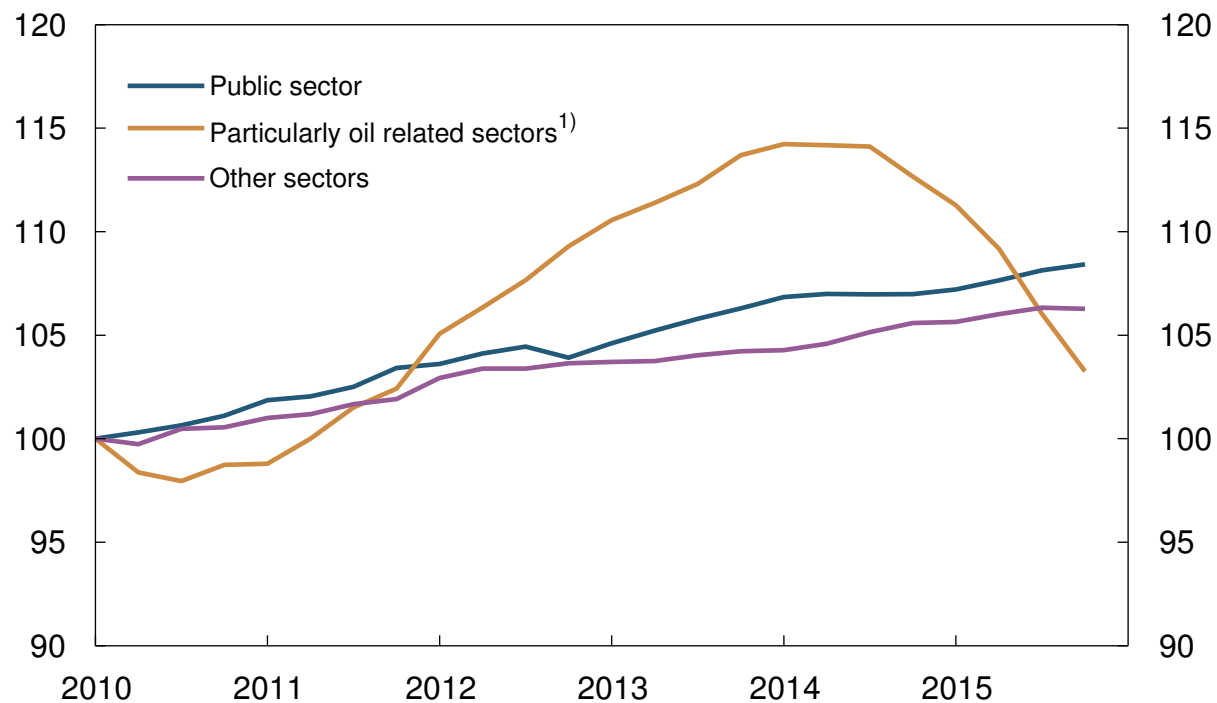
Source: Norges Bank

Chart 1.26 Export of various goods and services.
 Seasonally adjusted. Volume. Index. 2013 Q1=100. 2013 Q1 – 2015 Q4



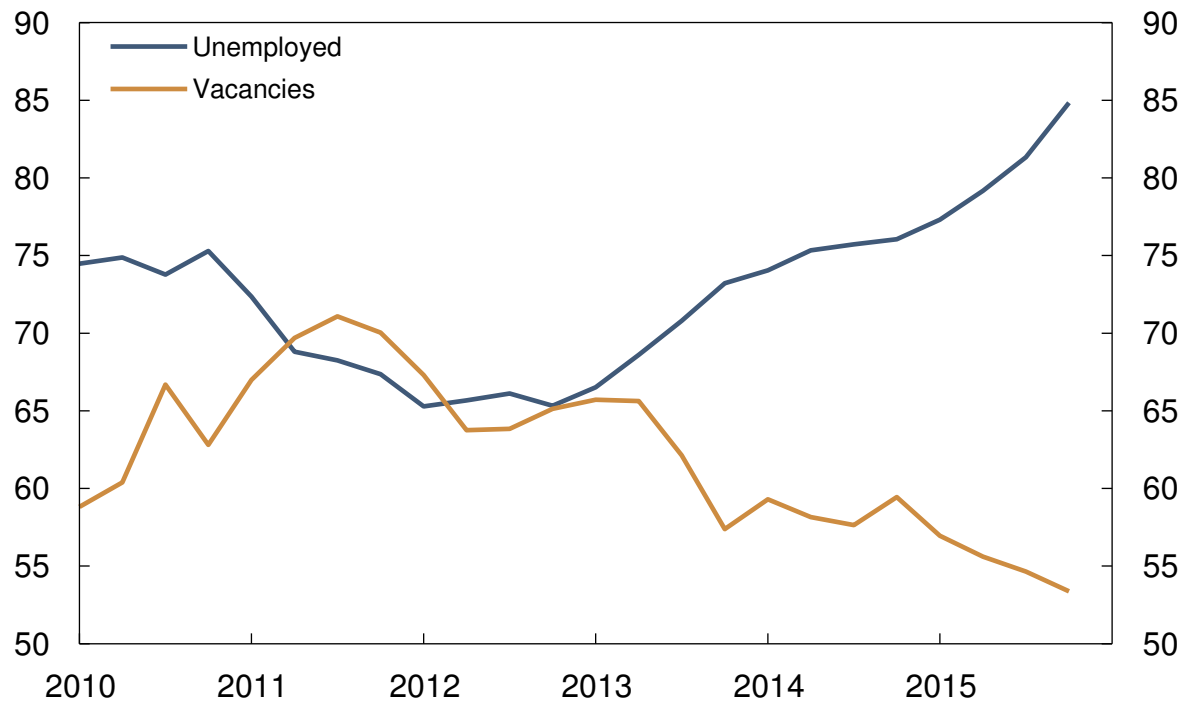
Source: Statistics Norway

Chart 1.27 Employment by sector.
 Seasonally adjusted. Index. 2010 Q1=100. 2010 Q1 – 2015 Q4



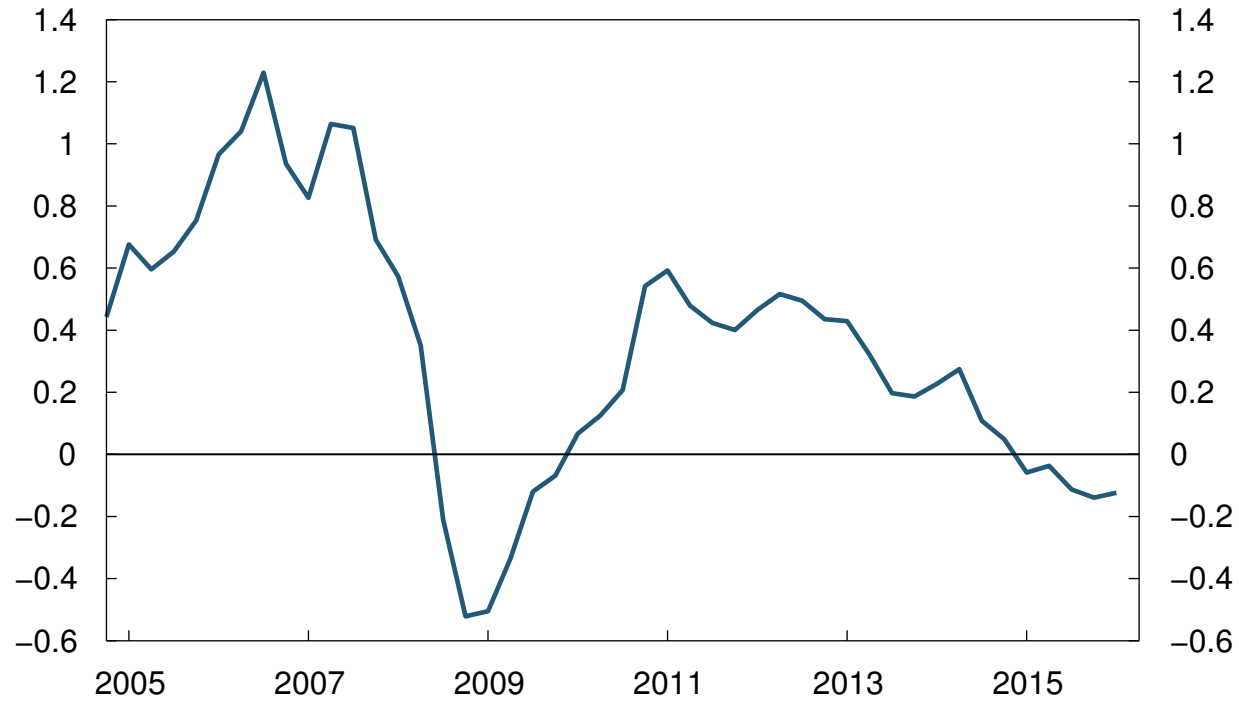
1) The category "particularly oil related sectors" includes extraction of crude oil and natural gas, including services, and the following industrial sectors: production of metal goods, electrical equipment and machinery, shipbuilding and transport industry, repairs and installation of machinery and equipment. In 2010 Q1 these sectors employed 166 000 people, 6% of all persons employed in the Norwegian economy. Sources: Statistics Norway and Norges Bank

Chart 1.28 Number of vacancies and number of unemployed¹⁾.
In 1000s of persons. Seasonally adjusted. 2010 Q1 – 2015 Q4



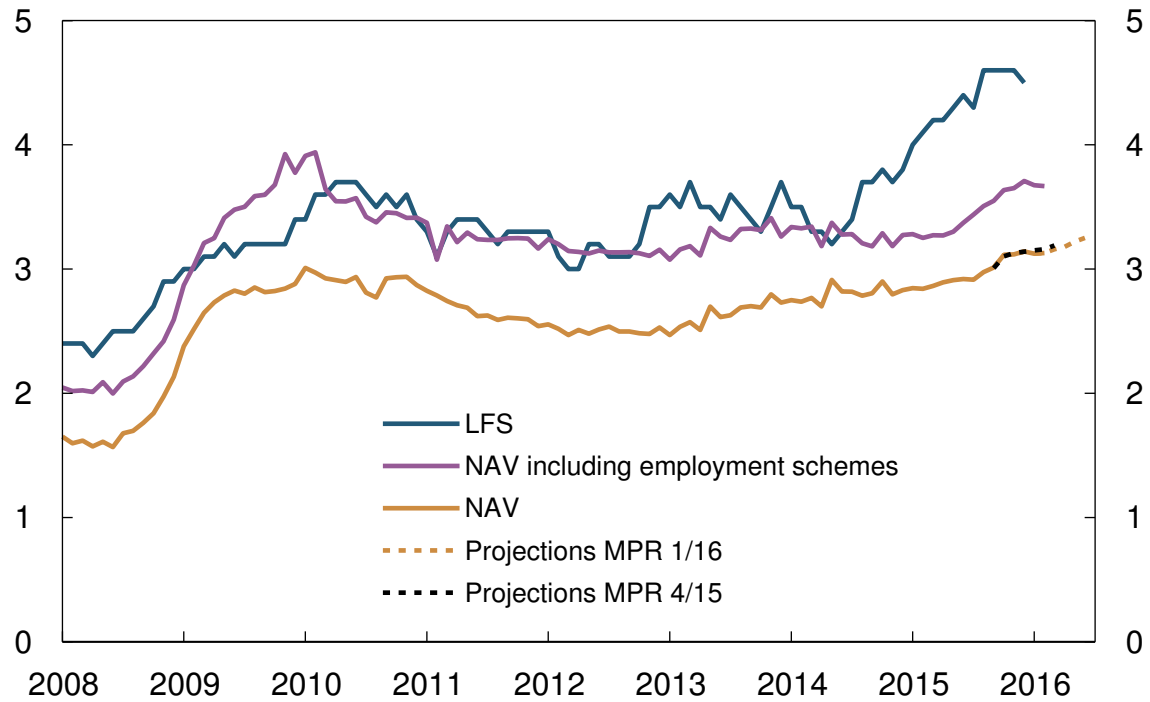
1) Registered unemployed.
Sources: Statistics Norway, NAV and Norges Bank

Chart 1.29 Norges Bank's regional network indicator for expected change in employment next three months. Percent. 2004 Q4 – 2016 Q1



Source: Norges Bank

Chart 1.30 Unemployment as a share of the labour force. LFS¹⁾ and NAV²⁾.
 Seasonally adjusted. Percent. January 2008 – June 2016 ^{3) 4)}



1) Labour Force Survey.

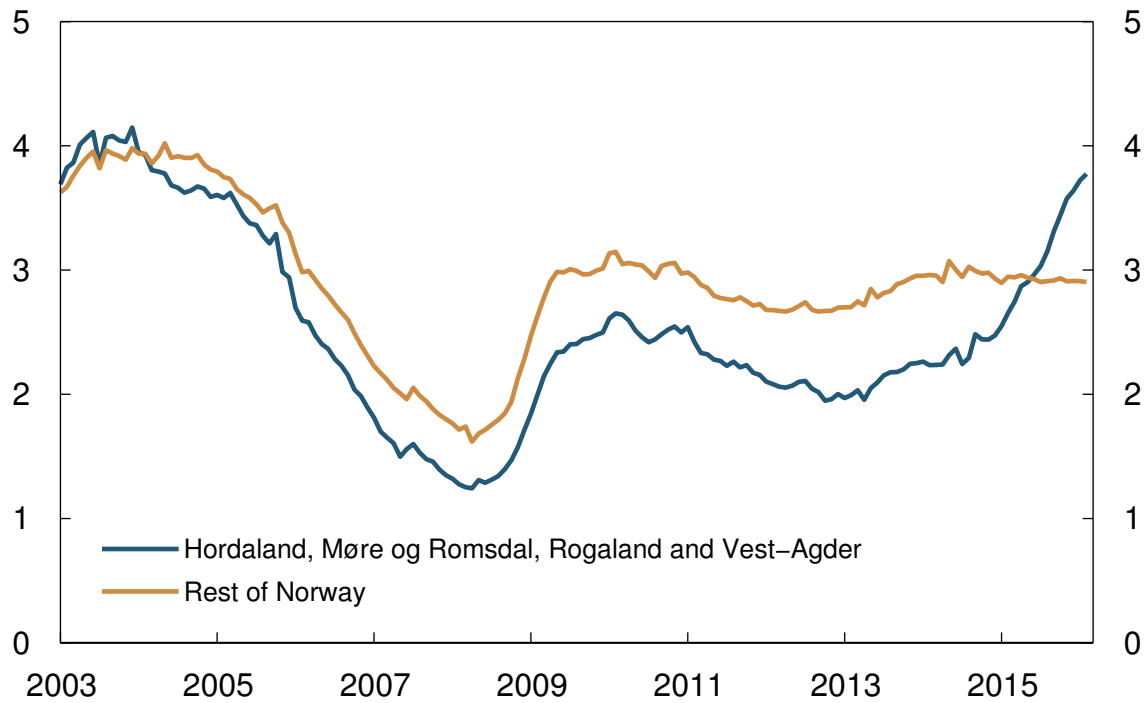
2) Norwegian Labour and Welfare Administration.

3) Projections for March 2016 – June 2016 (broken lines).

4) Latest observation December 2015 for LFS.

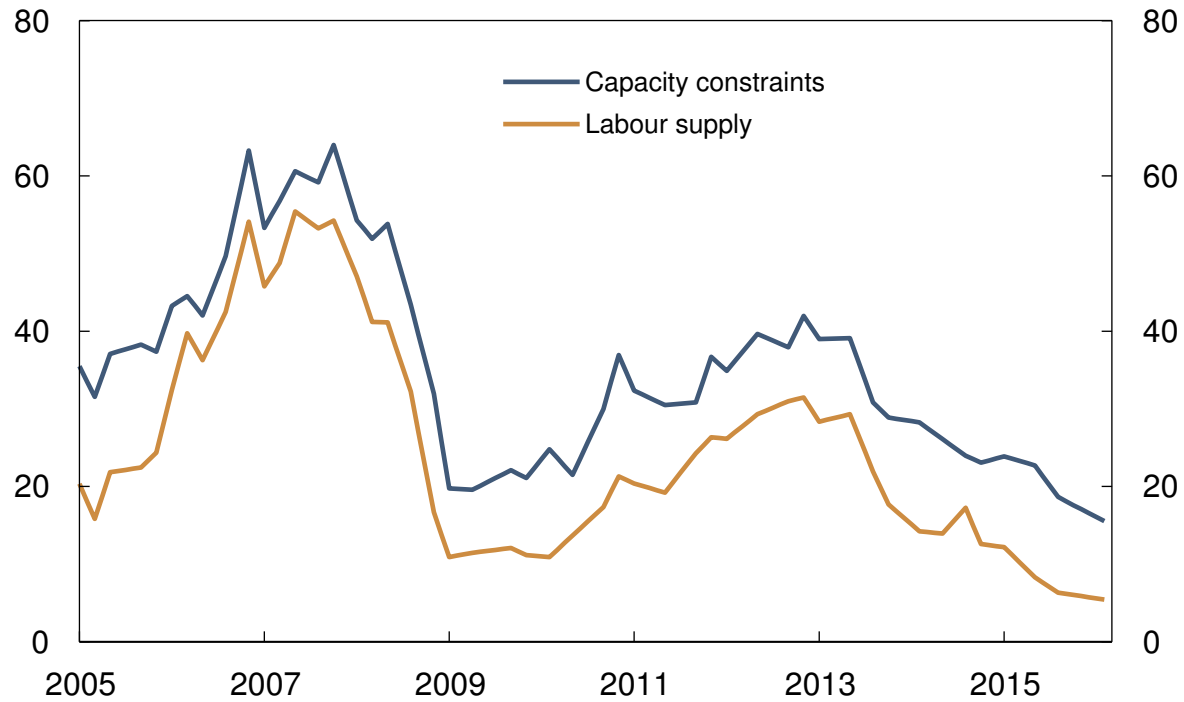
Sources: Statistics Norway, NAV and Norges Bank

Chart 1.31 Registered unemployment by county.
Share of labour force. Seasonally adjusted. Percent. January 2003 – February 2016



Sources: NAV and Norges Bank

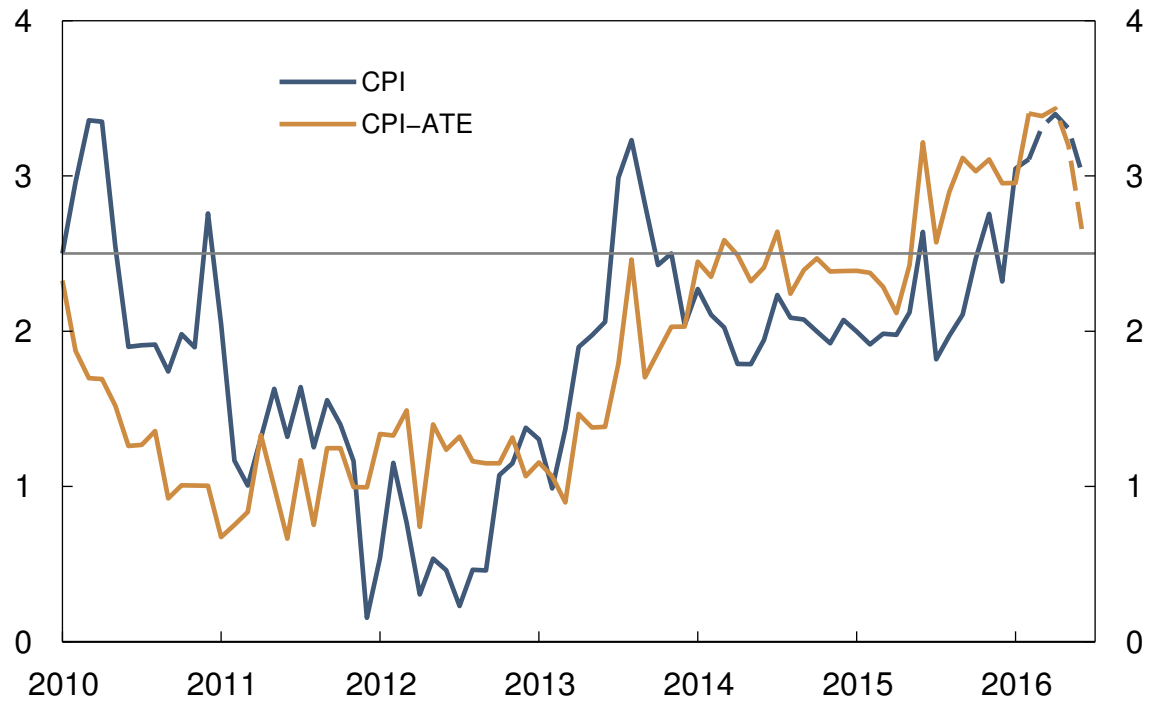
Chart 1.32 Capacity constraints and labour availability as reported by Norges Bank's regional network.¹⁾ Percent. January 2005 – February 2016



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

Chart 1.33 CPI and CPI-ATE¹⁾.

Twelve-month change. Percent. January 2010 – June 2016²⁾

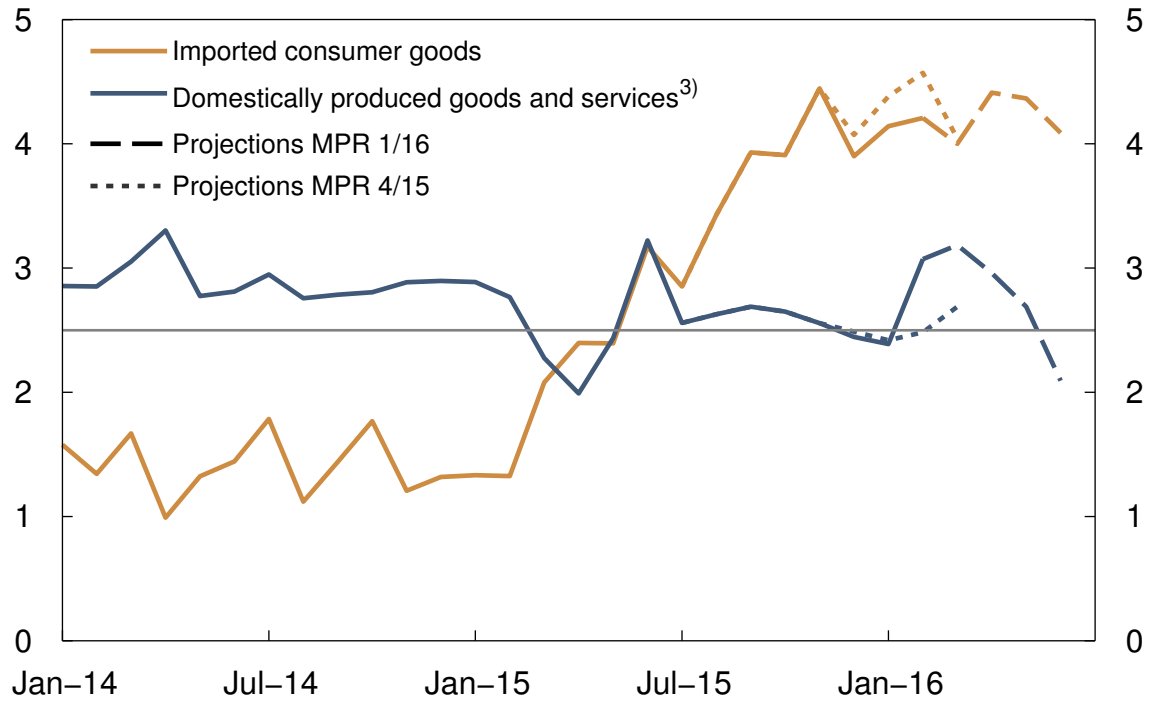


1) CPI adjusted for tax changes and excluding energy products.

2) Projections for March 2016 – June 2016 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 1.34 CPI-ATE¹⁾ by supplier sector.
 Twelve-month change. Percent. January 2014 – June 2016²⁾



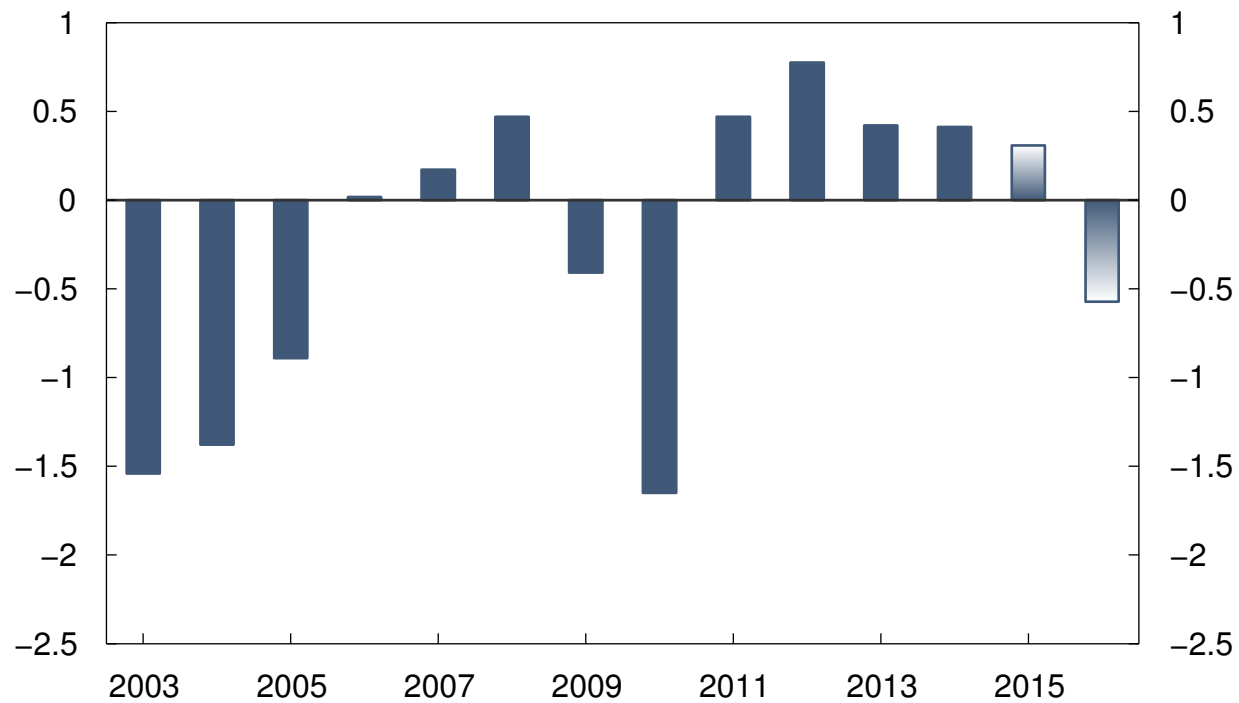
1) CPI adjusted for tax changes and excluding energy products.

2) Projections for March 2016 – June 2016 (broken lines).

3) Norges Bank's estimates.

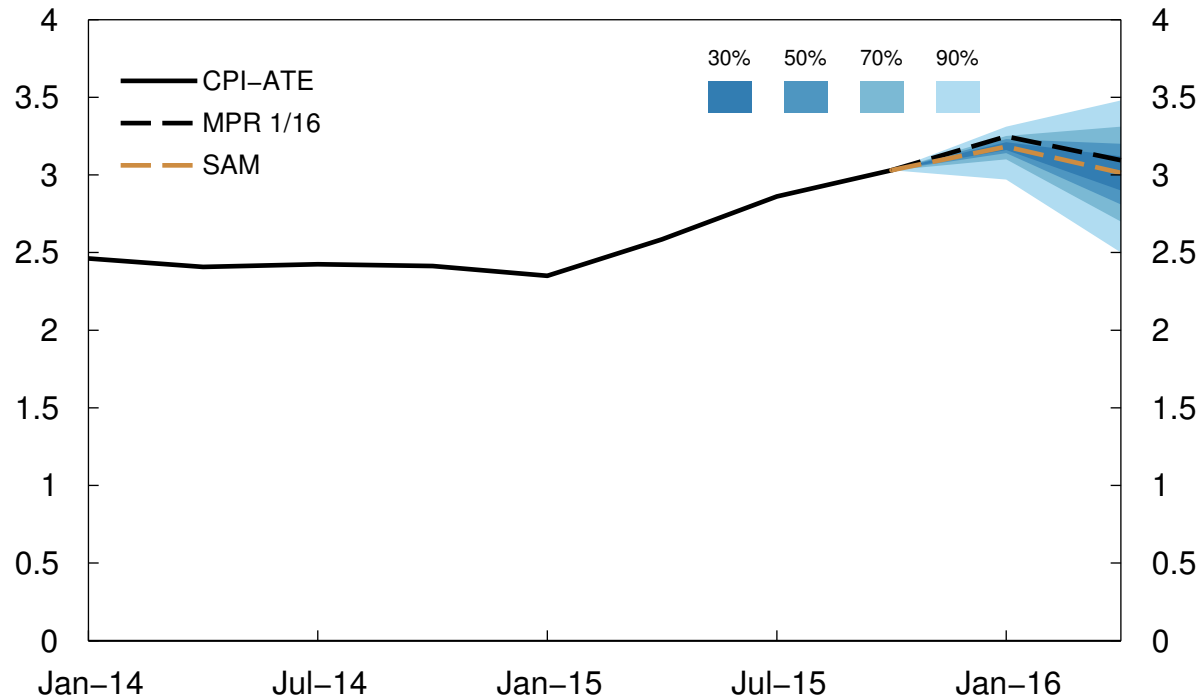
Sources: Statistics Norway and Norges Bank

Chart 1.35 Indicator of external price impulses to imported consumer goods measured in foreign currency. Annual change. Percent. 2003 – 2016¹⁾



1) Projections for 2015 and 2016.
Source: Norges Bank

Chart 1.36 CPI-ATE¹⁾. Actual figures, baseline scenario and projections from SAM²⁾ with fan chart. Four-quarter change. Percent. 2014 Q1 – 2016 Q2³⁾



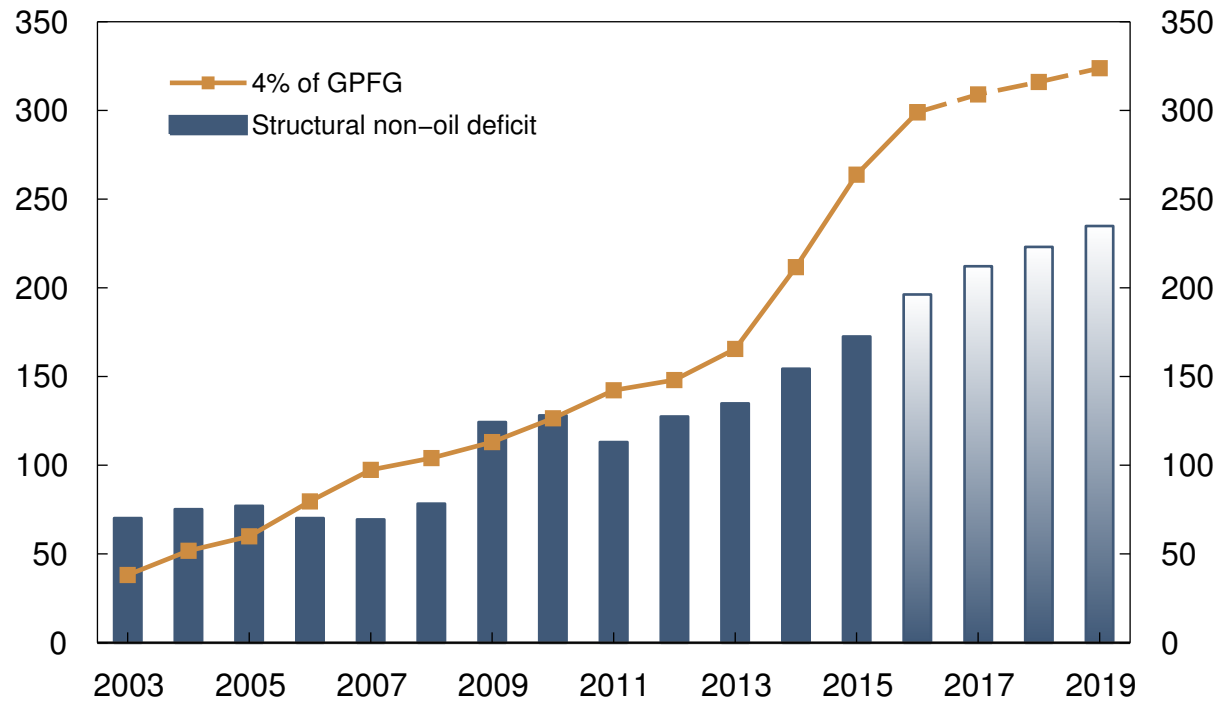
1) CPI adjusted for tax changes and excluding energy products.

2) System for Averaging short-term Models.

3) Projections for 2016 Q1 – 2016 Q2 (broken lines).

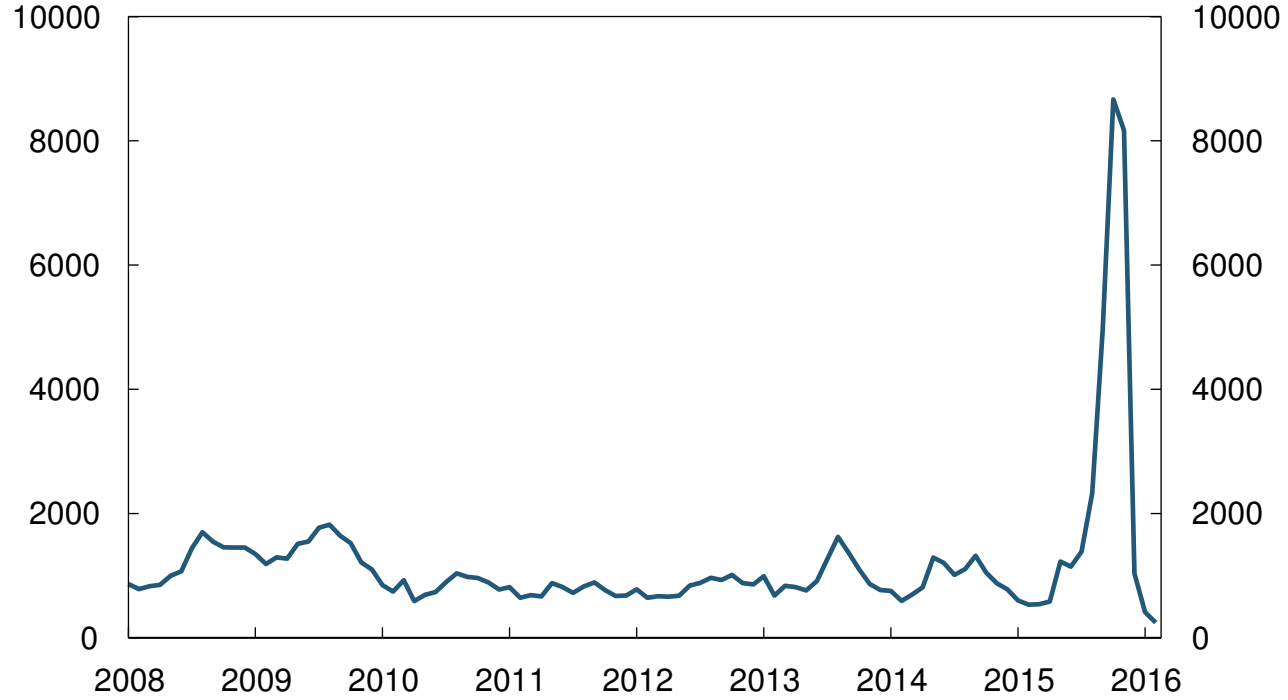
Sources: Statistics Norway and Norges Bank

Chart 1.37 Structural non-oil deficit and 4% of the Government Pension Fund Global (GPFG). Constant 2016 prices. In billions of NOK. 2003 – 2019¹⁾



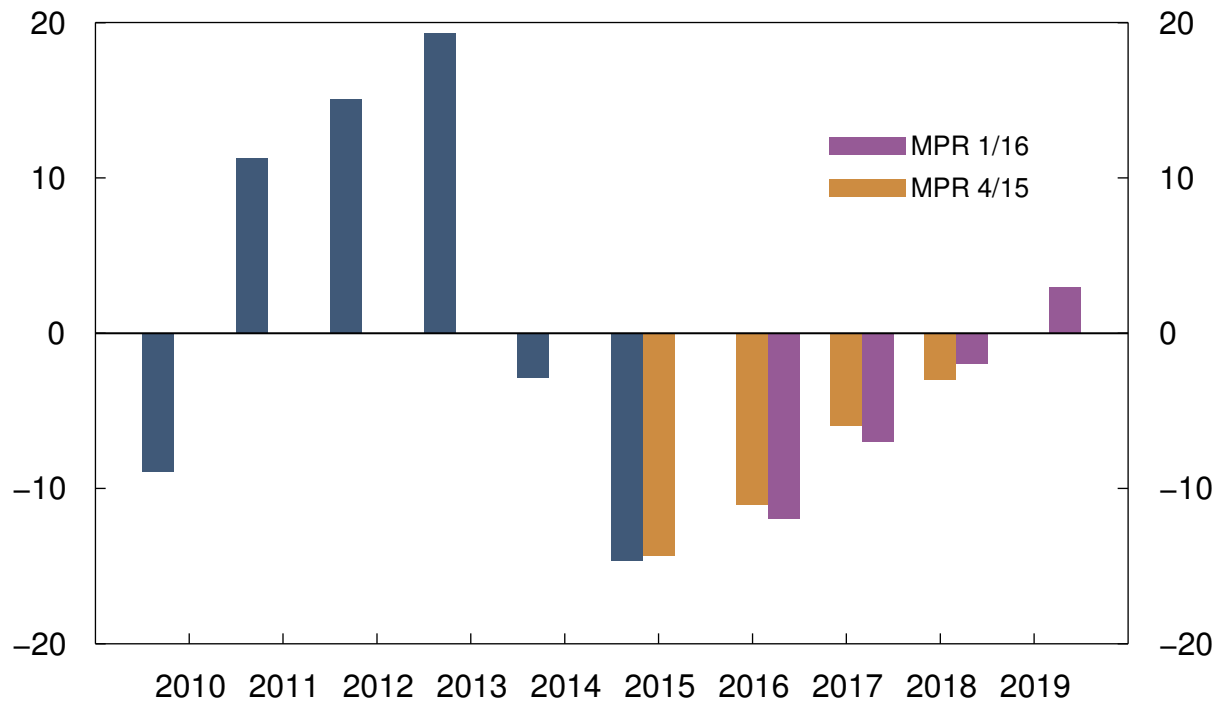
1) Projections for 2016 – 2019.
Sources: Ministry of Finance and Norges Bank

Chart 1.38 Number of asylum applications received per month.
January 2008 – February 2016



Source: Norwegian Directorate of Immigration

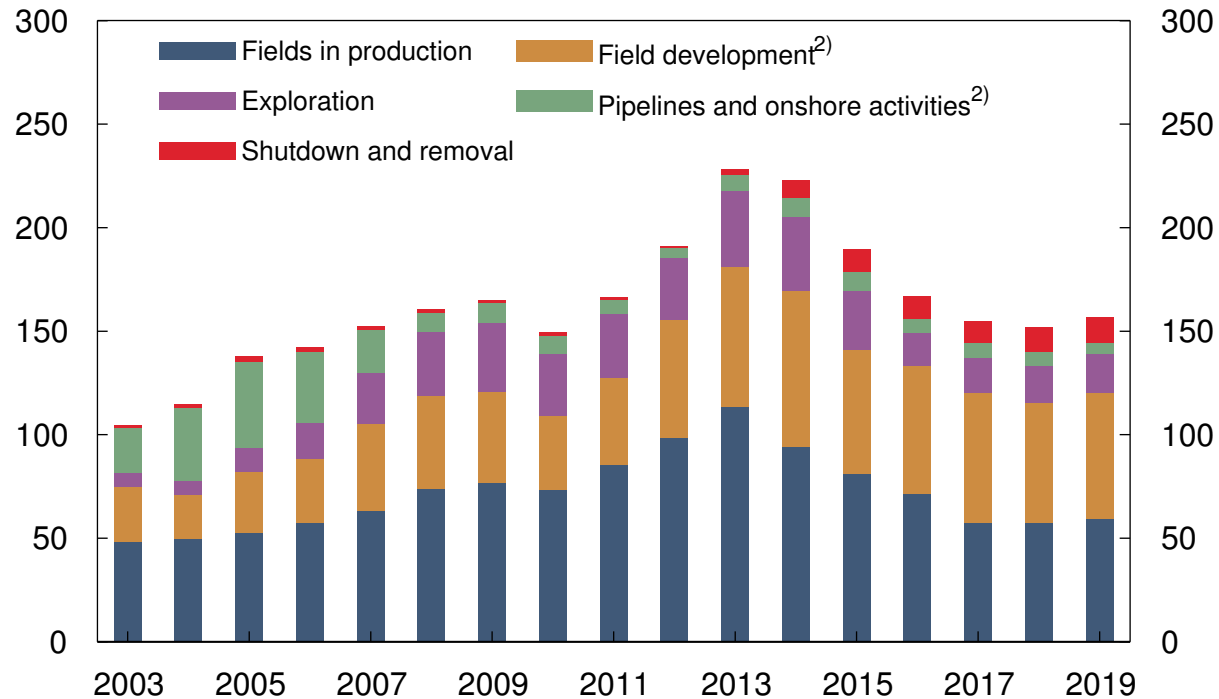
Chart 1.39 Petroleum investment.
Volume. Annual change. Percent. 2010 – 2019¹⁾



1) Projections for 2016 – 2019.
Sources: Statistics Norway and Norges Bank

Chart 1.40 Petroleum investment.

Constant 2016 prices. In billions of NOK. 2003 – 2019 ¹⁾



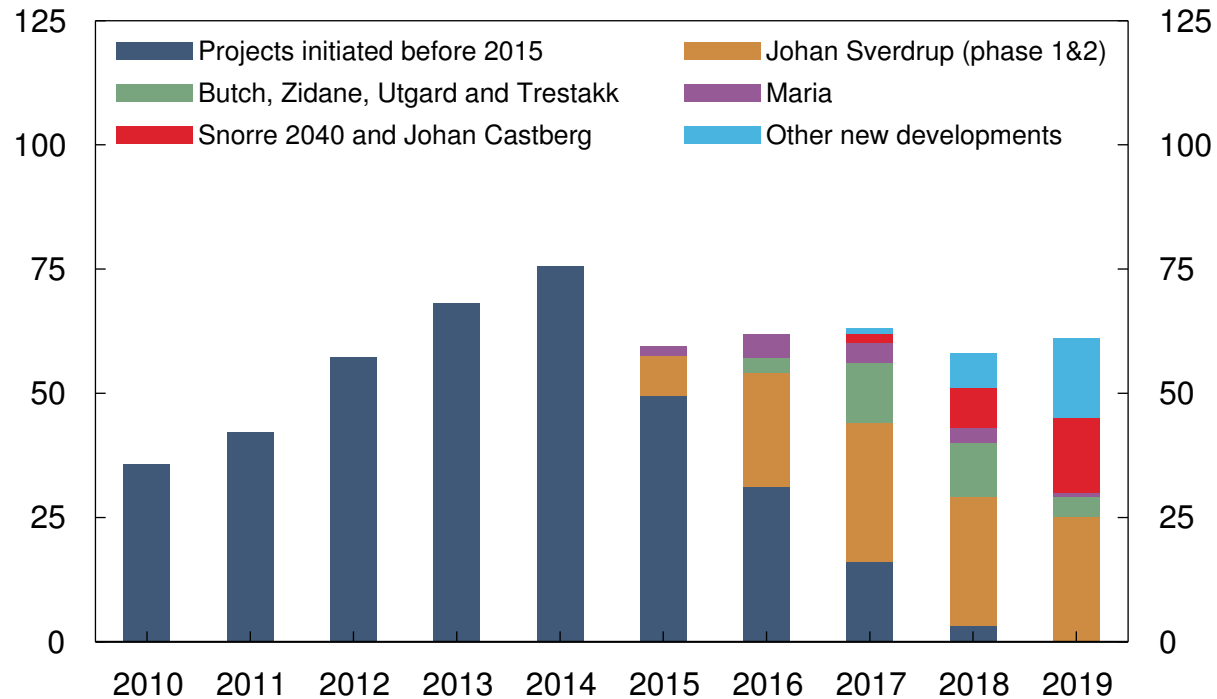
1) Projections for 2016 – 2019. Figures for 2003 – 2015 are from the investment intentions survey by Statistics Norway and deflated by the price index for petroleum investment in the national accounts. The index is projected to be unchanged from 2015 to 2016.

2) Expenses for pipelines for the Johan Sverdrup development are included in the estimates for pipeline transport and onshore activities.

Sources: Statistics Norway and Norges Bank

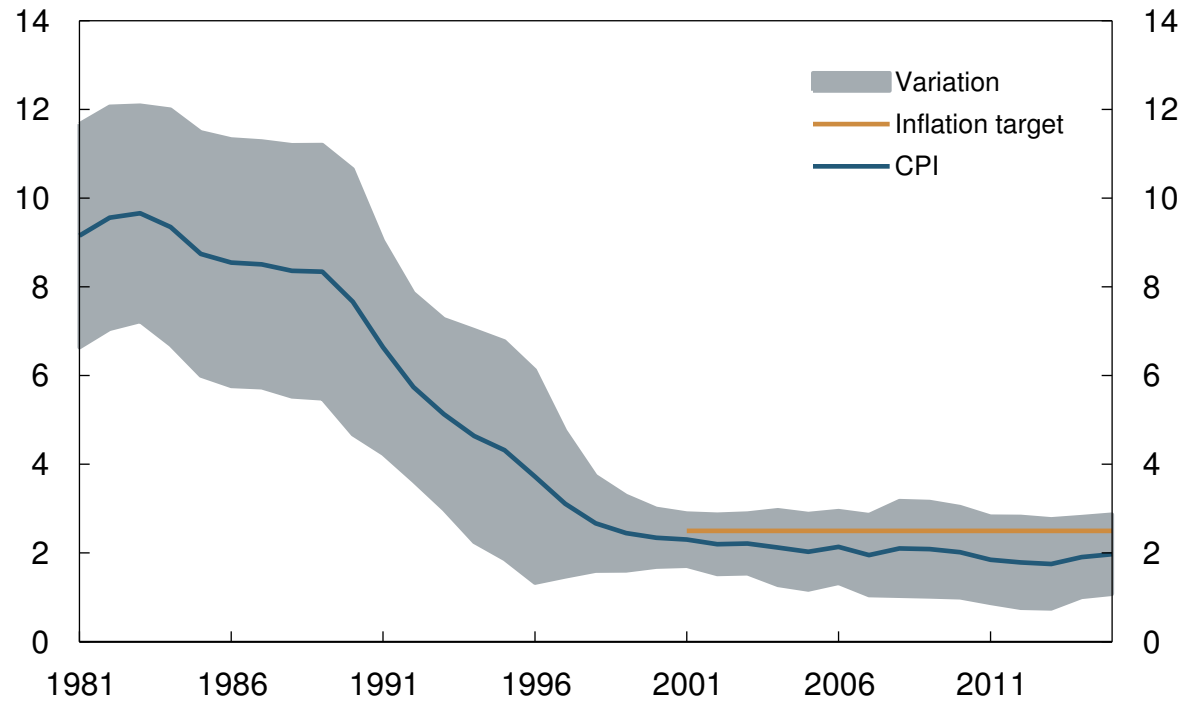
Chart 1.41 Field development.

Constant 2016 prices. In billions of NOK. 2010 – 2019 ¹⁾



1) Projections for 2016 – 2019 and for the breakdown of investment in 2015. Figures for total development investments for 2010 – 2015 are from the investment intentions survey by Statistics Norway and deflated by the price index for petroleum investment in the national accounts. The projections are based on reports to the Storting, impact analysis, forecasts from the Norwegian Petroleum Directorate, investment count from Statistics Norway and current information about development investments. Expenses for pipelines for the Johan Sverdrup development are included in the estimates for pipeline transport and onshore activities. Sources: Statistics Norway and Norges Bank

Chart 2.1 10-year moving average¹⁾ and variation²⁾ in the CPI.
Annual change. Percent. 1981 – 2015

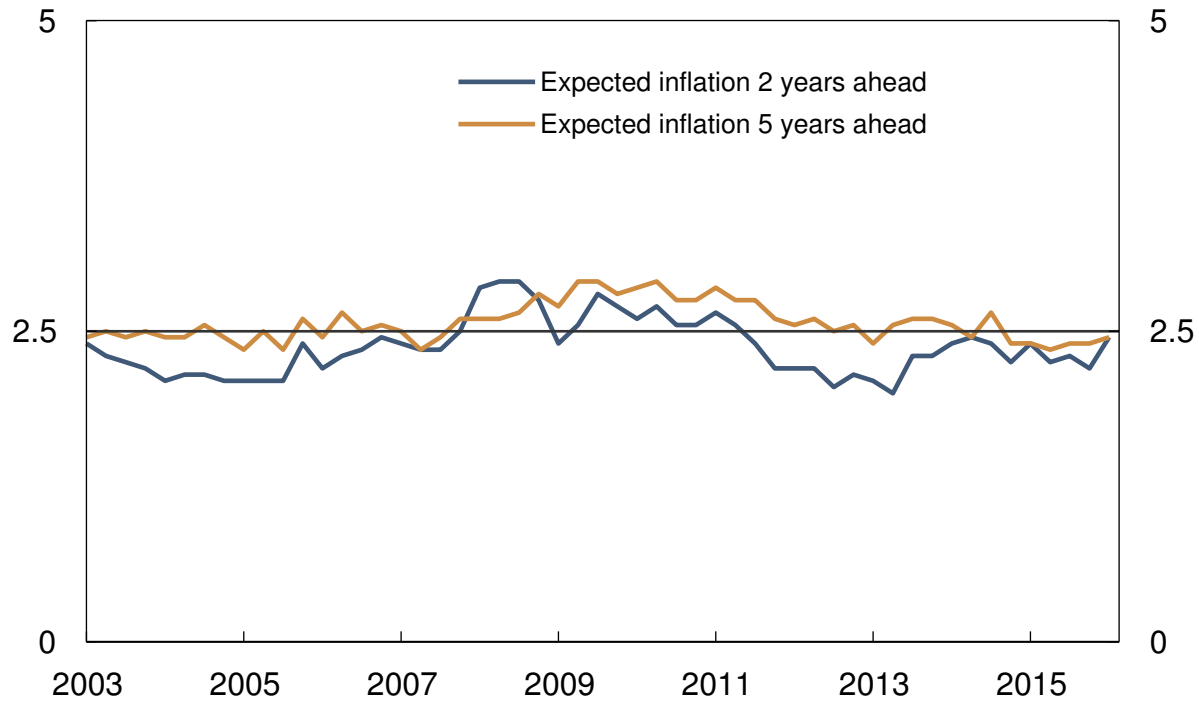


1) The moving average is calculated 10 years back.

2) The band around the CPI is the variation in the CPI in the average period, measured by +/- one standard deviation.

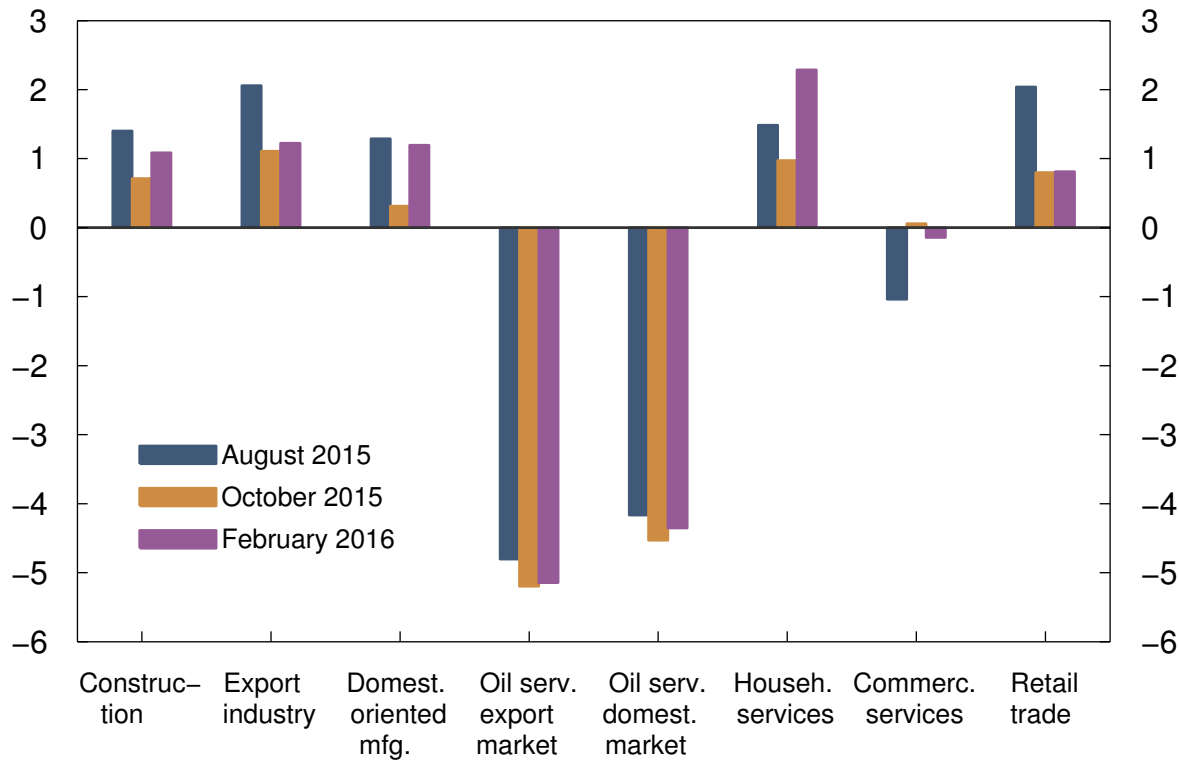
Sources: Statistics Norway and Norges Bank

Chart 2.2 Expected consumer price inflation 2 and 5 years ahead.¹⁾
Percent. 2003 Q1 – 2016 Q1



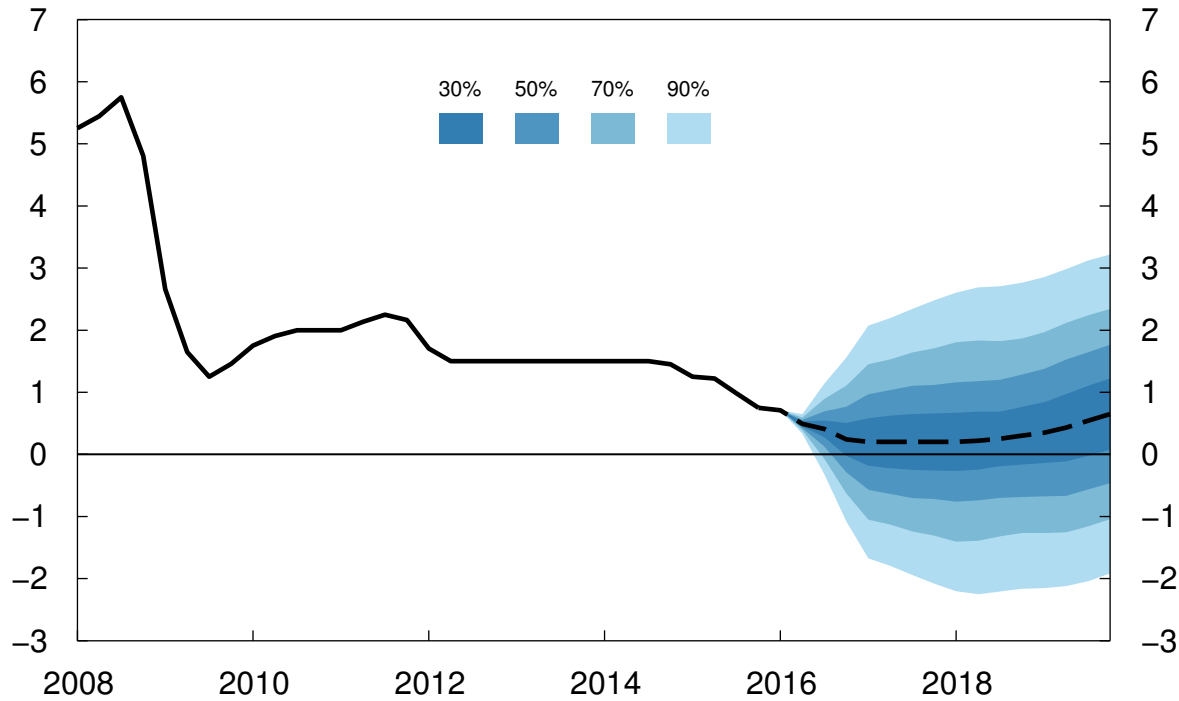
1) Average of expectations of employer/employee organisations and economists in the financial industry and academia.
Sources: Epiunion and Norges Bank

Chart 2.3 Expected output growth next six months, Norges Bank's regional network.¹⁾
Annualised. Percent



1) The network uses an index from -5 to +5, where -5 indicates that production is expected to decline by 10% or more annualised. Several oil service enterprises expect production to decline by more than 10% in the next six months. This is not reflected in the chart due to the limitations of the index.
Source: Norges Bank

Chart 2.4a Projected key policy rate in the baseline scenario with fan chart.¹⁾
Percent. 2008 Q1 – 2019 Q4²⁾

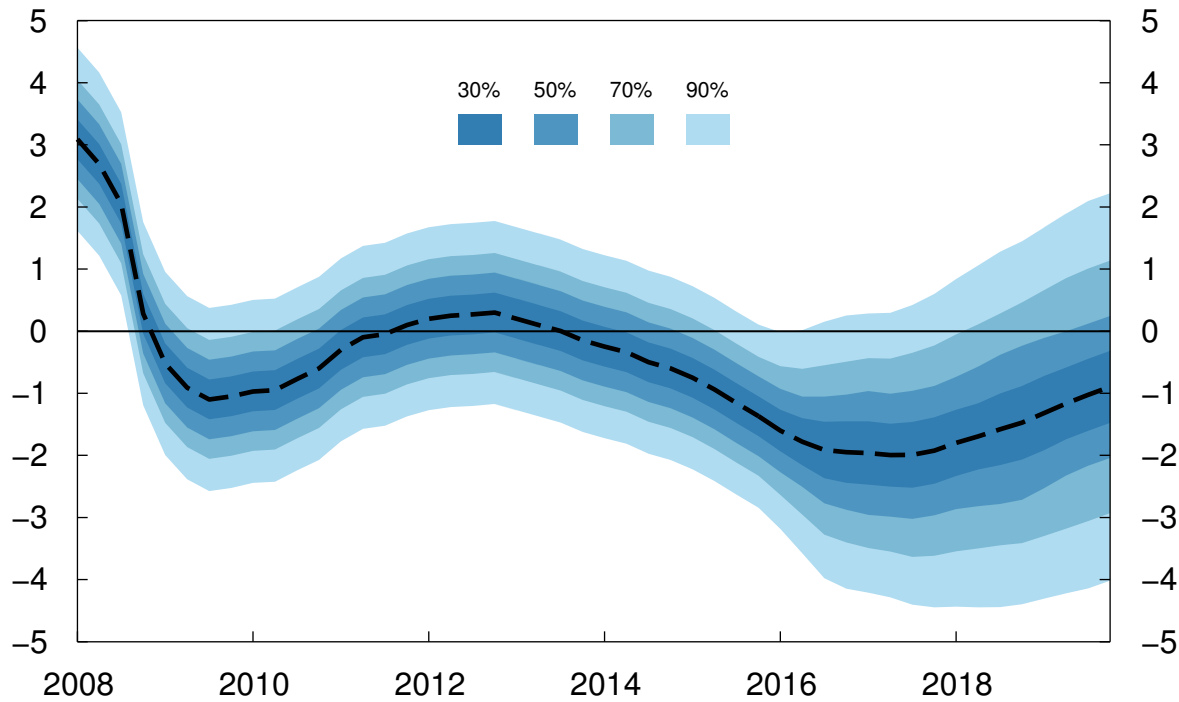


1) The fan charts are based on historical experience and stochastic simulations in our main macroeconomic model, NEMO. The fan chart for the key policy rate does not take into account that a lower bound for the interest rate exists.

2) Projections for 2016 Q1 – 2019 Q4 (broken line).

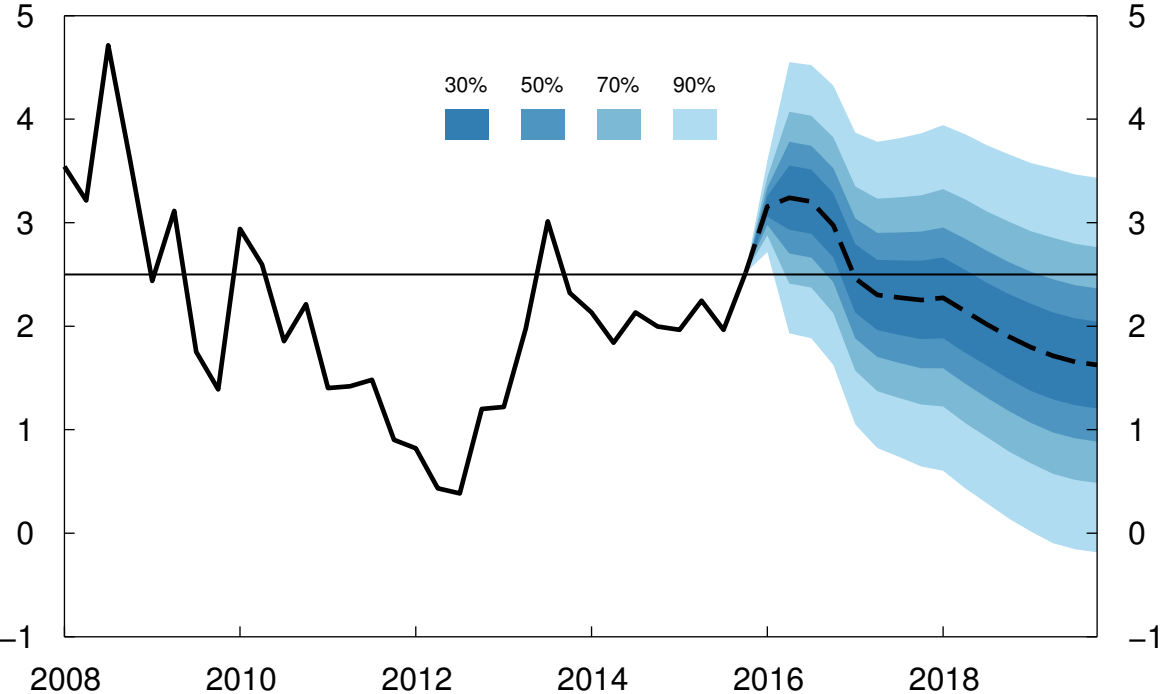
Source: Norges Bank

Chart 2.4b Projected output gap¹⁾ in the baseline scenario with fan chart.
Percent. 2008 Q1 – 2019 Q4



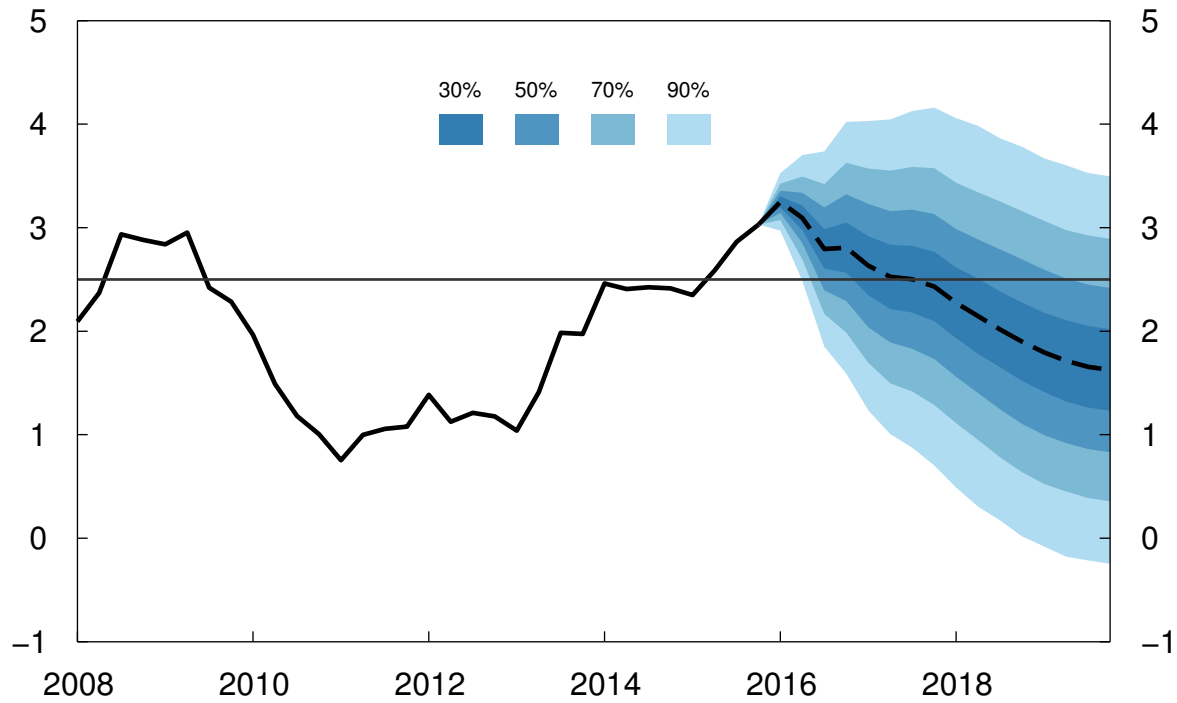
1) The output gap measures the percentage deviation between mainland GDP and projected potential mainland GDP.
Source: Norges Bank

Chart 2.4c Projected CPI in the baseline scenario with fan chart.
Four-quarter change. Percent. 2008 Q1 – 2019 Q4¹⁾



1) Projections for 2016 Q1 – 2019 Q4 (broken line).
Sources: Statistics Norway and Norges Bank

Chart 2.4d Projected CPI-ATE¹⁾ in the baseline scenario with fan chart.
Four-quarter change. Percent. 2008 Q1 – 2019 Q4²⁾

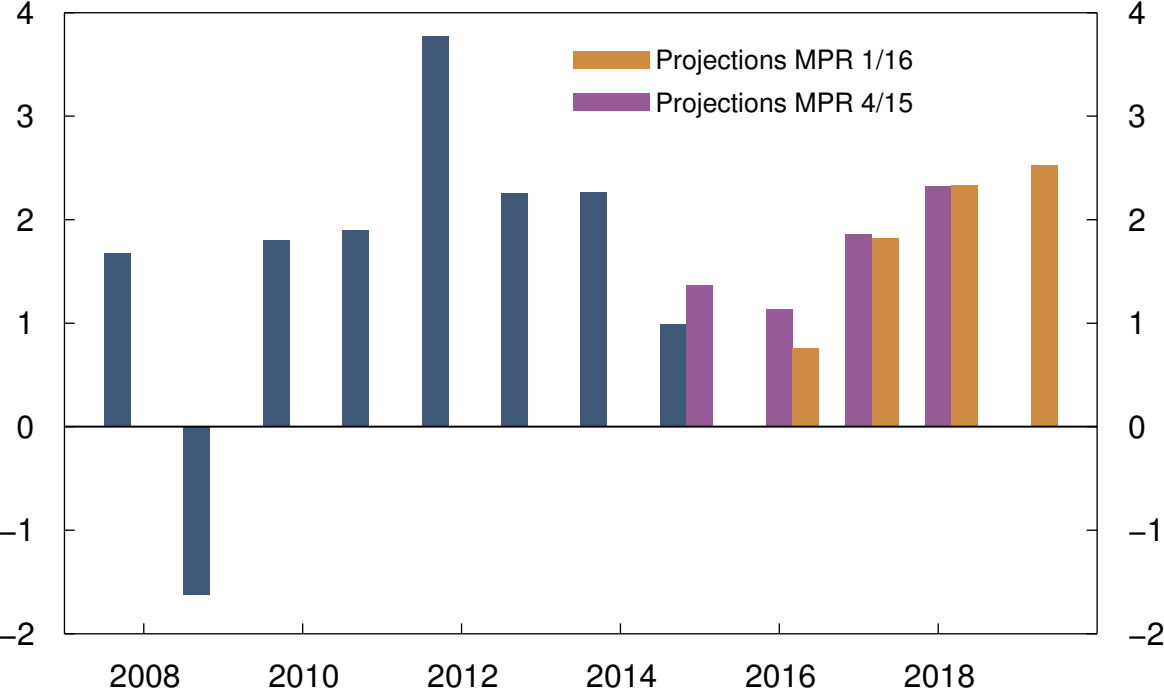


1) CPI adjusted for tax changes and excluding energy products.

2) Projections for 2016 Q1 – 2019 Q4 (broken line).

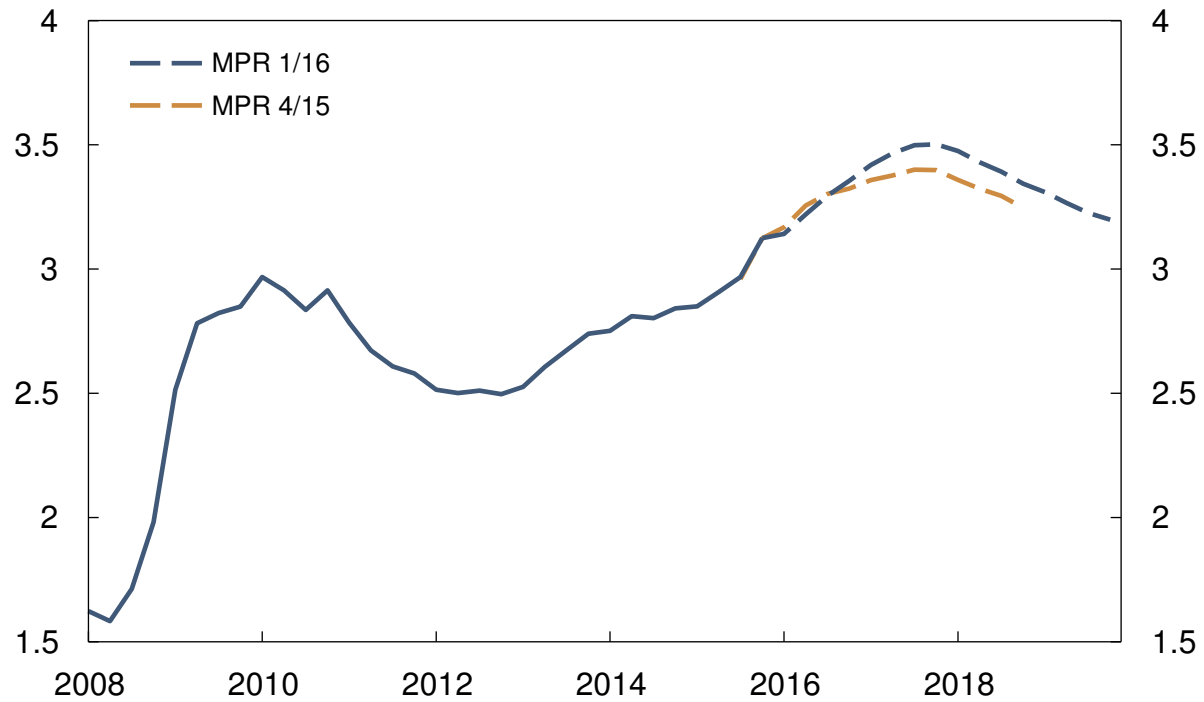
Sources: Statistics Norway and Norges Bank

Chart 2.5 GDP for mainland Norway.
Annual change. Percent. 2008 – 2019



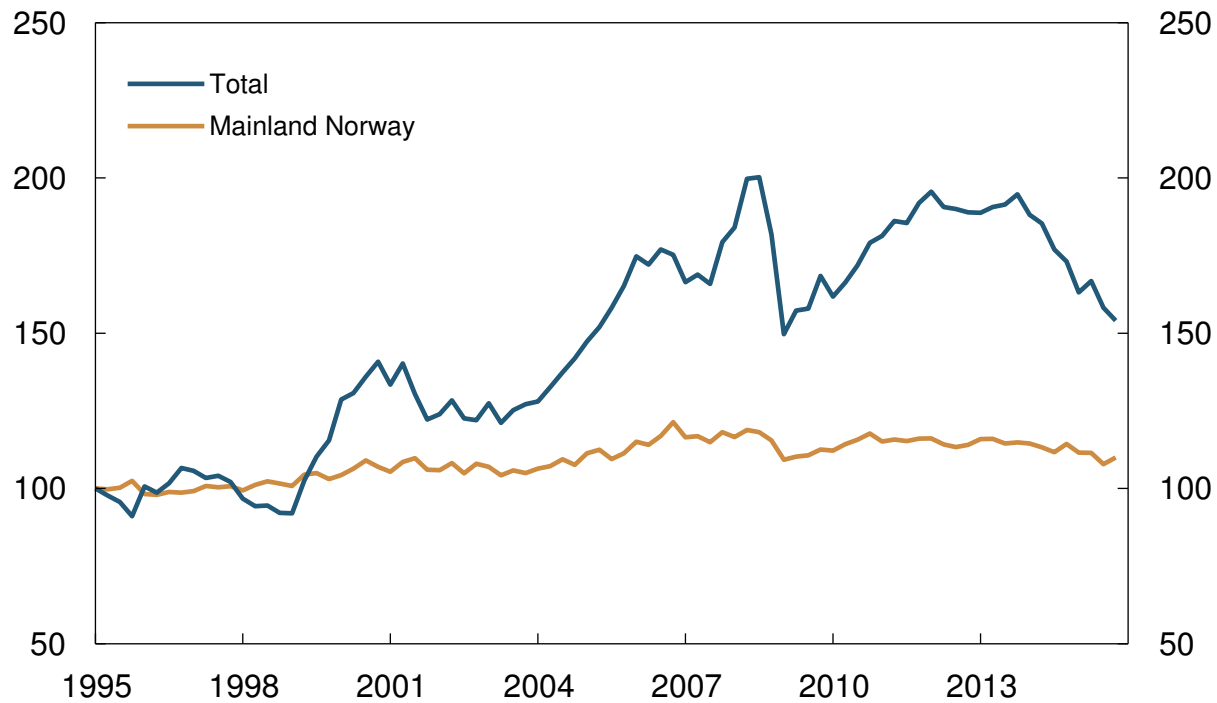
Sources: Statistics Norway and Norges Bank

Chart 2.6 Registered unemployment in percent of labour force.
Seasonally adjusted. Percent. 2008 Q1 – 2019 Q4 ¹⁾



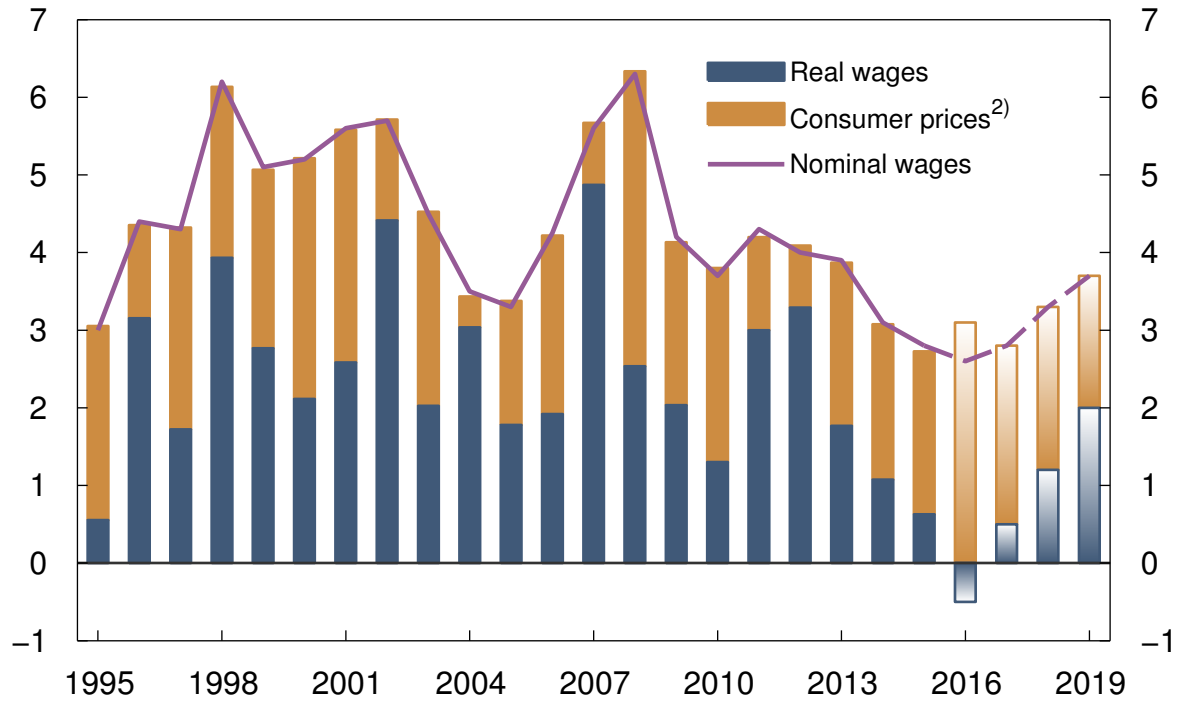
1) Projections for 2016 Q1 – 2019 Q4 (broken lines).
Sources: NAV, Statistics Norway and Norges Bank

Chart 2.7 Terms of trade.
Seasonally adjusted. Index. 1995 Q1=100. 1995 Q1 – 2015 Q4



Sources: Statistics Norway and Norges Bank

Chart 2.8 Annual wages.
Annual change. Percent. 1995 – 2019¹⁾

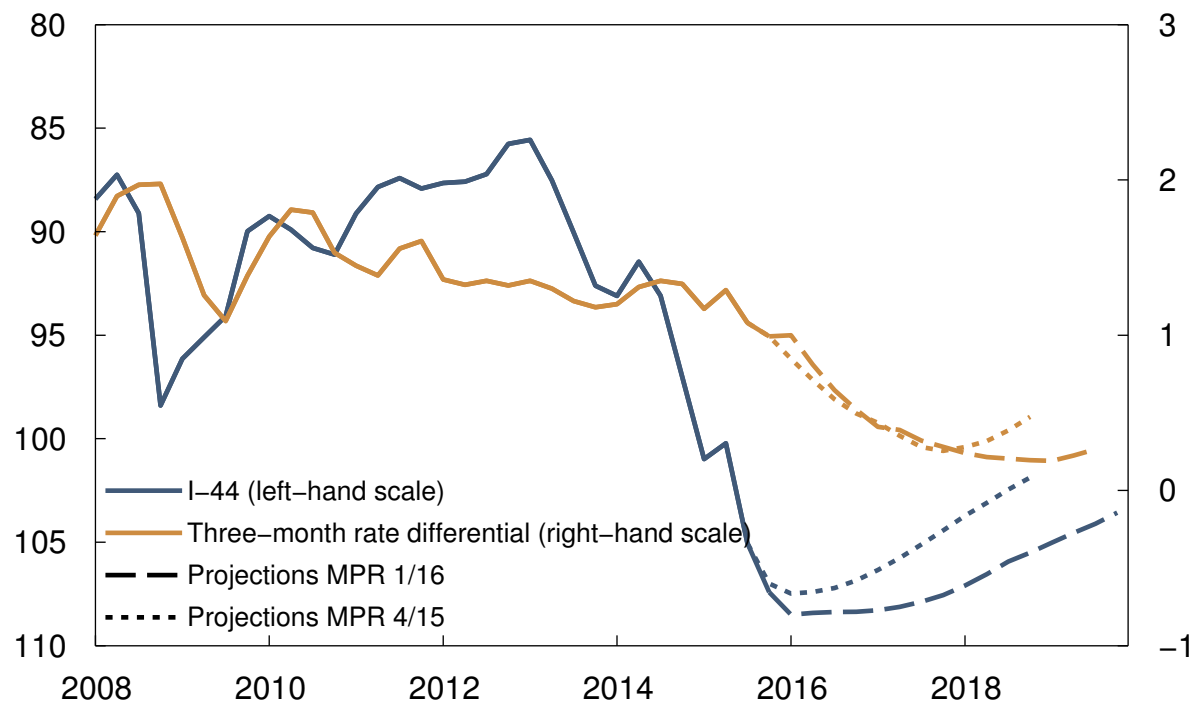


1) Projections for 2016 – 2019.

2) CPI.

Sources: TBU, Statistics Norway and Norges Bank

Chart 2.9 Three-month money market rate differential between Norway¹⁾ and trading partners²⁾ and import-weighted exchange rate index (I-44)³⁾. 2008 Q1 – 2019 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.

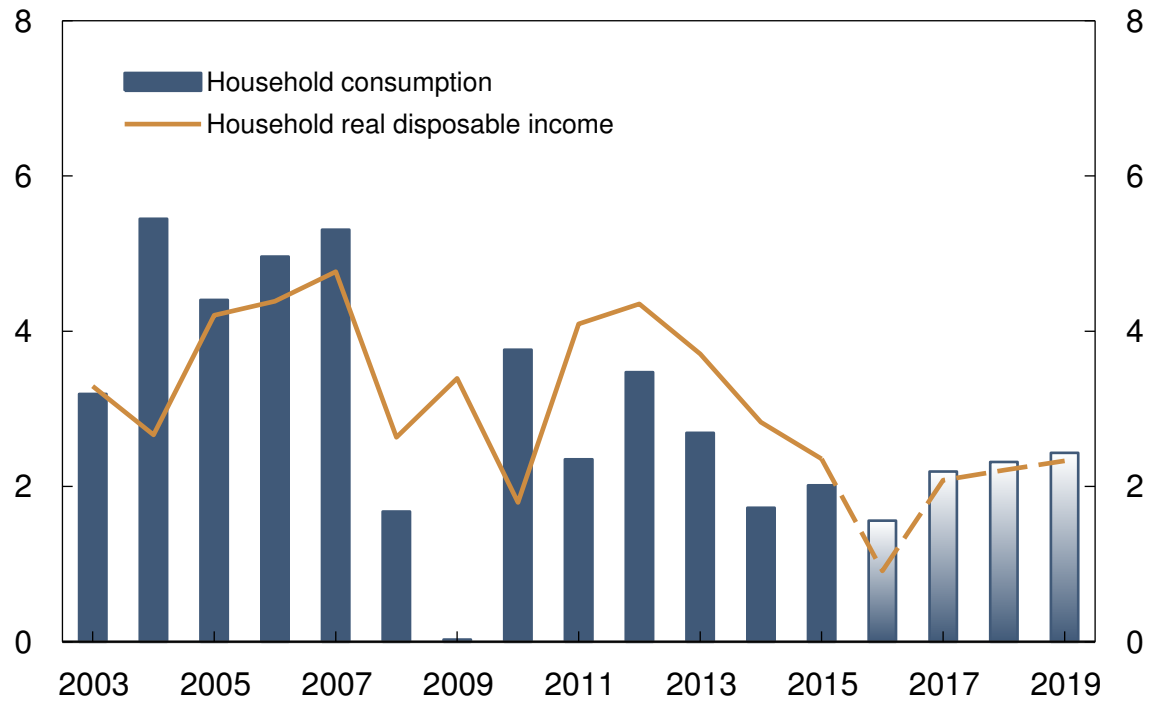
2) Forward rates for trading partners at 11 March 2016.

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

4) Projections for 2016 Q1 – 2019 Q4 (broken lines).

Sources: Thomson Reuters and Norges Bank

Chart 2.10 Household consumption¹⁾ and real disposable income²⁾.
Annual change. Percent. 2003 – 2019³⁾



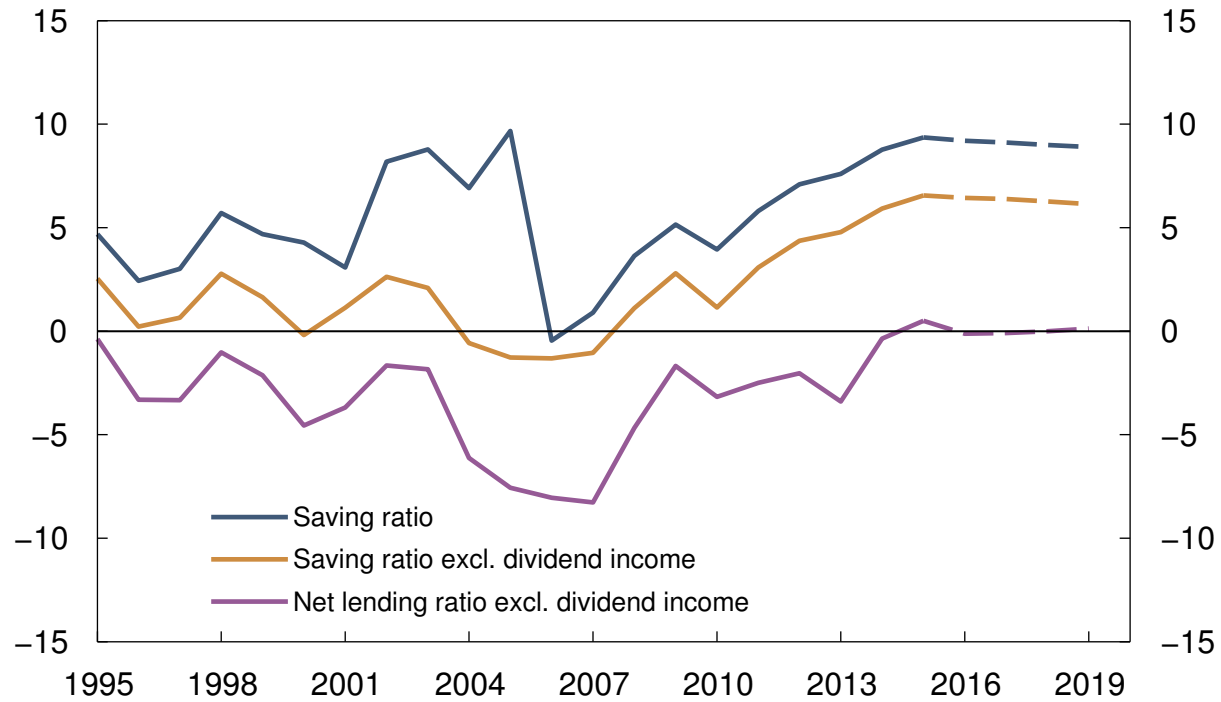
1) Includes consumption for non-profit organisations. Volume.

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

3) Projections for 2016 – 2019.

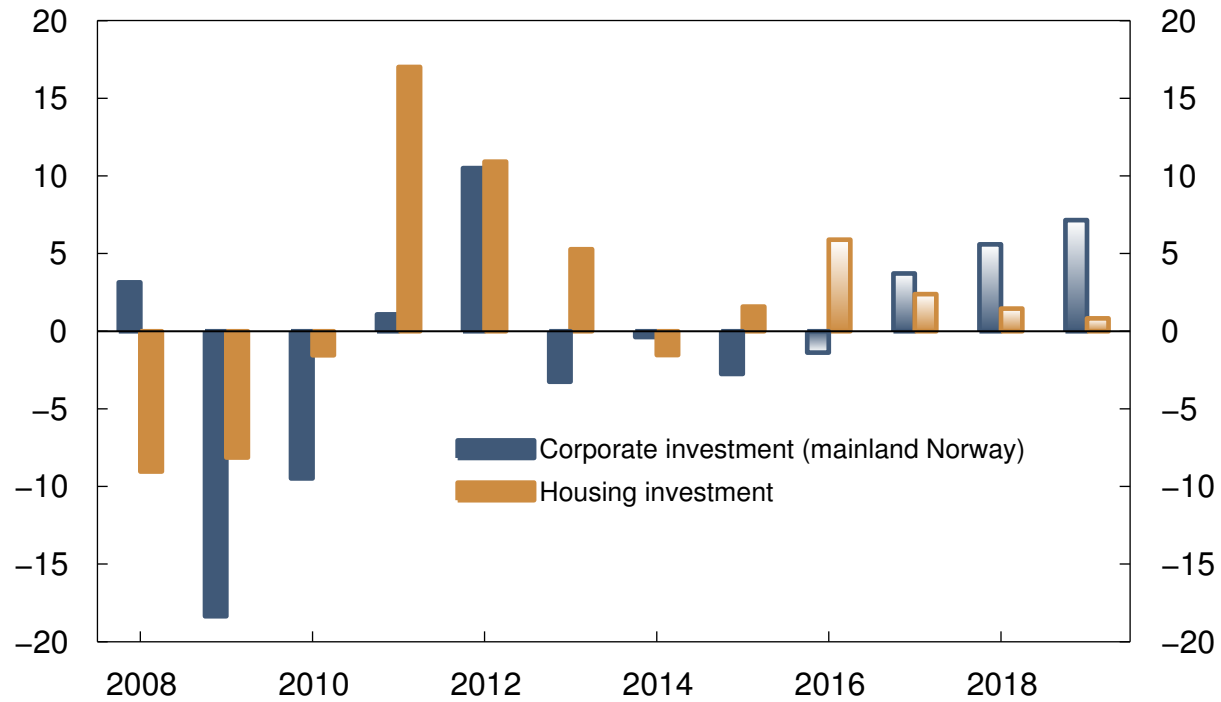
Sources: Statistics Norway and Norges Bank

Chart 2.11 Household saving and net lending as a share of disposable income.
Percent. 1995 – 2019 ¹⁾



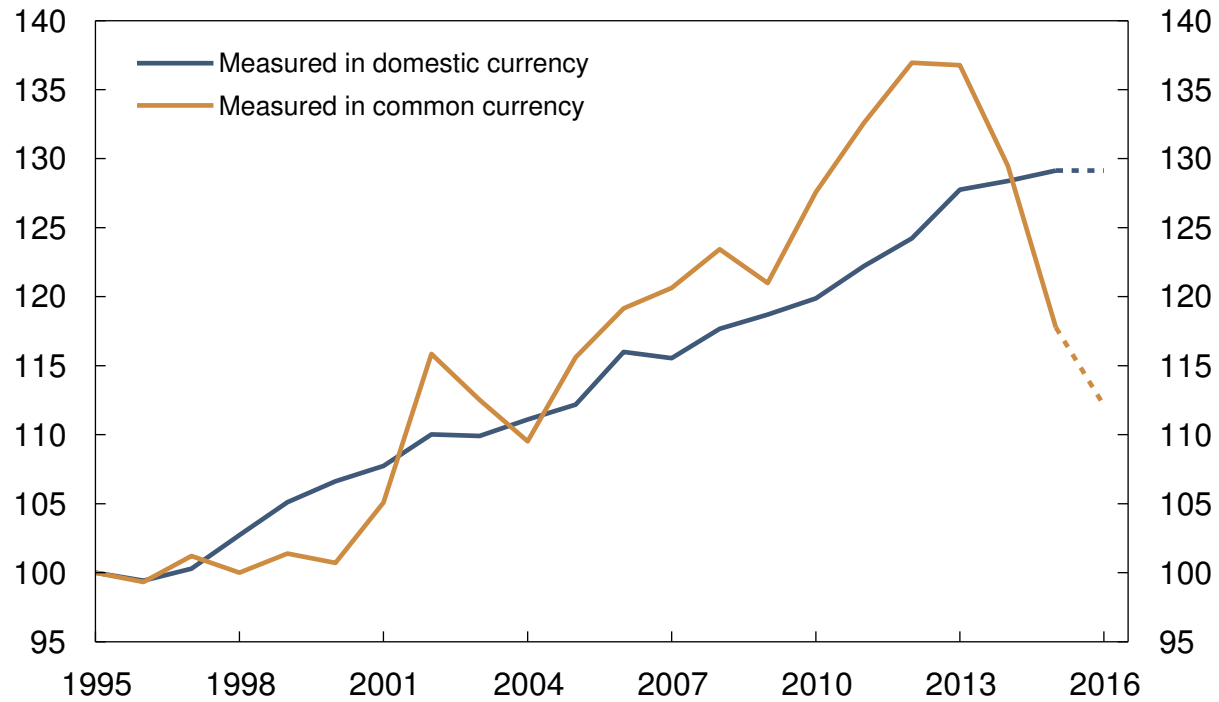
1) Projections for 2016 – 2019 (broken lines).
Sources: Statistics Norway and Norges Bank

Chart 2.12 Private investment.
Annual change. Percent. 2008 – 2019¹⁾



1) Projections for 2016 – 2019.
Sources: Statistics Norway and Norges Bank

Chart 2.13 Norwegian labour costs¹⁾ relative to trading partners' labour costs.
Index. 1995=100. 1995 – 2016²⁾

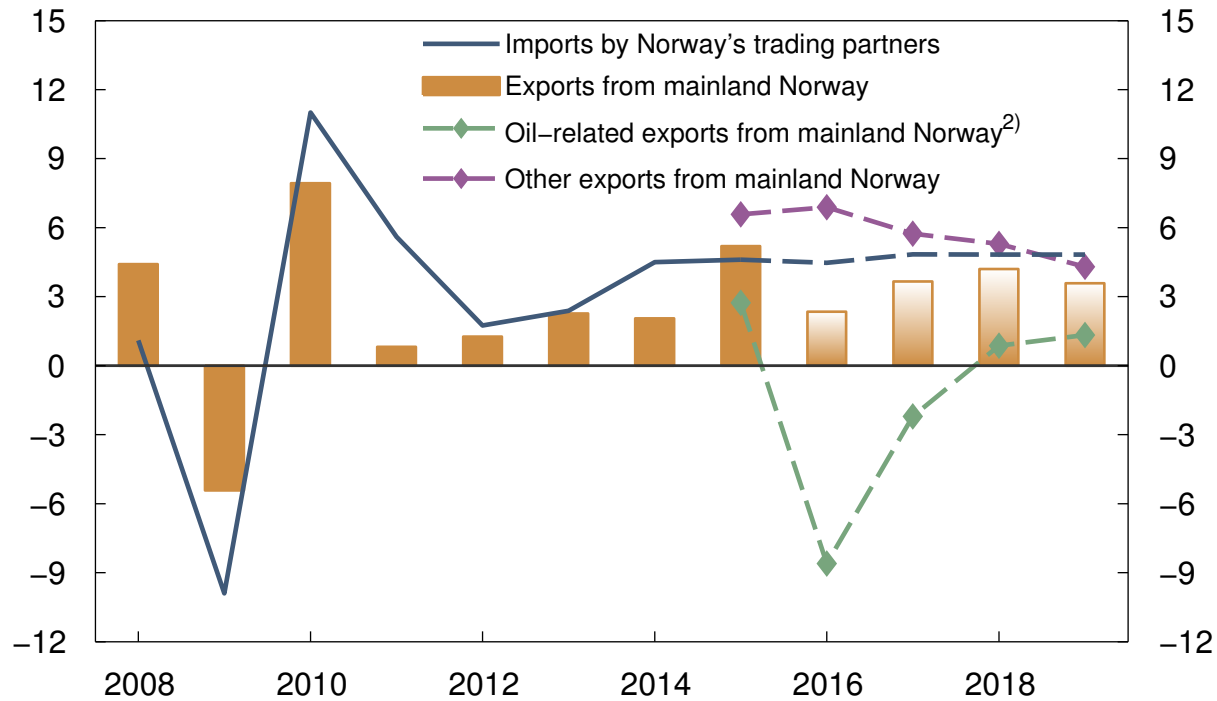


1) Hourly labour costs in manufacturing.

2) Projections for 2016 (broken lines).

Sources: TBU, Statistics Norway and Norges Bank

Chart 2.14 Exports from mainland Norway and imports by Norway's trading partners. Annual change. Percent. 2008 – 2019¹⁾

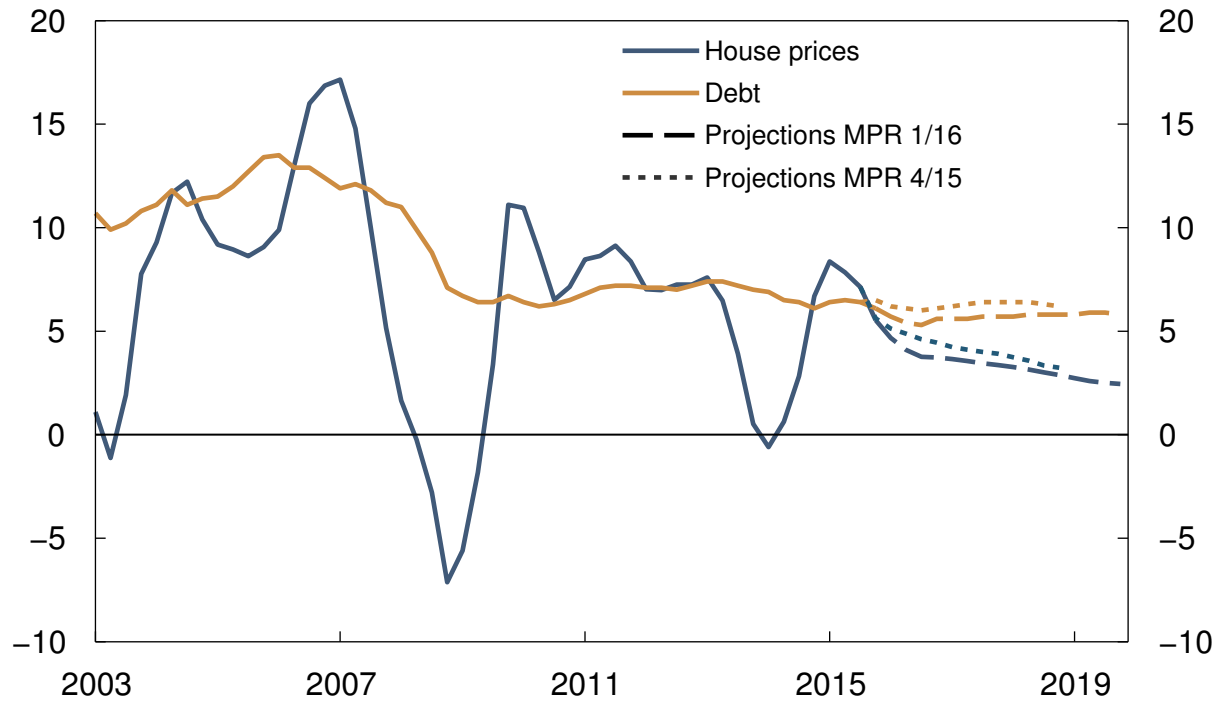


1) Projections for 2016 – 2019.

2) Goods and service groups in the national accounts where the oil service sector accounts for a considerable share of exports.

Sources: Thomson Reuters, Statistics Norway and Norges Bank

Chart 2.15 Household debt¹⁾ and house prices.
 Four-quarter change. Percent. 2003 Q1 – 2019 Q4²⁾

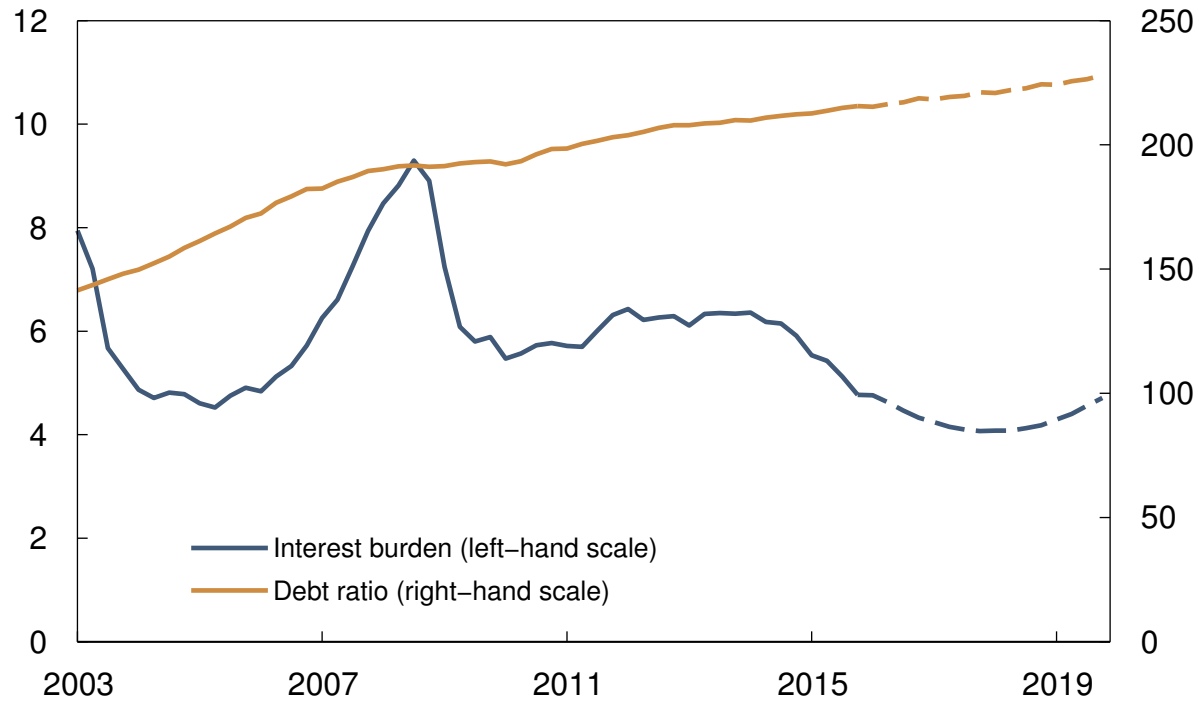


1) Domestic credit to households (C2).

2) Projections for 2016 Q1 – 2019 Q4 (broken lines).

Sources: Statistics Norway, Eiendom Norge, Eiendomsverdi, Finn.no and Norges Bank

Chart 2.16 Household debt ratio¹⁾ and interest burden²⁾.
Percent. 2003 Q1 – 2019 Q4³⁾



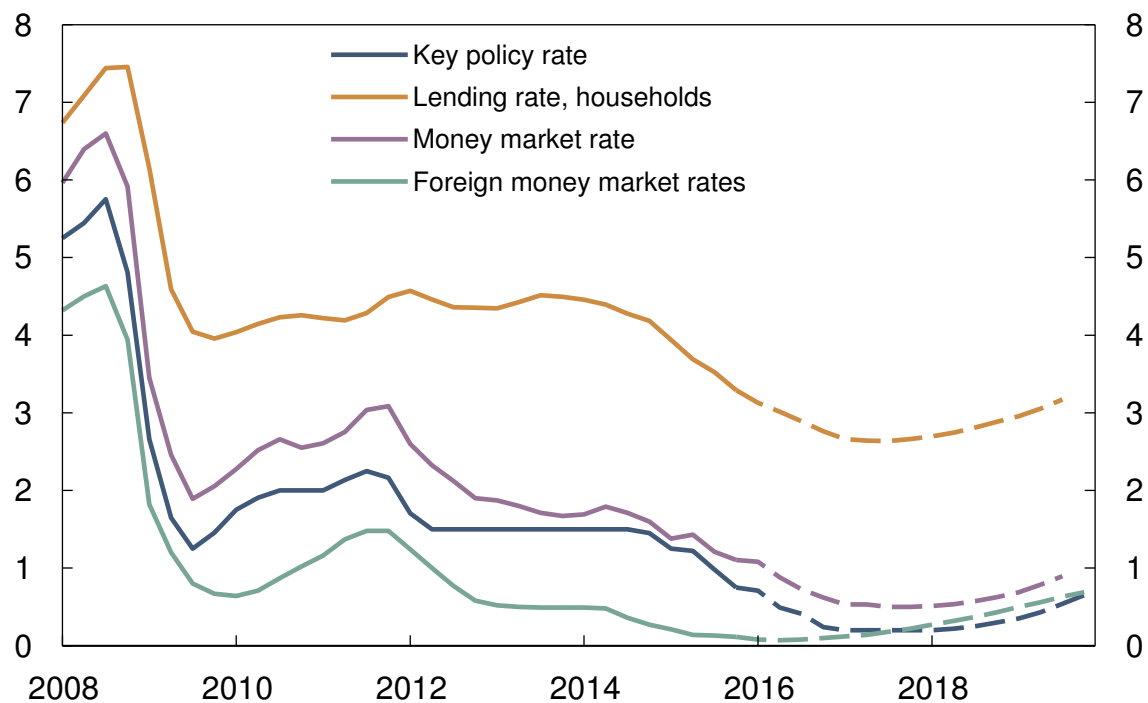
1) Loan debt as a percentage of disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and redemption/reduction of equity capital for 2006 Q1 – 2012 Q3.

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 Q1 – 2012 Q3 plus interest expenses.

3) Projections for 2015 Q4 – 2019 Q4 (broken lines).

Sources: Statistics Norway and Norges Bank

Chart 2.17 Key policy rate, three-month money market rate¹⁾, interest rate on loans to households²⁾ and foreign money market rates in the baseline scenario. Percent. 2008 Q1 – 2019 Q4³⁾



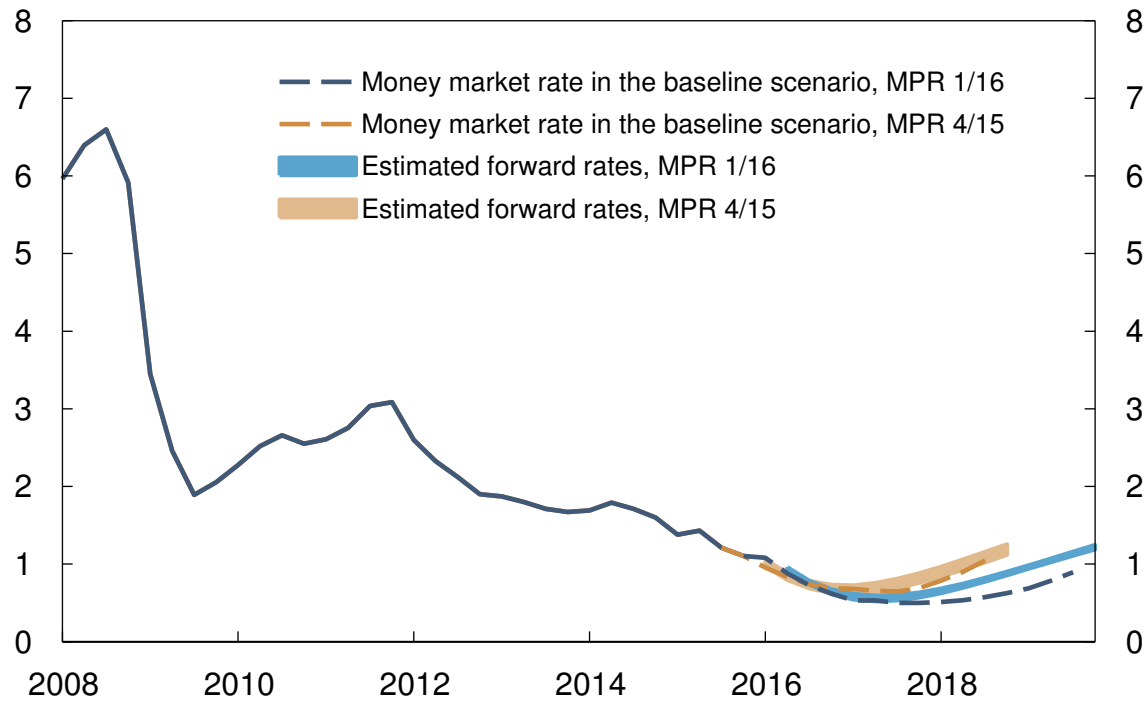
1) Key policy rate in the baseline scenario plus premiums in the Norwegian money market. The calculations are based on the assumption that announced interest rate changes are priced into the money market.

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

3) Projections for 2016 Q1 – 2019 Q4 (broken lines).

Sources: Thomson Reuters, Statistics Norway and Norges Bank

Chart 2.18 Three-month money market rate in the baseline scenario¹⁾ and estimated forward rates²⁾. Percent. 2008 Q1 – 2019 Q4

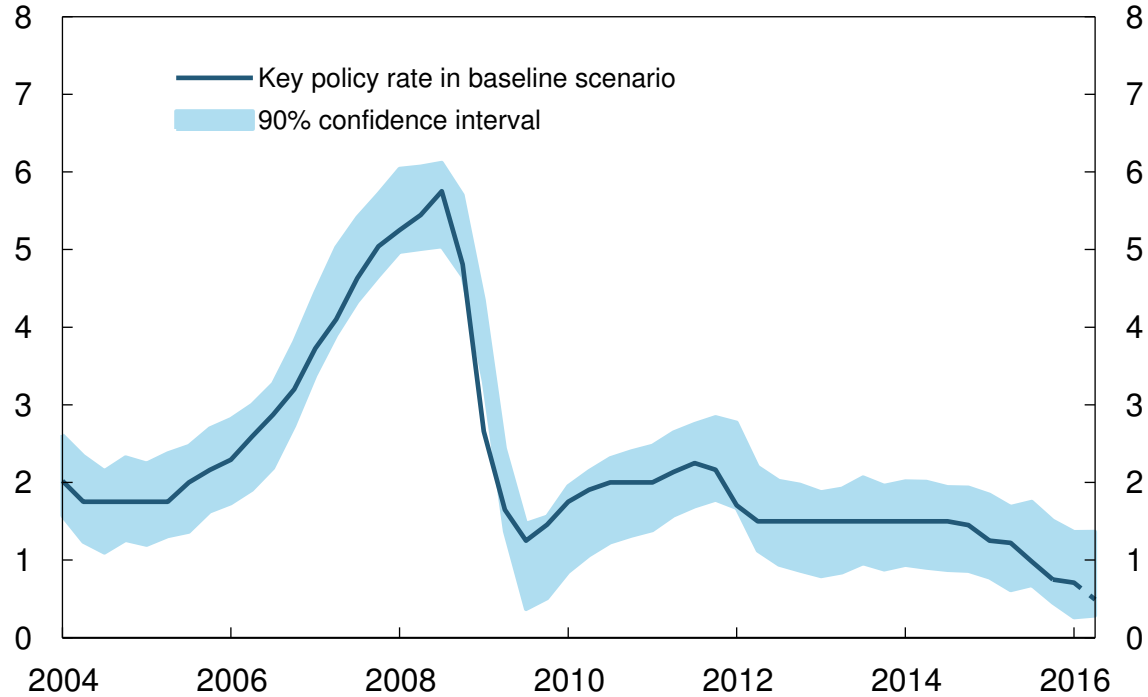


1) Key policy rate in the baseline scenario plus Norwegian money market premiums. The calculations are based on the assumption that announced interest rate changes are priced into the money market.

2) Forward rates are based on money market rates and interest rate swaps. The orange and blue bands show the highest and lowest rates in the period 30 November – 11 December 2015 and 29 February – 11 March 2016, respectively.

Sources: Thomson Reuters and Norges Bank

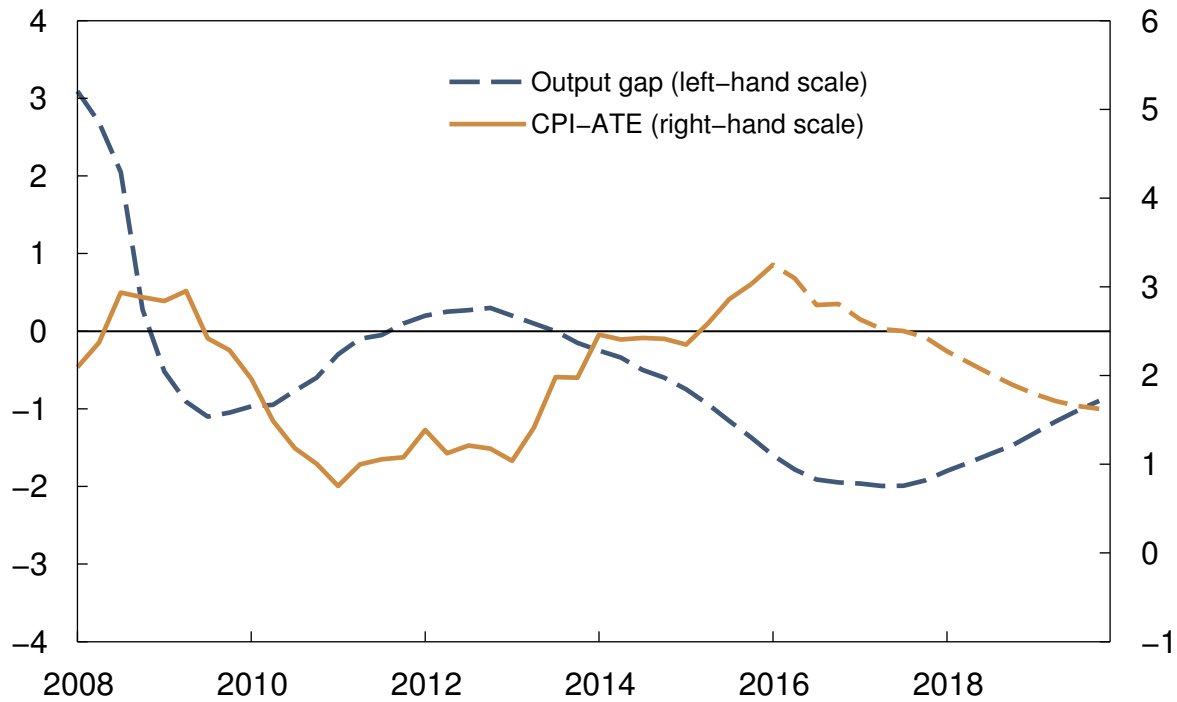
Chart 2.19 Key policy rate and interest rate developments that follow from Norges Bank's average pattern of interest rate setting.¹⁾
Percent. 2004 Q1 – 2016 Q2



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 Q4. See Norges Bank *Staff Memo* 3/2008 for further discussion.

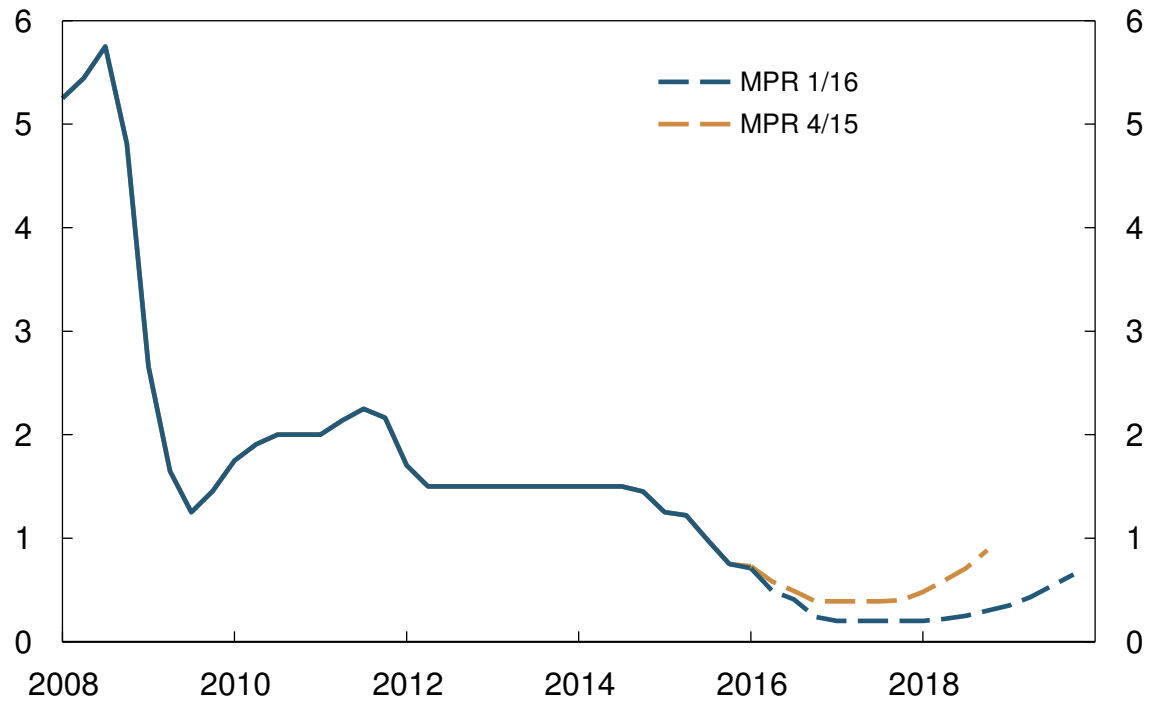
Source: Norges Bank

Chart 2.20 Inflation¹⁾ and projected output gap in the baseline scenario.
 Percent. 2008 Q1 – 2019 Q4



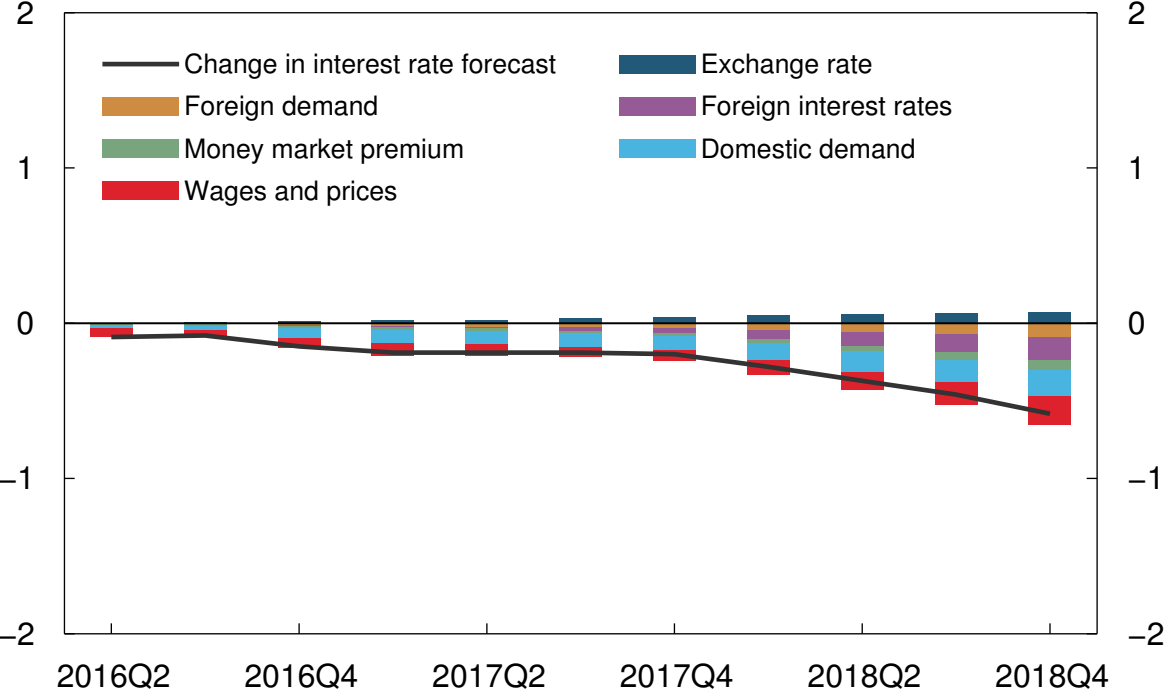
1) CPI adjusted for tax changes and excluding energy products. Projections for 2016 Q1 – 2019 Q4 (broken line).
 Sources: Statistics Norway and Norges Bank

Chart 2.21 Key policy rate.¹⁾
Percent. 2008 Q1 – 2019 Q4



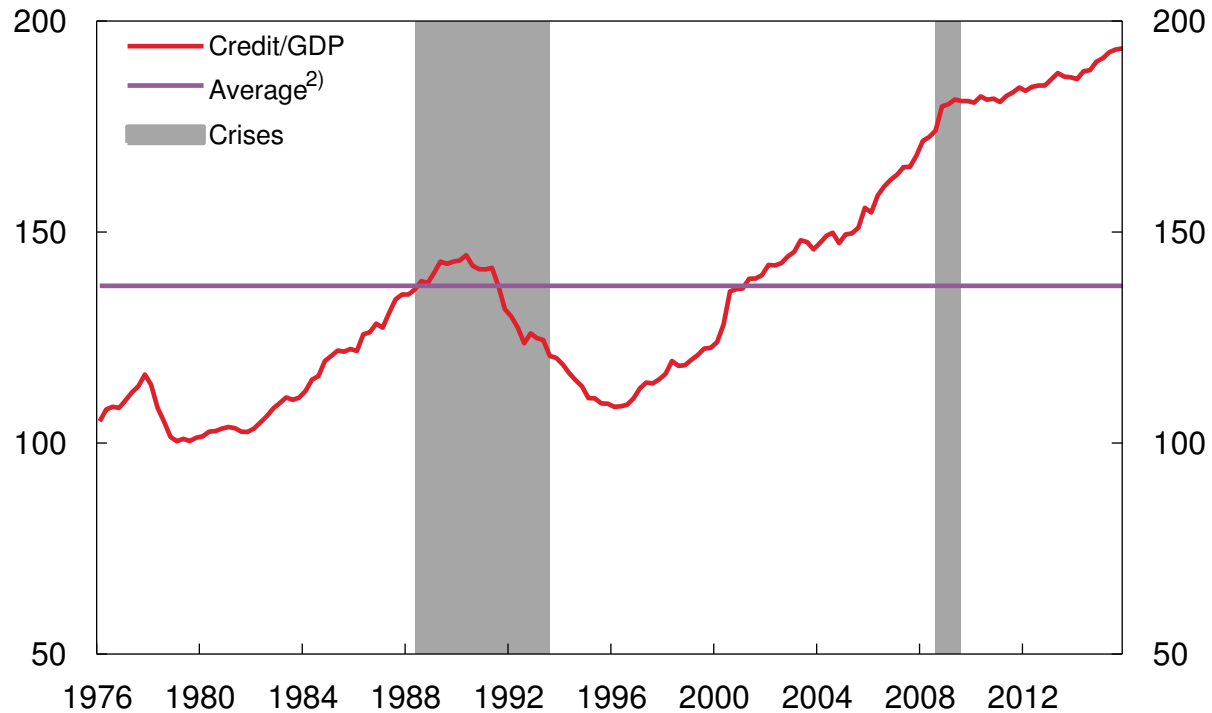
1) Projections for 2016 Q1 – 2019 Q4.
Source: Norges Bank

Chart 2.22 Factors behind changes in the interest rate forecast since MPR 4/15. Cumulative contribution. Percentage points. 2016 Q2 – 2018 Q4



Source: Norges Bank

Chart 3.1 Total credit¹⁾ mainland Norway as a share of mainland GDP.
Percent. 1976 Q1 – 2015 Q4

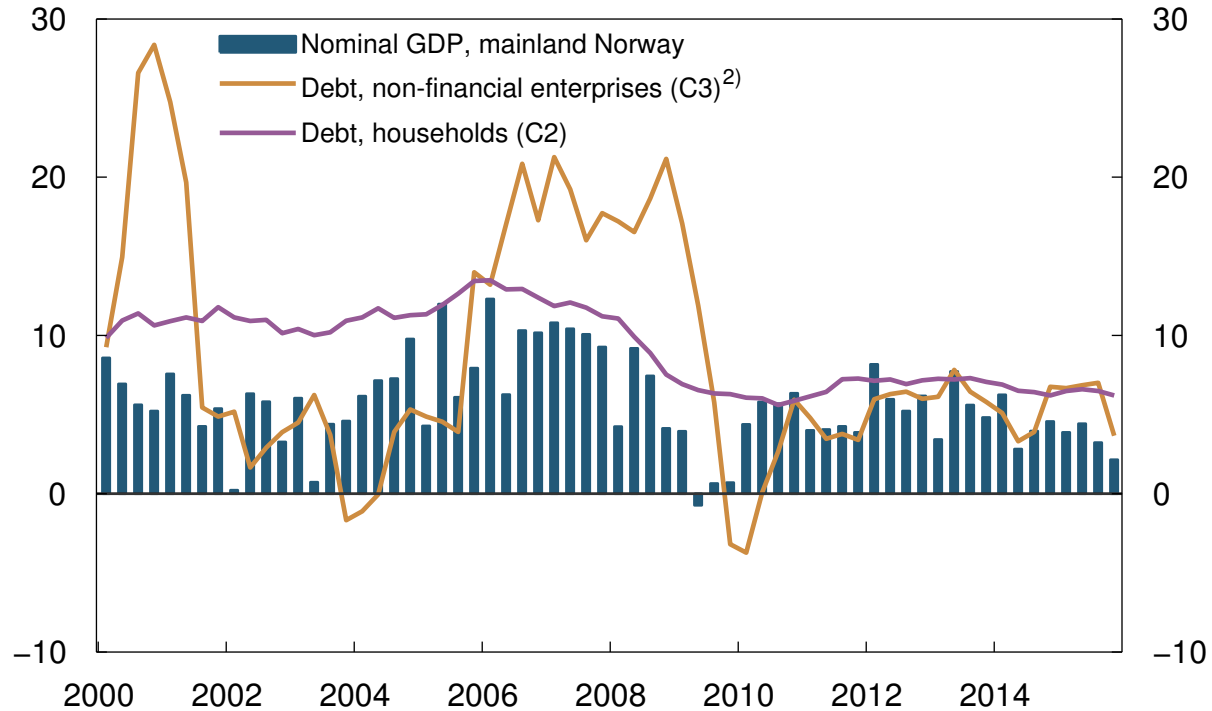


1) The sum of C2 households and C3 non-financial enterprises for mainland Norway (all non-financial enterprises pre-1995). C3 non-financial enterprises comprises C2 non-financial enterprises and foreign debt for mainland Norway.

2) Estimated based on figures from 1975 Q4.

Sources: Statistics Norway, IMF and Norges Bank

Chart 3.2 Debt held by households and non-financial enterprises and mainland GDP. Four-quarter change.¹⁾ Percent. 2000 Q1 – 2015 Q4

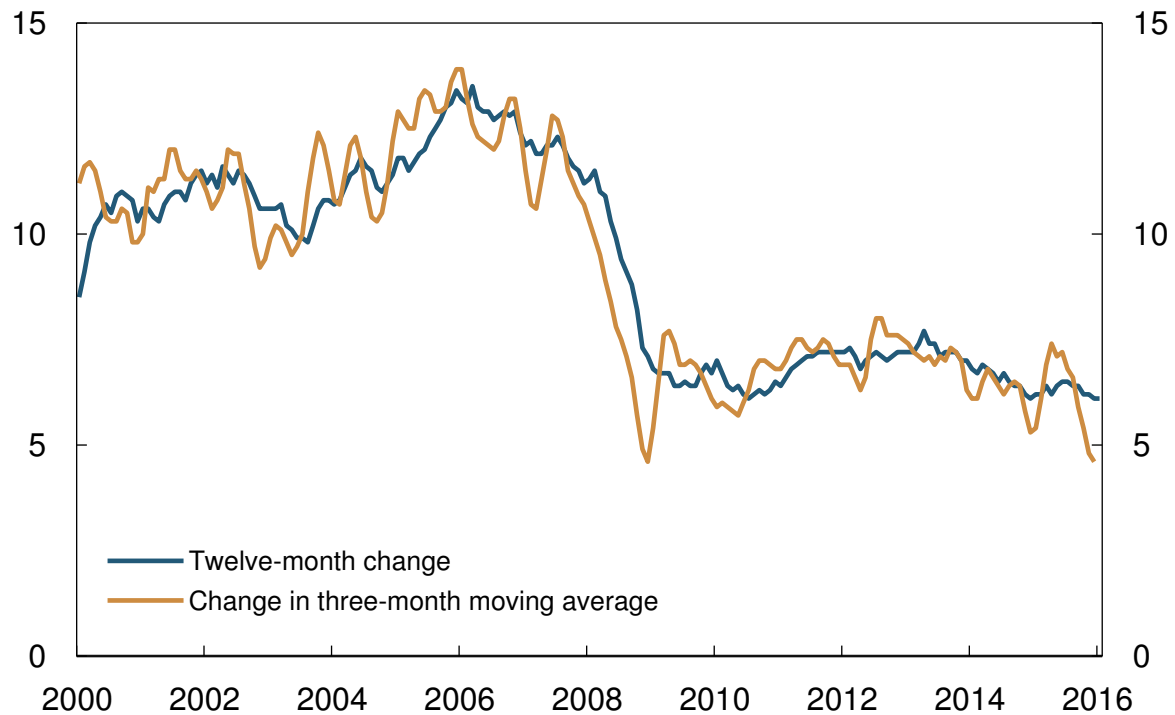


1) Estimated based on stock of debt at the end of the quarter.

2) Sum of C2 non-financial enterprises and foreign debt for mainland Norway.

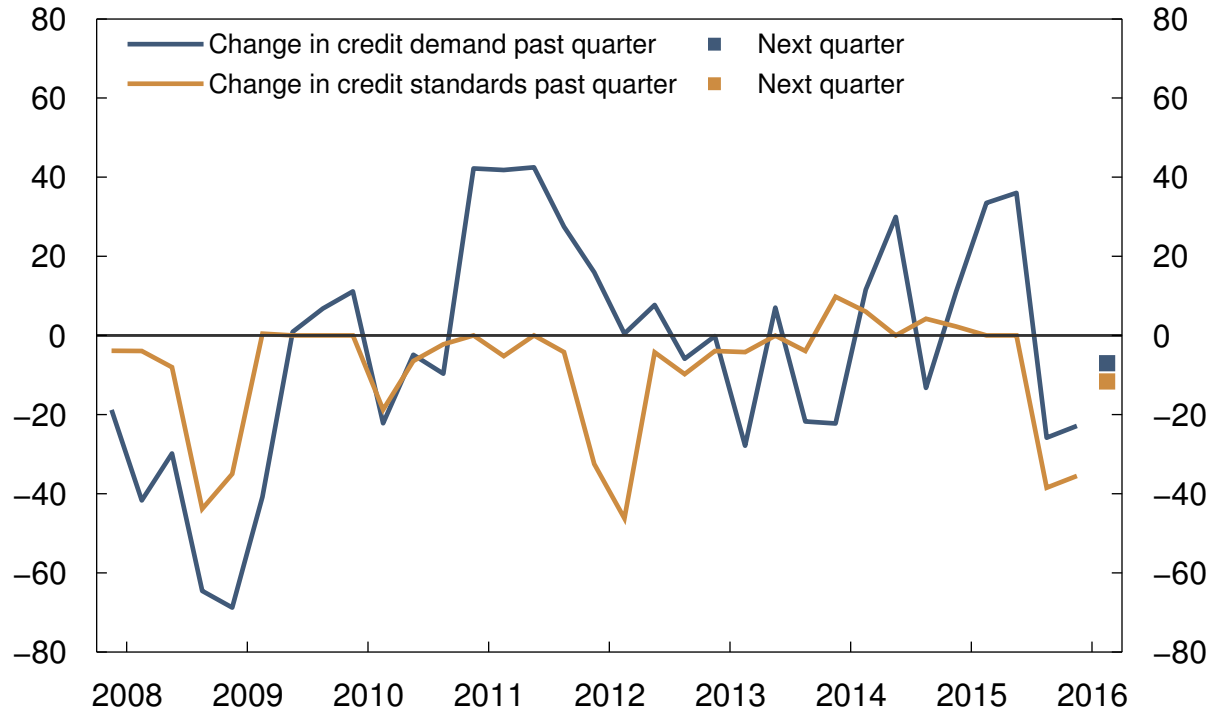
Sources: Statistics Norway and Norges Bank

Chart 3.3 Credit to households (C2). Twelve-month change and annualised change in three-month moving average. Percent. January 2000 – January 2016



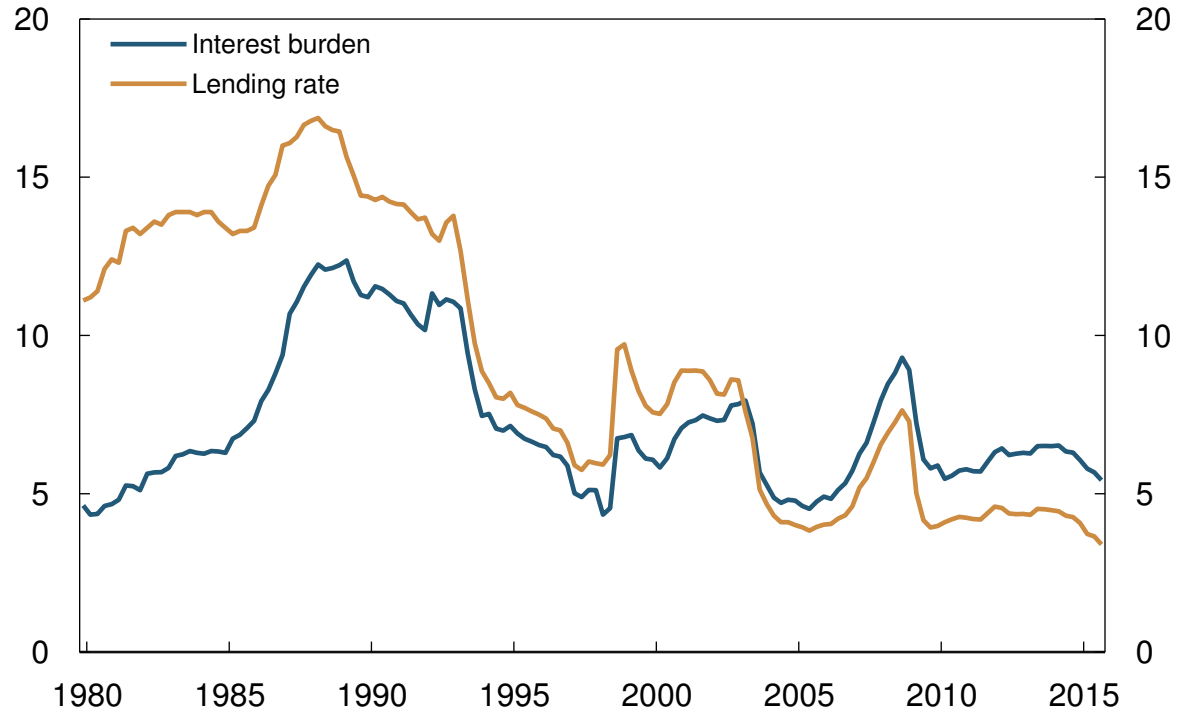
Source: Statistics Norway

Chart 3.4 Change in credit demand and banks' credit standards past quarter and expected change next quarter.¹⁾ Households. 2007 Q4 – 2015 Q4



1) Negative values denote lower demand or tighter credit standards.
Source: Norges Bank

Chart 3.5 Lending rates¹⁾ and interest burden²⁾. Percent. 1979 Q4 – 2015 Q3

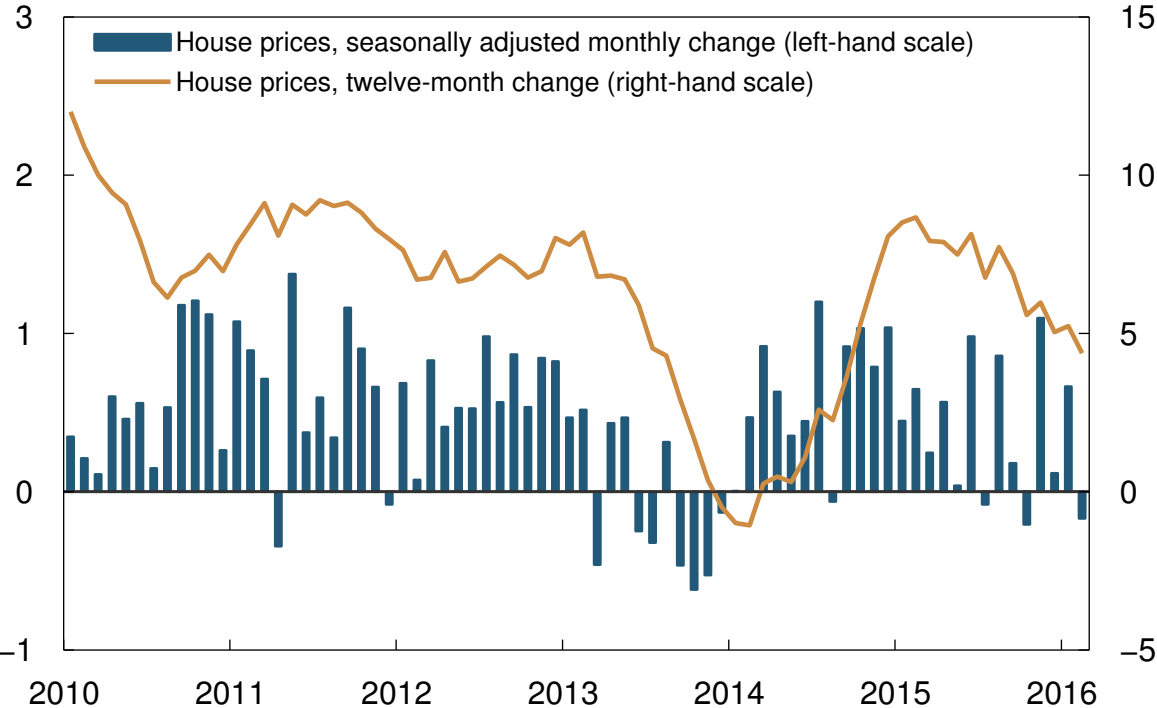


1) Interest rate on all bank loans to households and enterprises up to 2001. From 2001, interest rate on all loans to households from banks and mortgage companies.

2) Interest expenses as a percentage of disposable income adjusted for estimated reinvested dividend income for 2003 – 2005 and redemption/reduction of equity capital 2006 Q1 – 2012 Q3 plus interest expenses after tax.

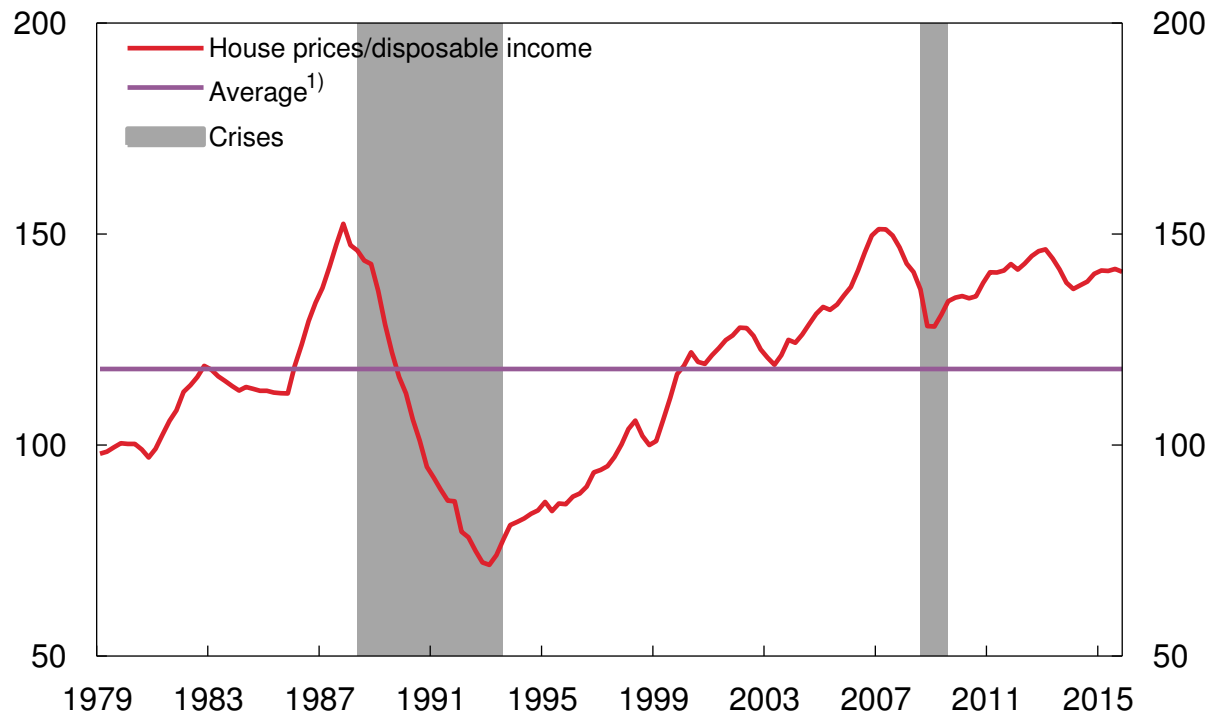
Sources: Statistics Norway and Norges Bank

Chart 3.6 House prices. Twelve-month change and seasonally adjusted monthly change. Percent. January 2010 – February 2016



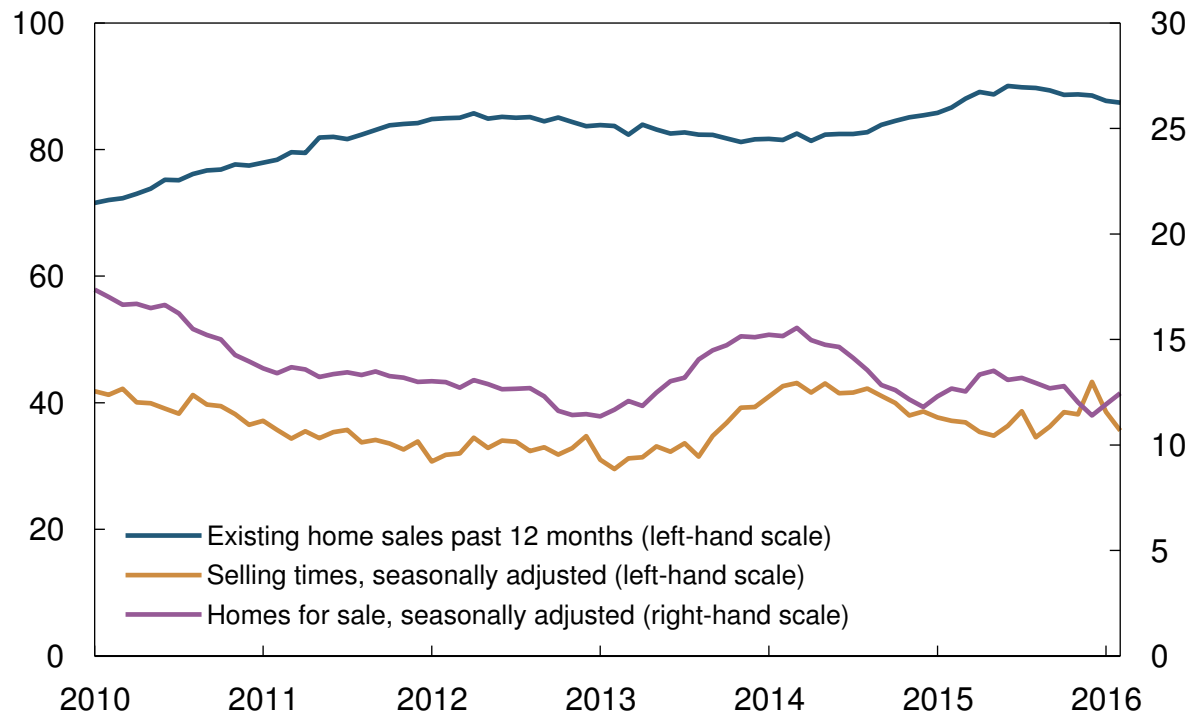
Sources: Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.7 House prices relative to disposable income.
Indexed. 1998 Q4 = 100. 1979 Q1 – 2015 Q4



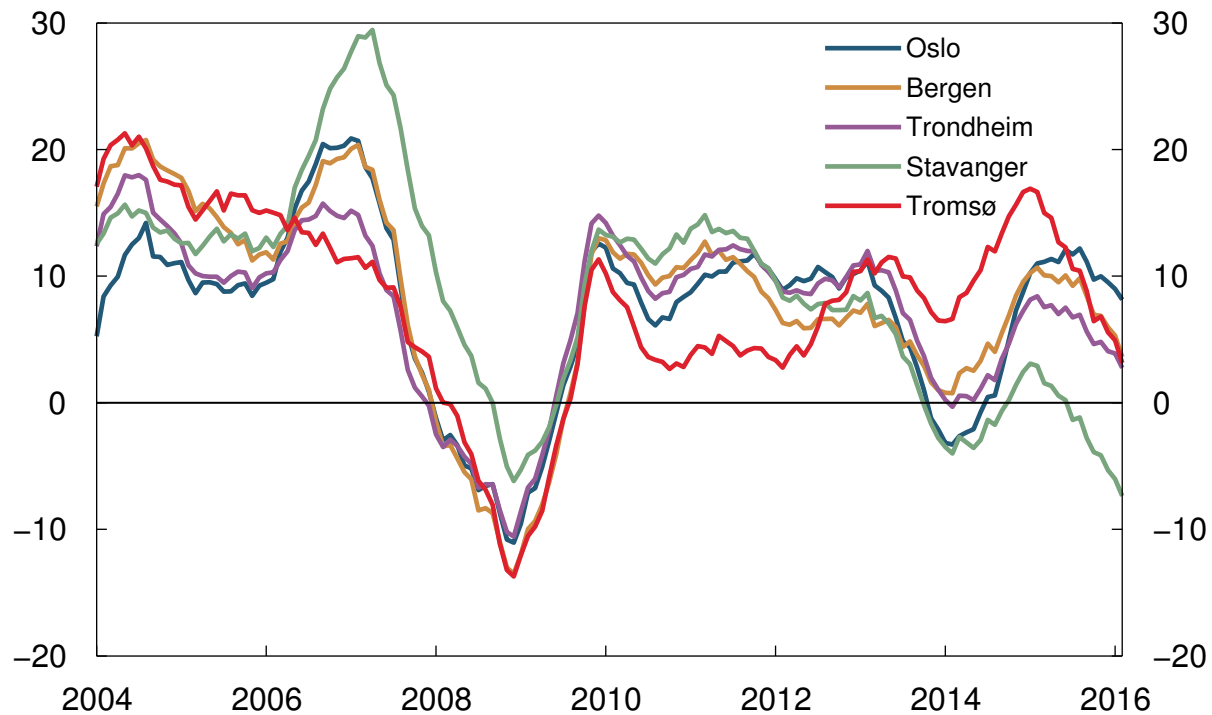
1) Average house prices/disposable income. Estimated based on figures from 1978 Q4.
Sources: Statistics Norway, Eiendom Norge, Eiendomsverdi, Finn.no, Norwegian Association of Real Estate Agents (NEF) and Norges Bank

Chart 3.8 Sales of existing homes and homes for sale in thousands of dwellings.
Selling times in days. January 2010 – February 2016



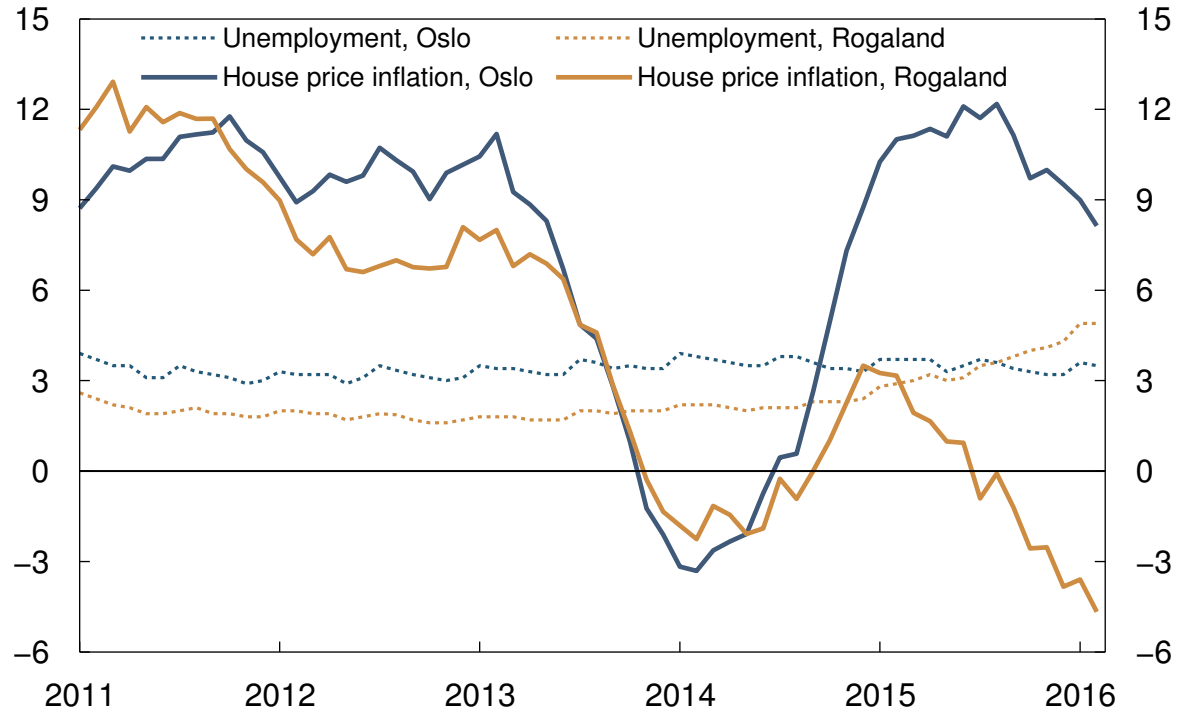
Sources: Eiendom Norge, Eiendomsverdi, Finn.no and Norges Bank

Chart 3.9 House prices in selected cities.
Twelve-month change. Percent. January 2004 – February 2016



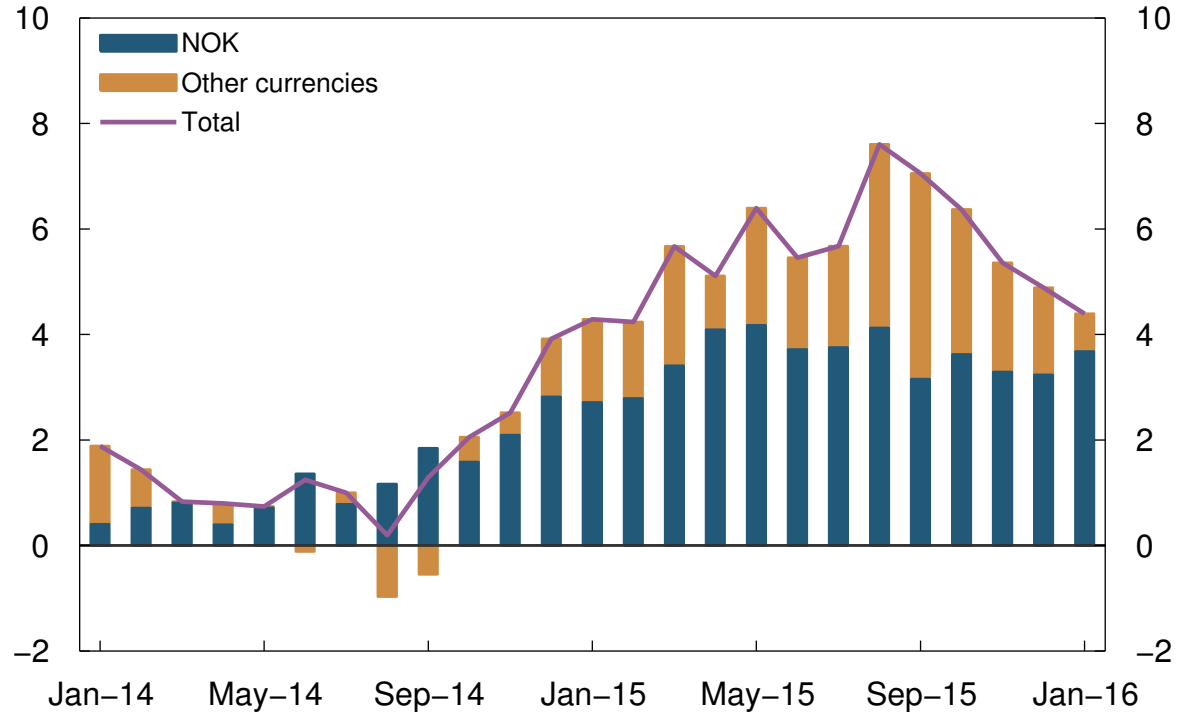
Sources: Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.10 Unemployment¹⁾ and twelve-month house price inflation for Oslo and Rogaland county. Percent. January 2011 – February 2016



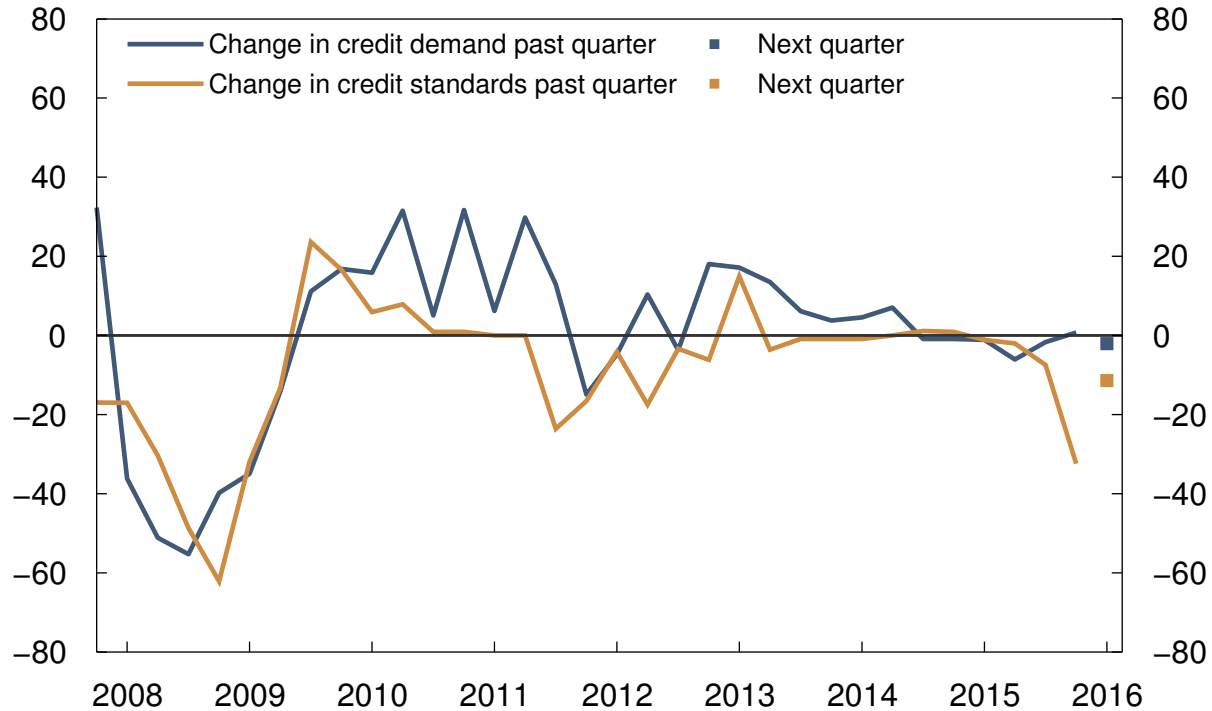
1) Registered unemployment as a share of the labour force.
Sources: NAV, Eiendom Norge, Eiendomsverdi and Finn.no

Chart 3.11 Domestic credit (C2) to Norwegian non-financial enterprises from banks and mortgage companies in NOK and other currencies.
 Twelve-month change.¹⁾ Percent. January 2014 – January 2016



1) Change in stock of debt.
 Sources: Statistics Norway and Norges Bank

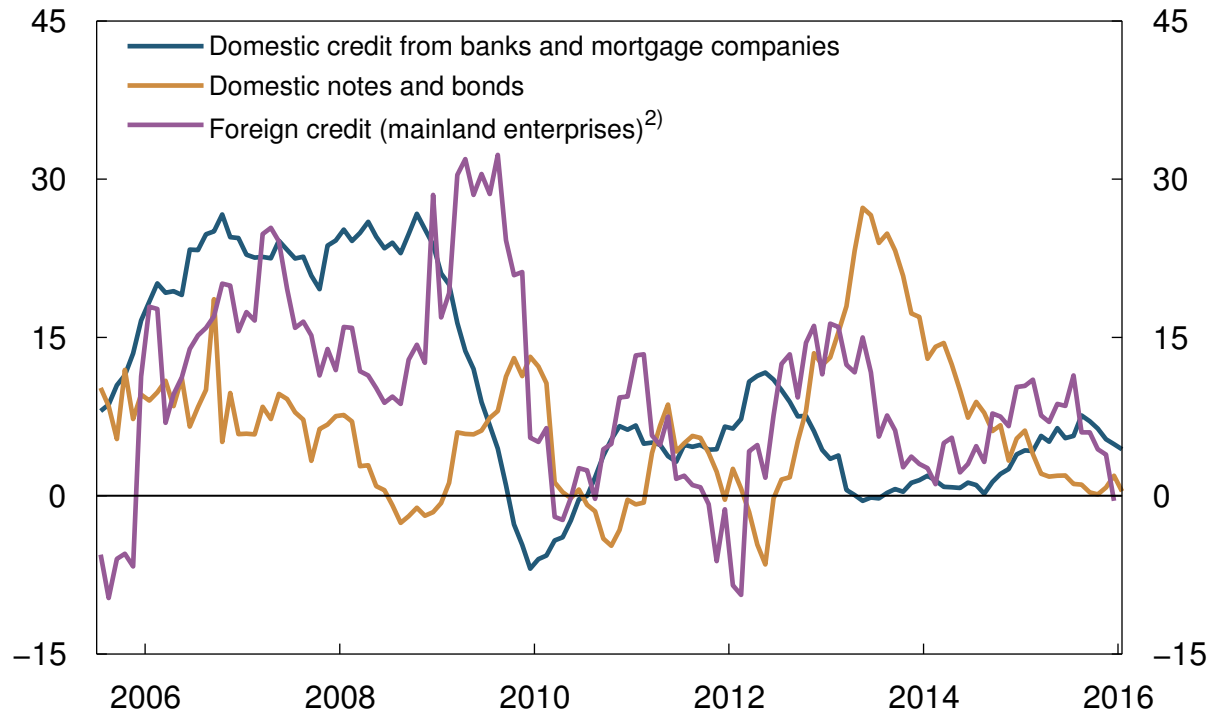
Chart 3.12 Changes in credit demand and banks' credit standards past quarter, and expected change next quarter.¹⁾ Enterprises. 2007 Q4 – 2015 Q4



1) Negative values denote lower demand or tighter credit standards.

Source: Norges Bank

Chart 3.13 Credit from selected funding sources to Norwegian non-financial enterprises. Twelve-month change.¹⁾ Percent. July 2005 – January 2016

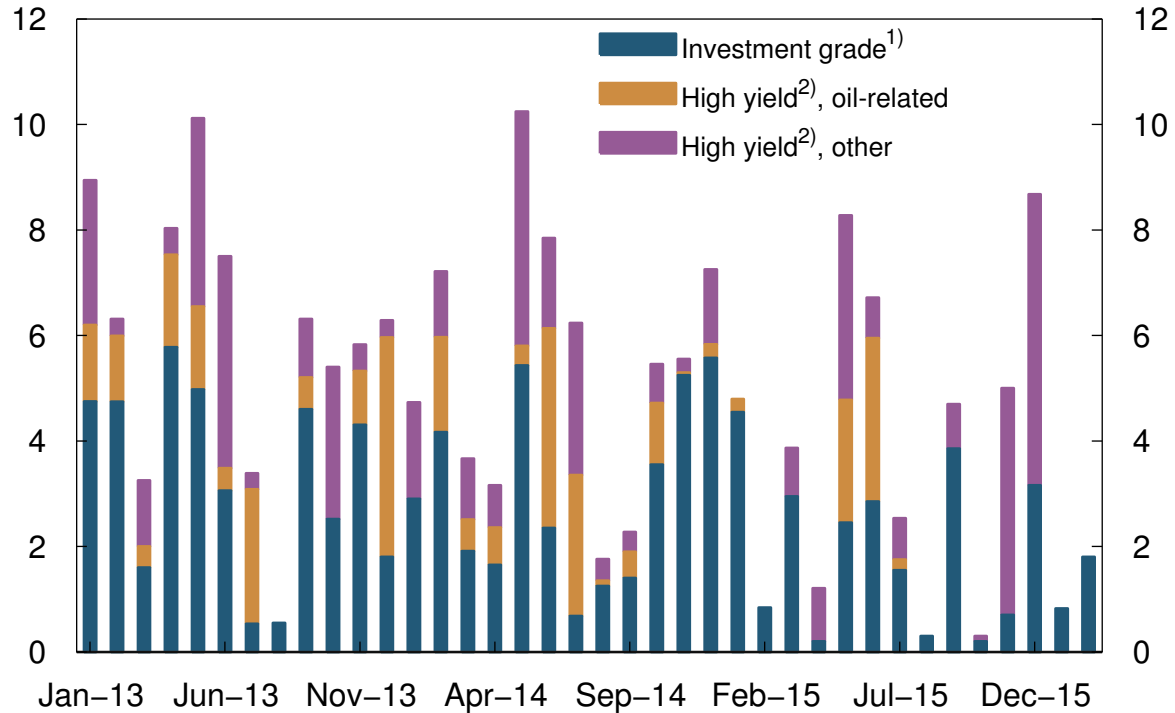


1) Estimated based on stock of debt.

2) Change based on transactions. To end-December 2015.

Sources: Statistics Norway and Norges Bank

Chart 3.14 Volume of bond issues from Norwegian registered non-financial enterprises in the Norwegian bond market. In billions of NOK.
January 2013 – February 2016

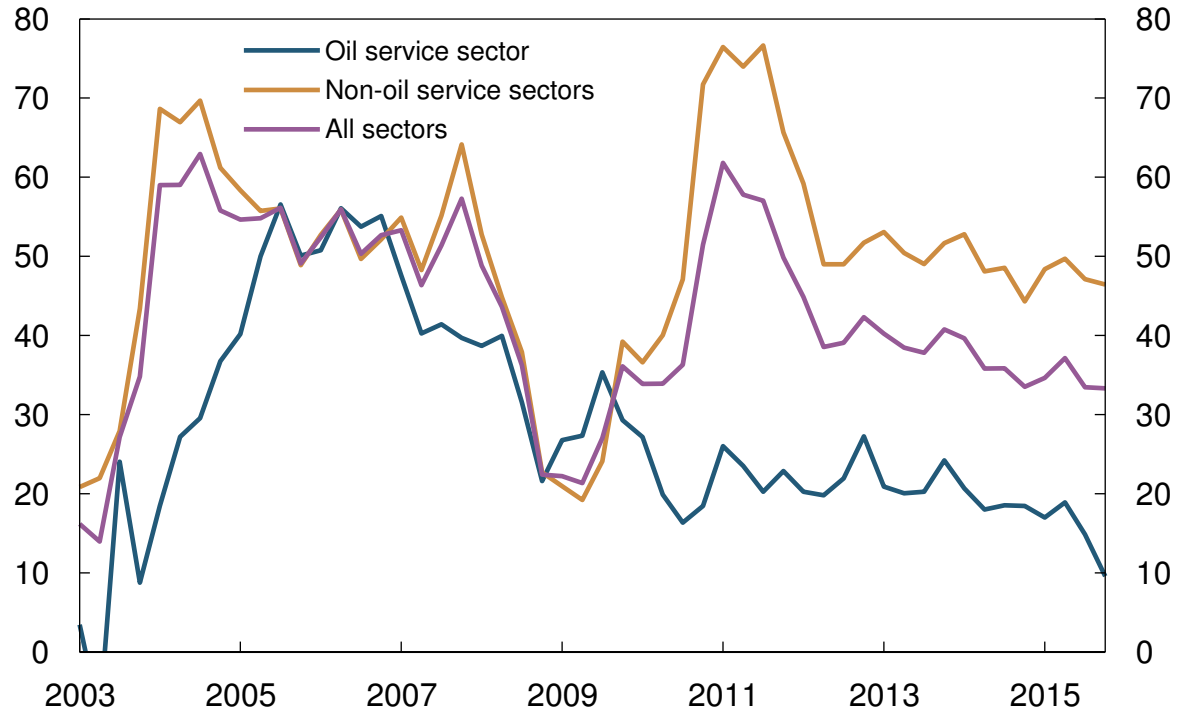


1) Enterprises with credit rating equal to or higher than BBB-.

2) Enterprises with credit rating lower than BBB-.

Source: Stamdata

Chart 3.15 Debt-servicing capacity¹⁾ for listed companies.²⁾
 Percent. 2003 Q1 – 2015 Q4

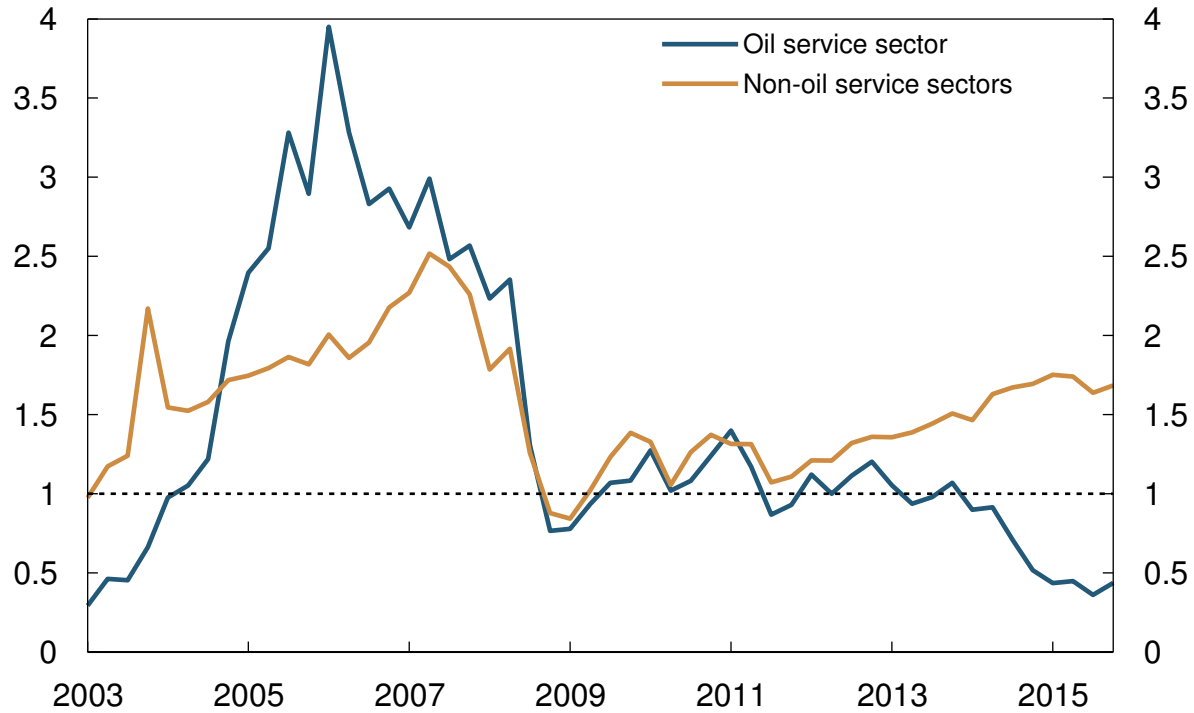


1) Pre-tax profit plus depreciation and amortisation for the previous four quarters as a percentage of net-interest bearing debt.

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

Sources: Bloomberg and Norges Bank

Chart 3.16 Price-to-book ratio¹⁾, listed companies.²⁾ 2003 Q1 – 2015 Q4

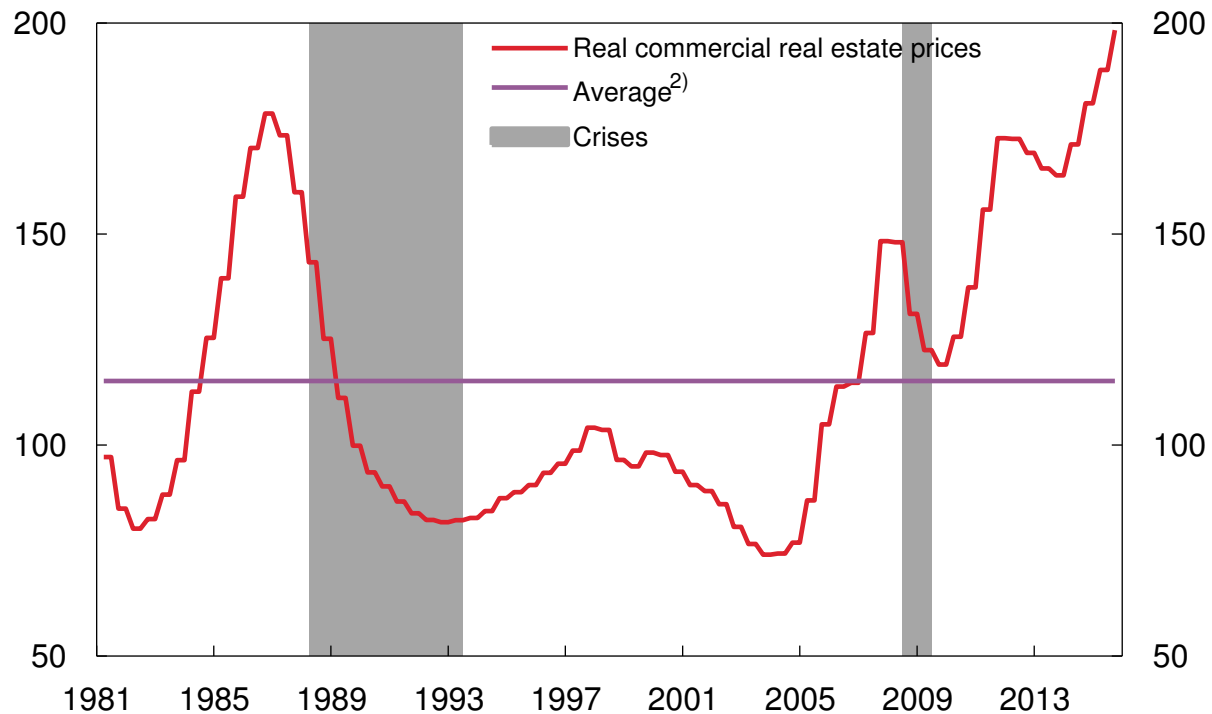


1) Market value as a percentage of book value per share.

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

Sources: Bloomberg and Norges Bank

Chart 3.17 Real commercial real estate prices.¹⁾
Indexed. 1998 = 100. 1981 Q2 – 2015 Q4

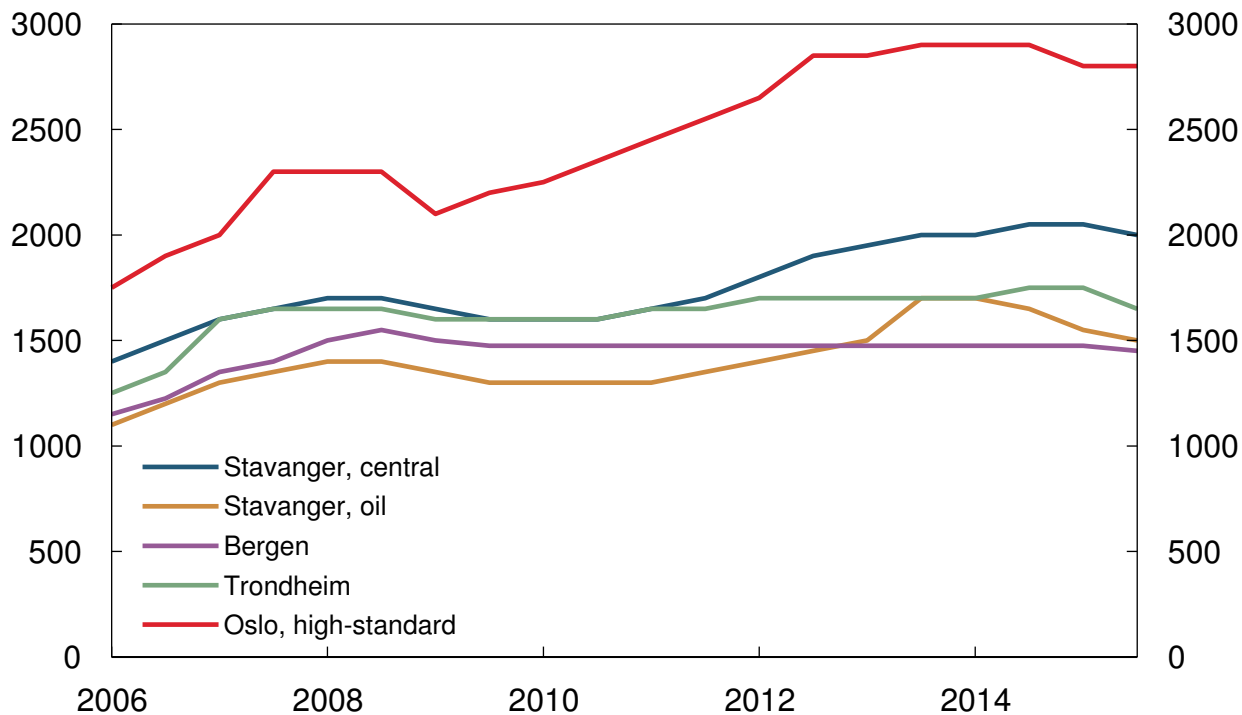


1) Estimated market prices for high-standard office premises in central Oslo deflated by the GDP deflator for mainland Norway.

2) Estimated based on figures from 1981 Q2.

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

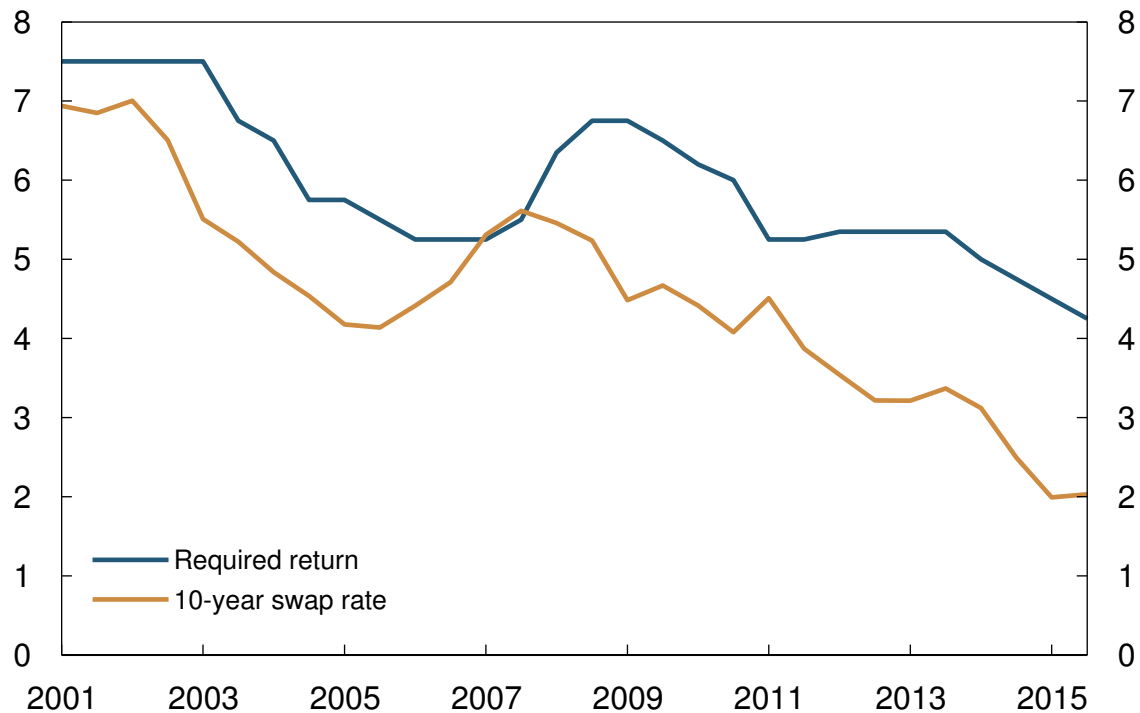
Chart 3.18 Rental prices for office premises in selected cities.
 NOK per square metre, per year. 2006 H1 – 2015 H2¹⁾



1) For cities other than Oslo, the statistics previously comprised one rental price segment. In the latter half of 2013, prices were divided into the segments “middle standard” and “high standard” in each 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 3.19 Required return¹⁾ for the most attractive office premises in Oslo and 10-year swap rate.²⁾ Percent. 2001 H1 – 2015 H2

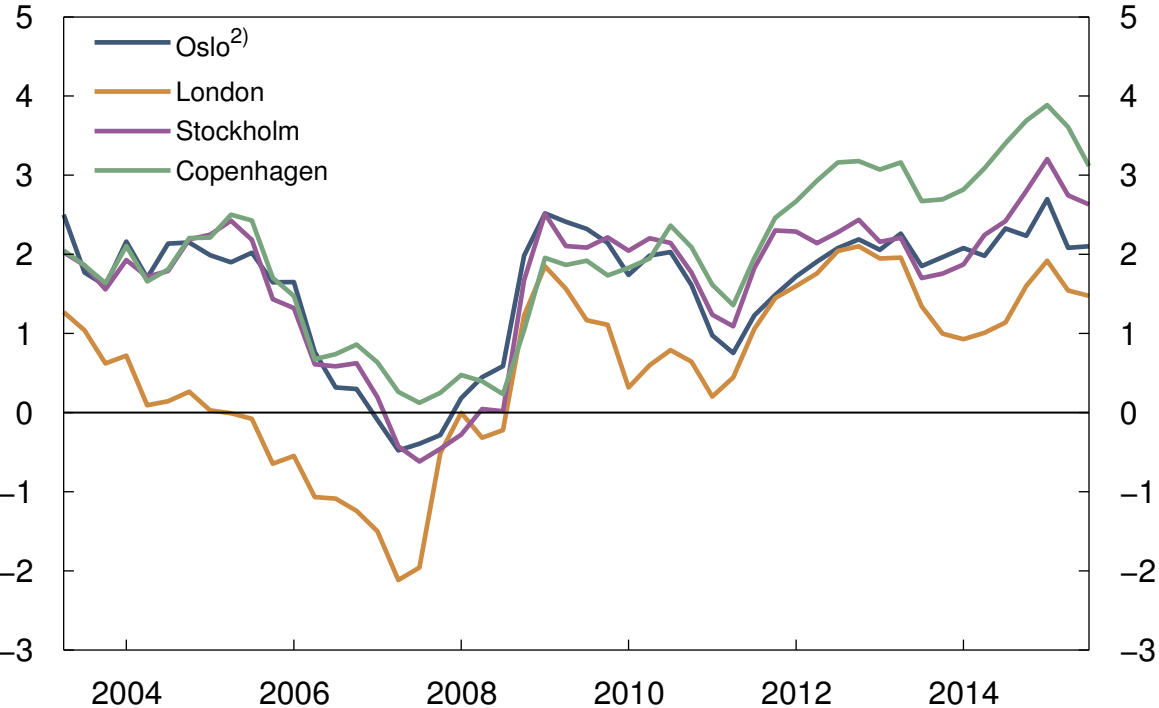


1) The required return is based on assessments by Dagens Næringsliv's expert panel for commercial real estate.

2) Semi-annual swap rate is calculated as an average of daily rates.

Sources: Dagens Næringsliv and Thomson Reuters

Chart 3.20 Risk premiums for attractive premises in selected major European cities.¹⁾
 Percent. 2003 Q2 – 2015 Q3

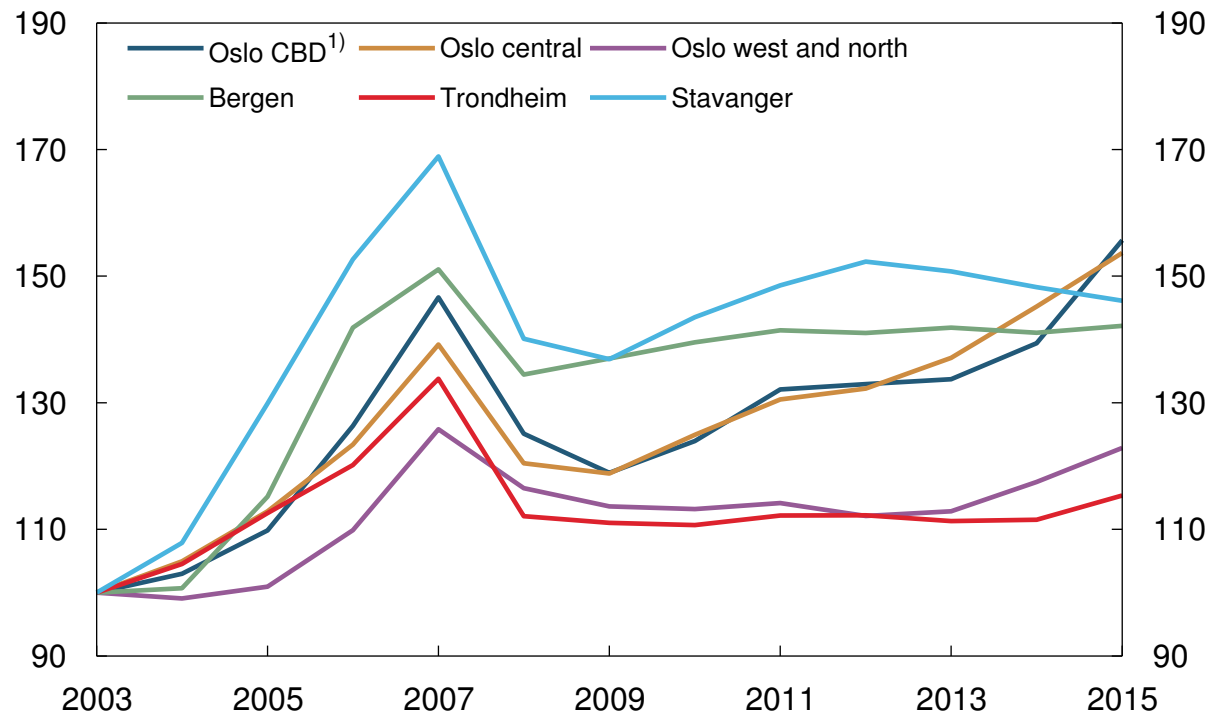


1) The risk premium is the difference between the direct required rate of return in each city and the quarterly ten-year swap rate in that country. The quarterly swap rate is calculated as an average of daily rates.

2) For Oslo, there are some minor deviations in the direct required rate of return between this chart and Chart 3.19 owing to the use of different sources.

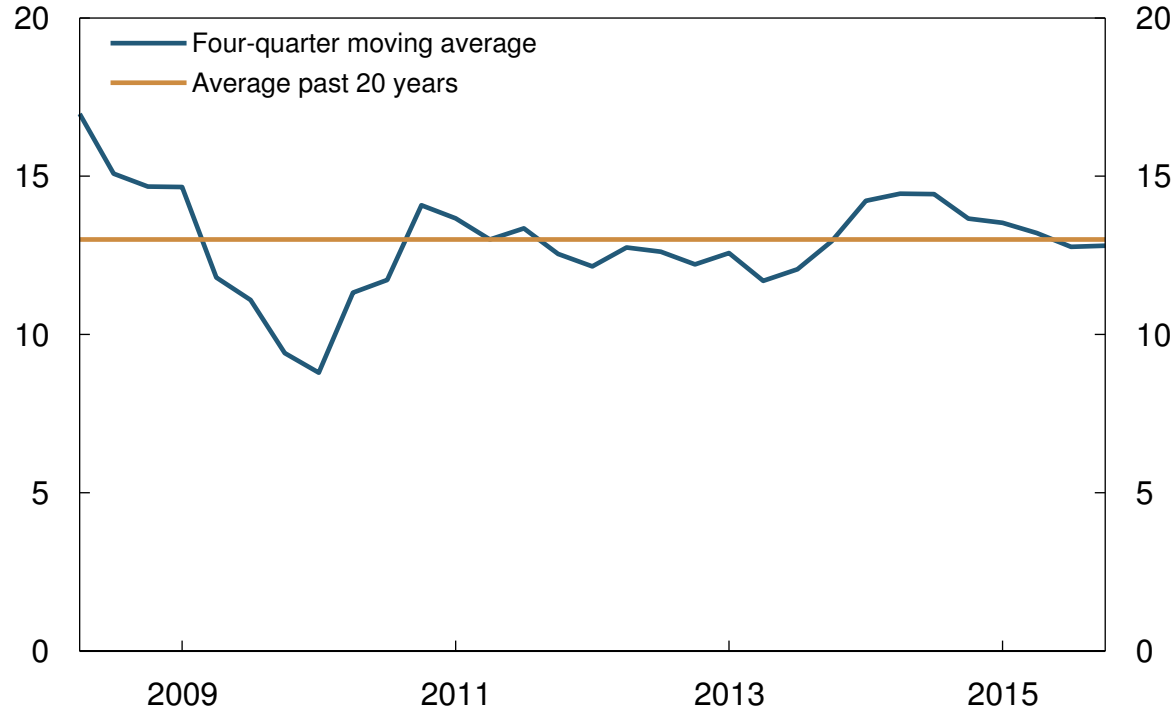
Sources: CBRE and Bloomberg

Chart 3.21 Value of office premises. Selected cities.
 Index. 2003 = 100. 2003 – 2015



1) CBD stands for Central Business District.
 Source: Investment Property Databank (IPD)

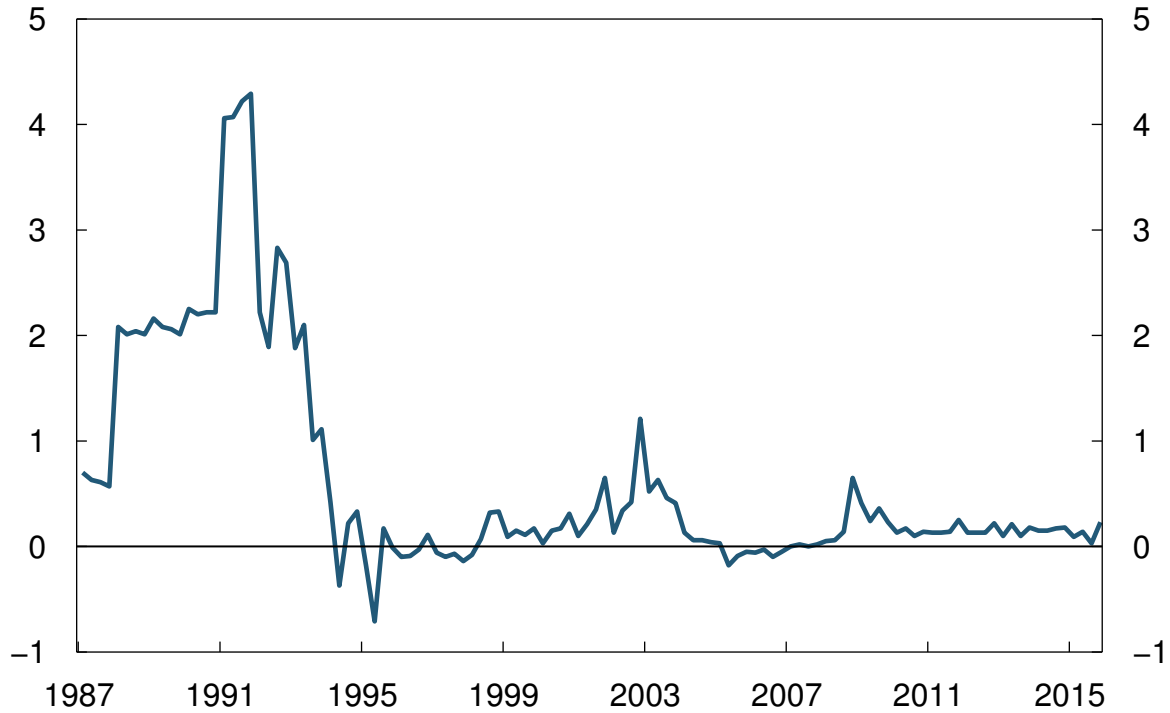
Chart 3.22 Return on equity for Norwegian banks¹⁾. Percent. 2008 Q2 – 2015 Q4



1) Calculated as weighted average of seven large Norwegian banks: DNB Bank, Nordea Bank Norge, SpareBank 1 SR-Bank, Sparebanken Vest, SpareBank 1 SMN, Sparebanken Sør and SpareBank 1 Nord-Norge (excluding Sparebanken Sør to end-December 2013).

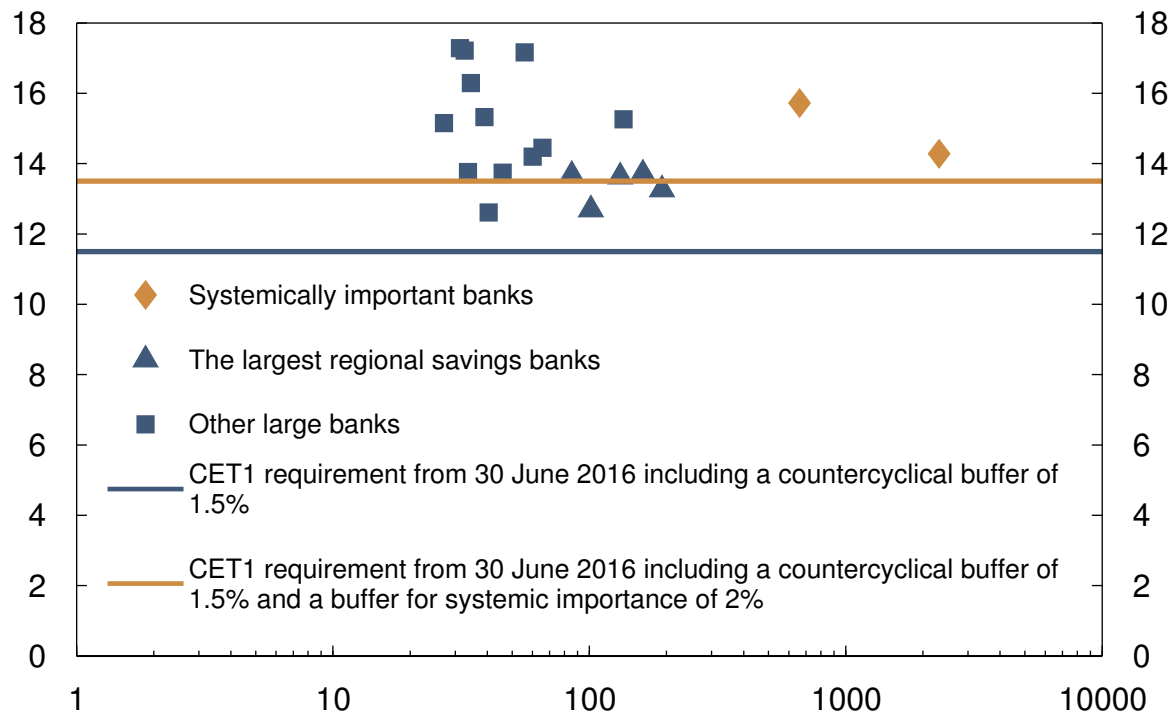
Sources: Banking groups' quarterly and annual reports and Norges Bank

Chart 3.23 Banks¹⁾ loan losses as a share of gross lending.
Percent. Annualised. 1987 Q1 – 2015 Q4



1) All banks and mortgage companies in Norway.
Source: Norges Bank

Chart 3.24 Banking groups' ¹⁾ Common Equity Tier 1 (CET1) capital ratios. Percent. Total assets. ²⁾ In billions of NOK. At 31 December 2015 ³⁾



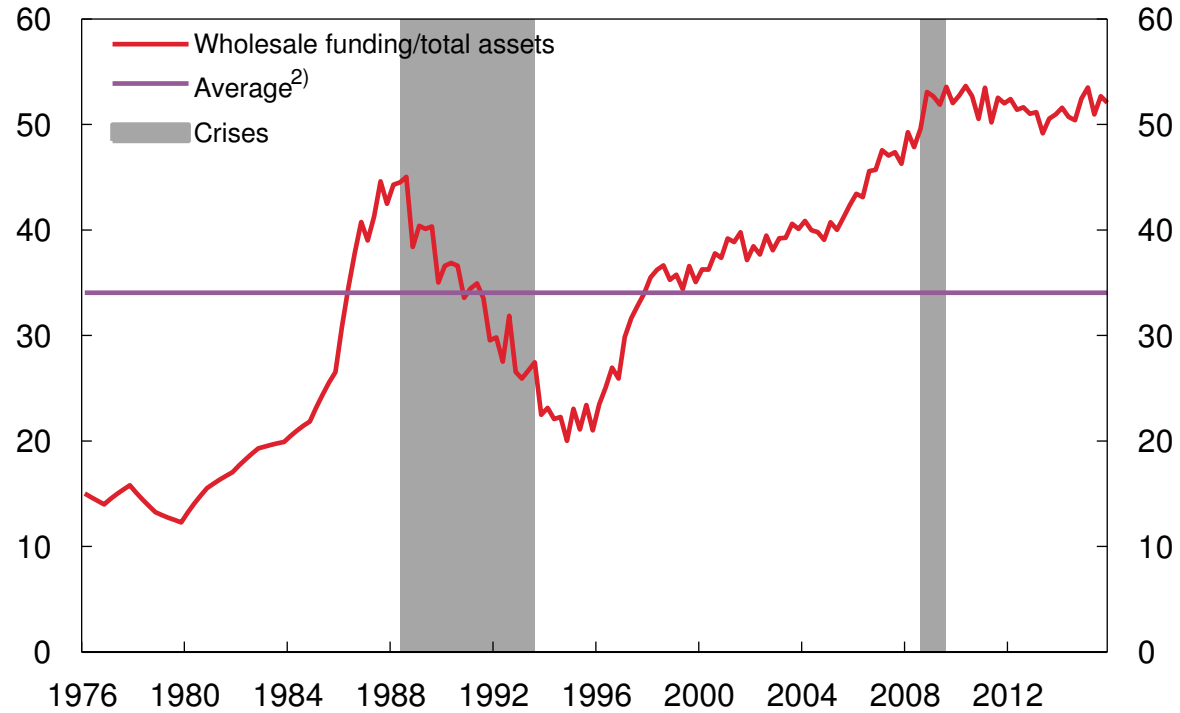
1) Banking groups with total assets in excess of NOK 25bn, excluding branches of foreign banks in Norway.

2) Logarithmic scale.

3) Calculations based on banks' proposed dividends.

Sources: Banking groups' quarterly reports and Norges Bank

Chart 3.25 Banks' ¹⁾ wholesale funding as a share of total assets.
Percent. 1976 Q1 – 2015 Q4

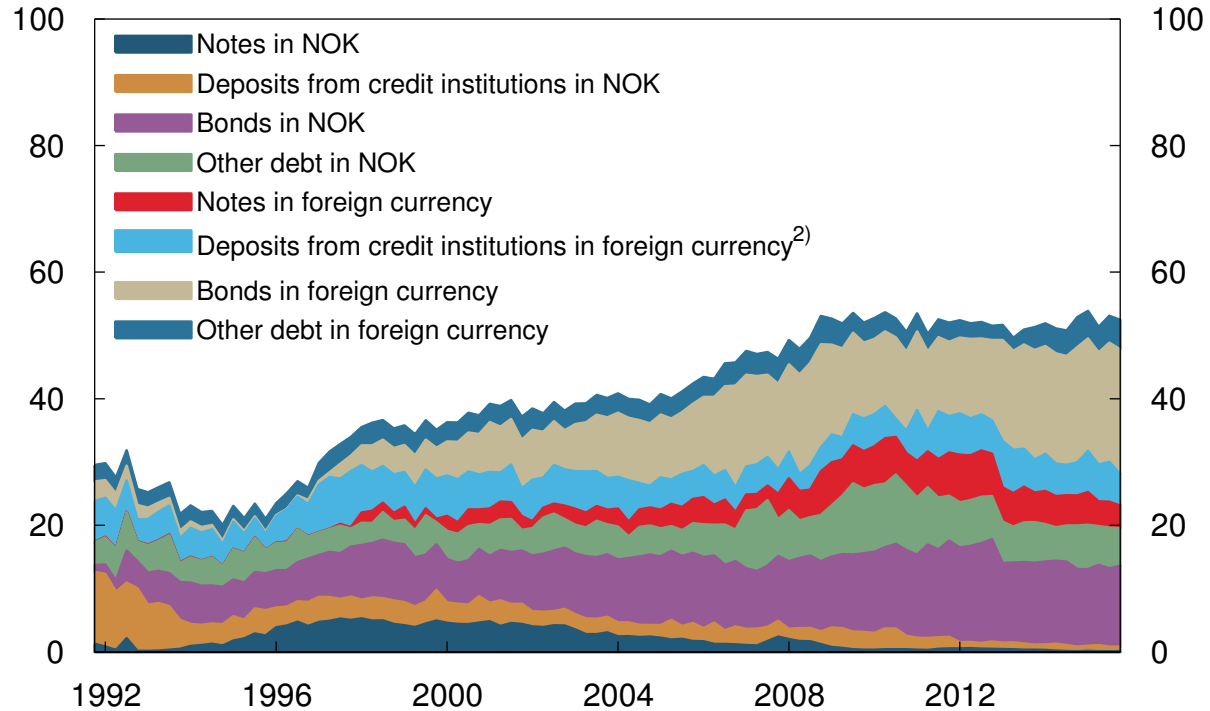


1) All banks and covered bond mortgage companies in Norway, excluding branches and subsidiaries of foreign banks.

2) Estimated based on figures from 1975 Q4.

Source: Norges Bank

Chart 3.26 Decomposition of banks' ¹⁾ wholesale funding.
As a percentage of total assets. 1991 Q4 – 2015 Q4

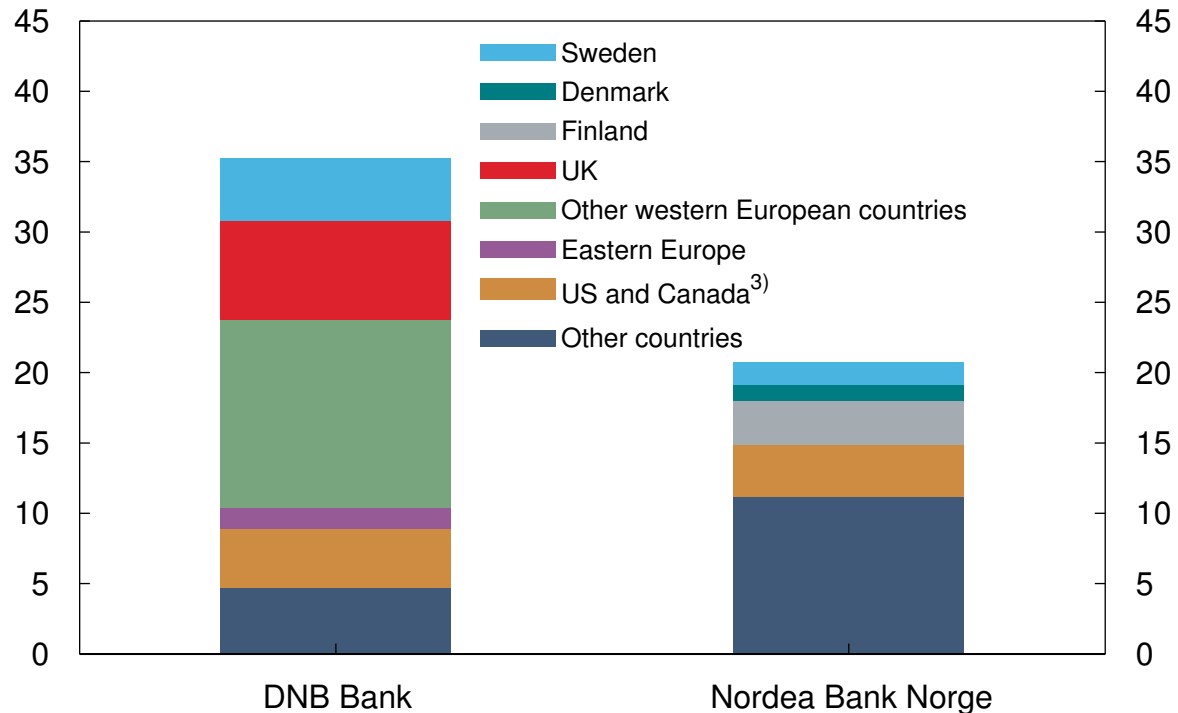


1) All banks and covered bond mortgage companies in Norway excluding branches and subsidiaries of foreign banks.

2) Deposits from credit institutions include deposits from central banks.

Source: Norges Bank

Chart 3.27 Exposures in other countries. Share of total exposures.^{1),2)} Percent



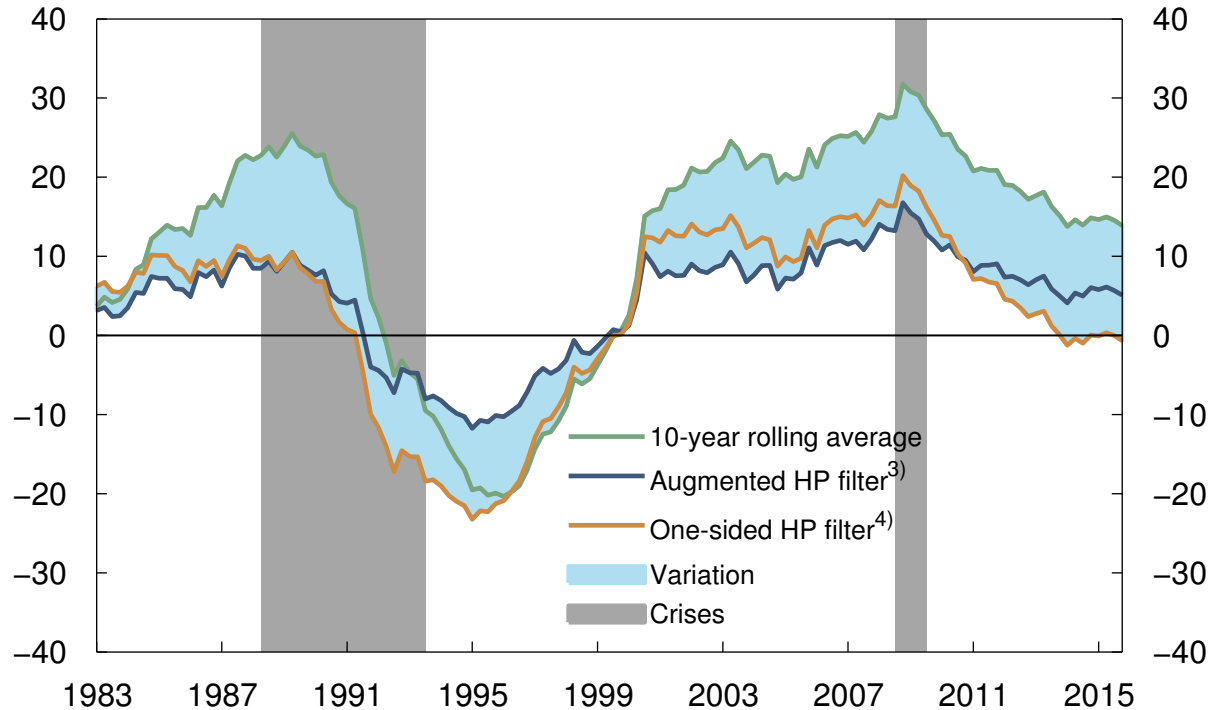
1) Exposures are not risk-weighted. Figures at 31 December 2014 for the DNB Bank group and 31 December 2015 for the Nordea Bank Norge group.

2) The two banks group countries differently and general categories may include countries categorised separately by the other bank.

3) Nordea only reports figures for the US.

Sources: The banks' group annual and Pillar 3 reports and Norges Bank

Chart 3.28a Credit gap. Total credit¹⁾ mainland Norway as a share of mainland GDP. Deviation from estimated trends.²⁾ Percentage points. 1983 Q1 – 2015 Q4



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.

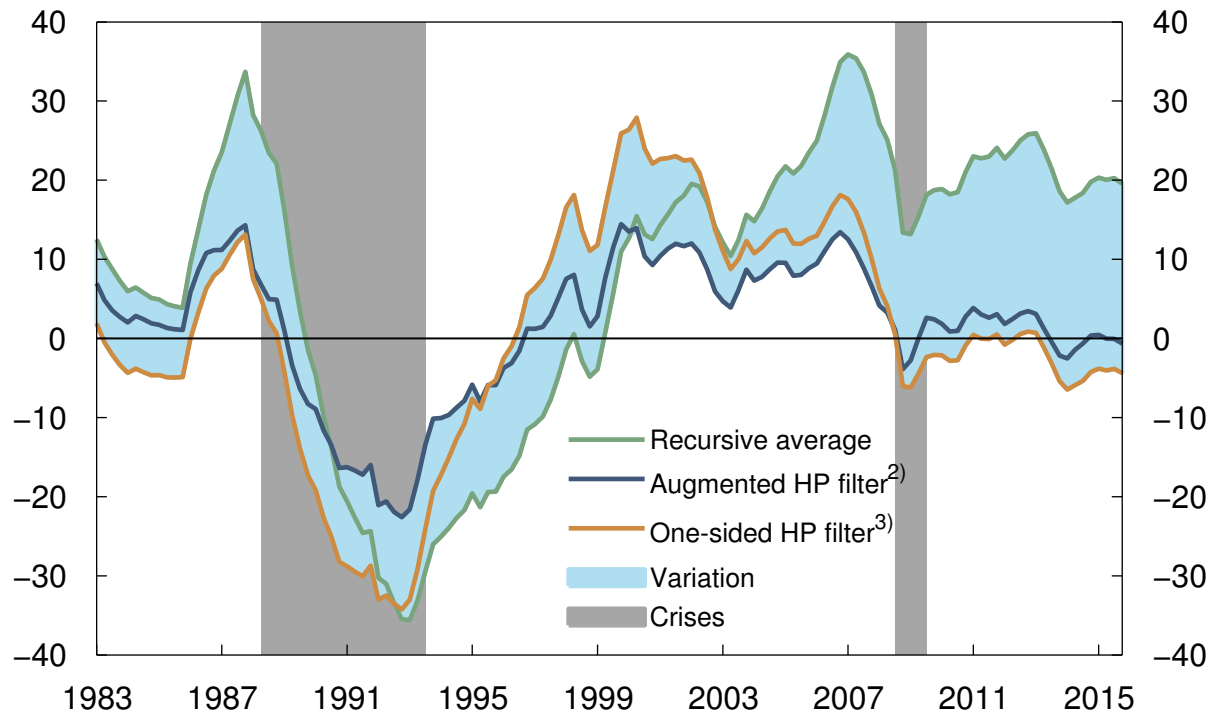
2) The trends are calculated based on figures from 1975 Q4.

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

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

Sources: Statistics Norway, IMF and Norges Bank

Chart 3.28b House price gap. House prices relative to disposable income.
Deviation from estimated trends.¹⁾ Percent. 1983 Q1 – 2015 Q4



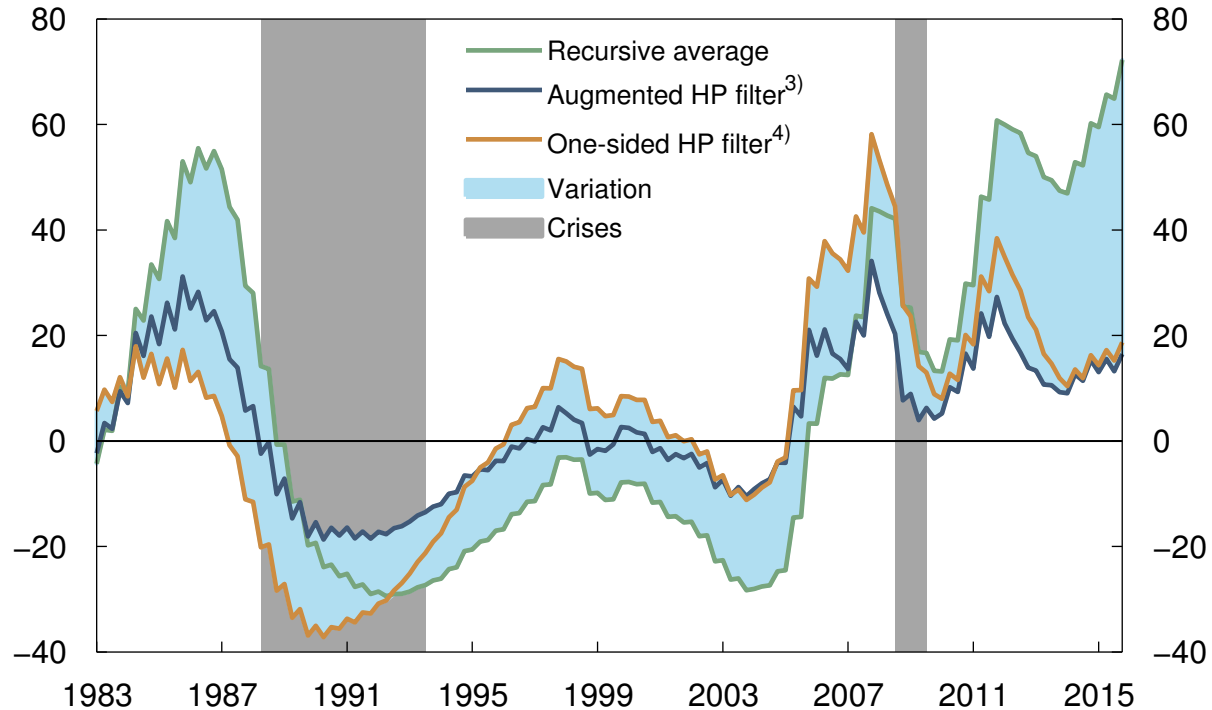
1) The trends are calculated based on figures from 1978 Q4.

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

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

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

Chart 3.28c Commercial real estate price gap. Real commercial real estate prices¹⁾ as deviation from estimated trends.²⁾ Percent. 1983 Q1 – 2015 Q4



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

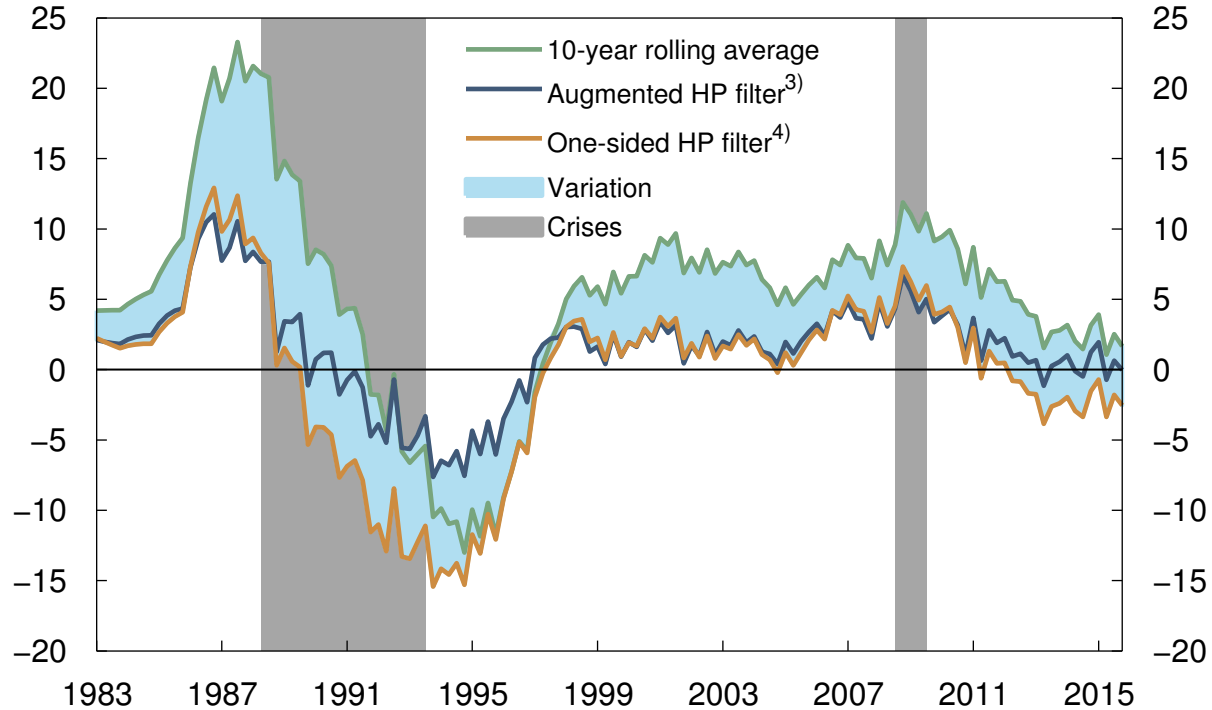
2) The trends are calculated based on figures from 1981 Q2.

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 3.28d Wholesale funding gap. Banks¹⁾ wholesale funding as a share of total assets. Deviation from estimated trends.²⁾ Percentage points. 1983 Q1 – 2015 Q4



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

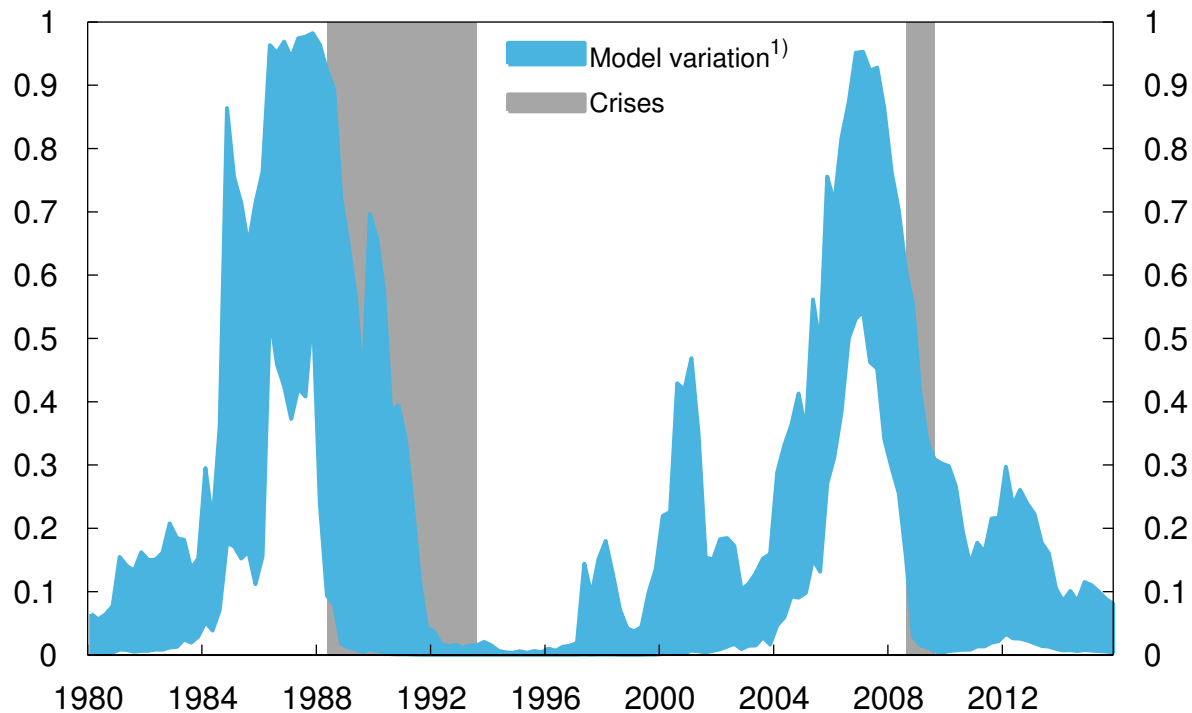
2) The trends are calculated based on figures from 1975 Q4.

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

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

Source: Norges Bank

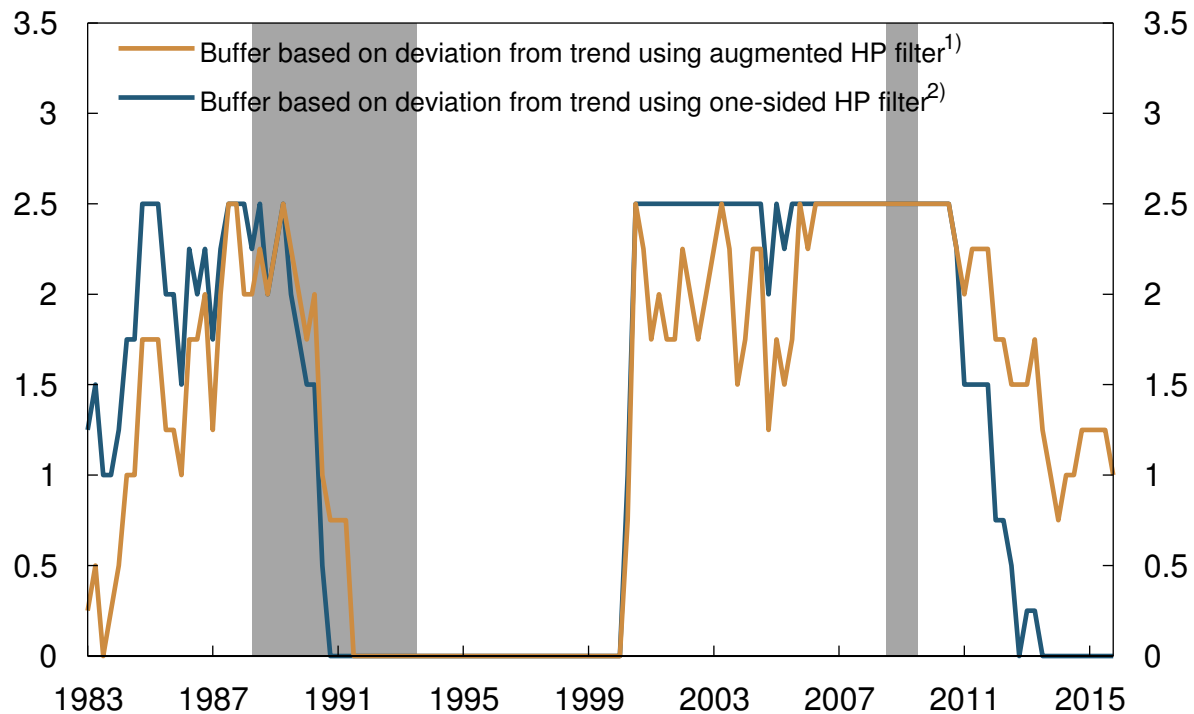
Chart 3.29 Estimated crisis probabilities from various model specifications.
1980 Q1 – 2015 Q4



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

Source: Norges Bank

Chart 3.30 Reference rates for the countercyclical capital buffer under alternative trend estimates. Percent. 1983 Q1 – 2015 Q4

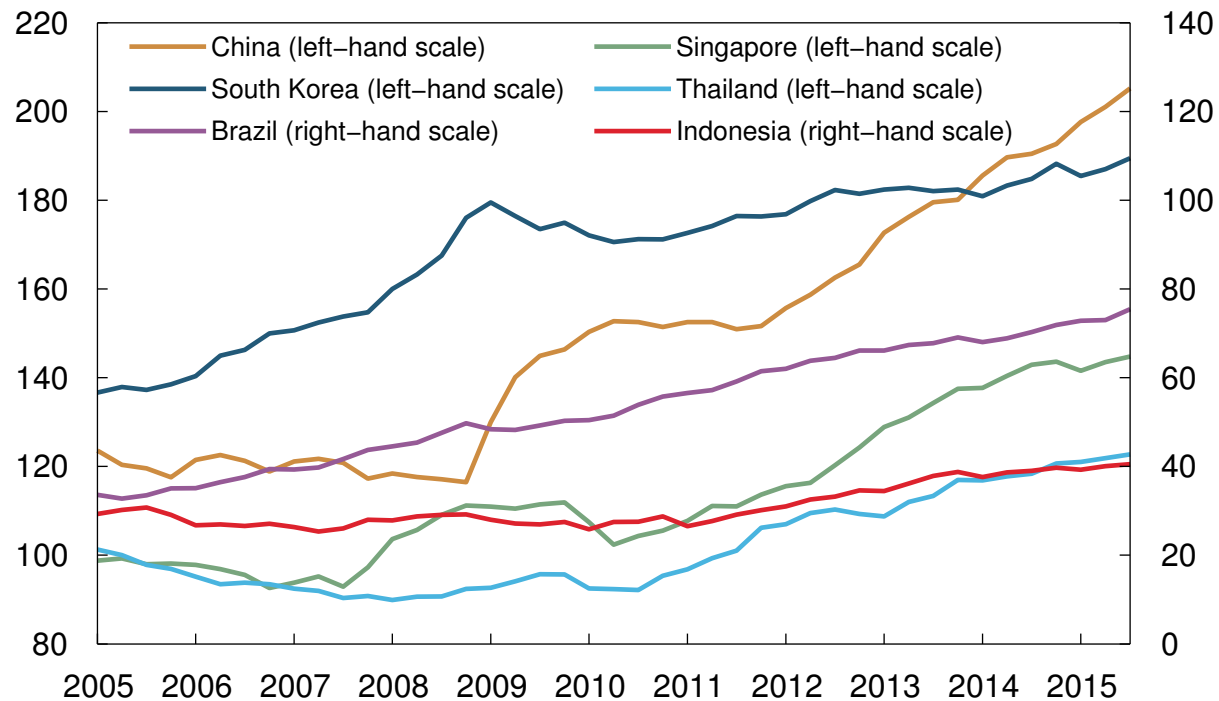


1) One-sided Hodrick-Prescott filter estimated on data augmented with a simple projection. Lambda = 400 000.

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

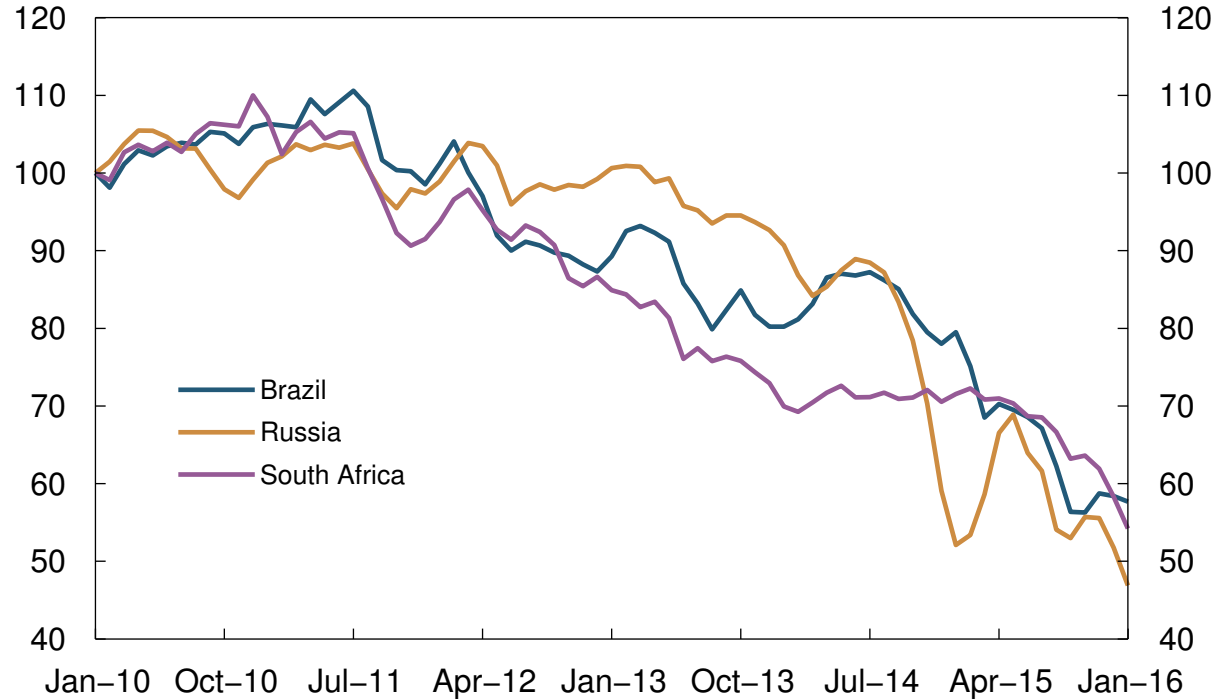
Sources: Statistics Norway, IMF and Norges Bank

Chart 1 Private sector credit as a share of GDP.
Percent. 2005 Q1 – 2015 Q3



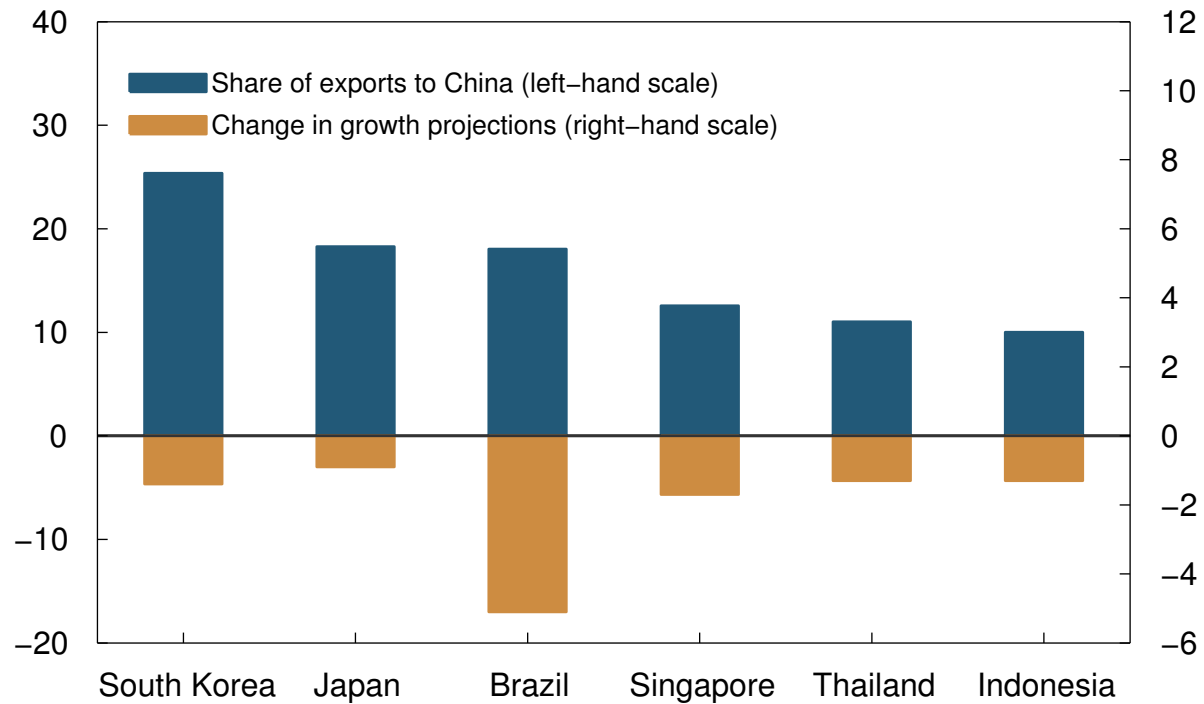
Sources: BIS, Thomson Reuters and Norges Bank

Chart 2 Effective nominal exchange rate in commodity-exporting emerging economies. Index.¹⁾ January 2010=100. January 2010 – January 2016



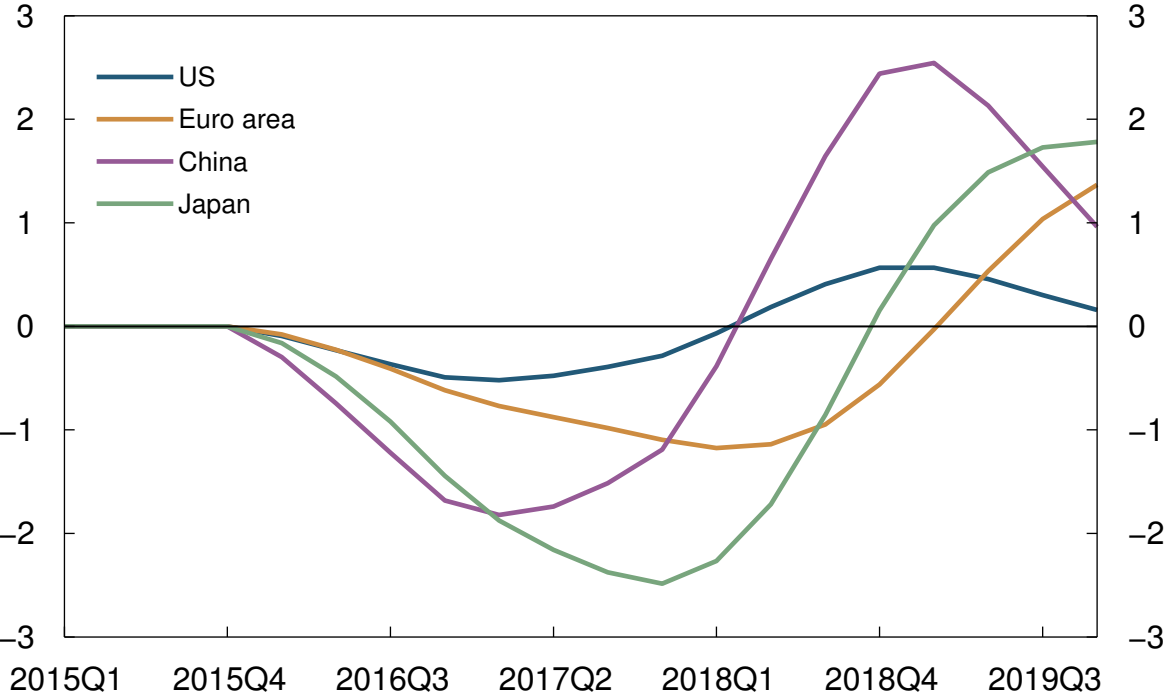
1) A falling curve denotes a weaker exchange rate.
Source: BIS

Chart 3 Exports to China as a share of total exports.¹⁾ Percent.
 Change in growth projections for 2016 from MPR 1/15 to MPR 1/16.
 Percentage points



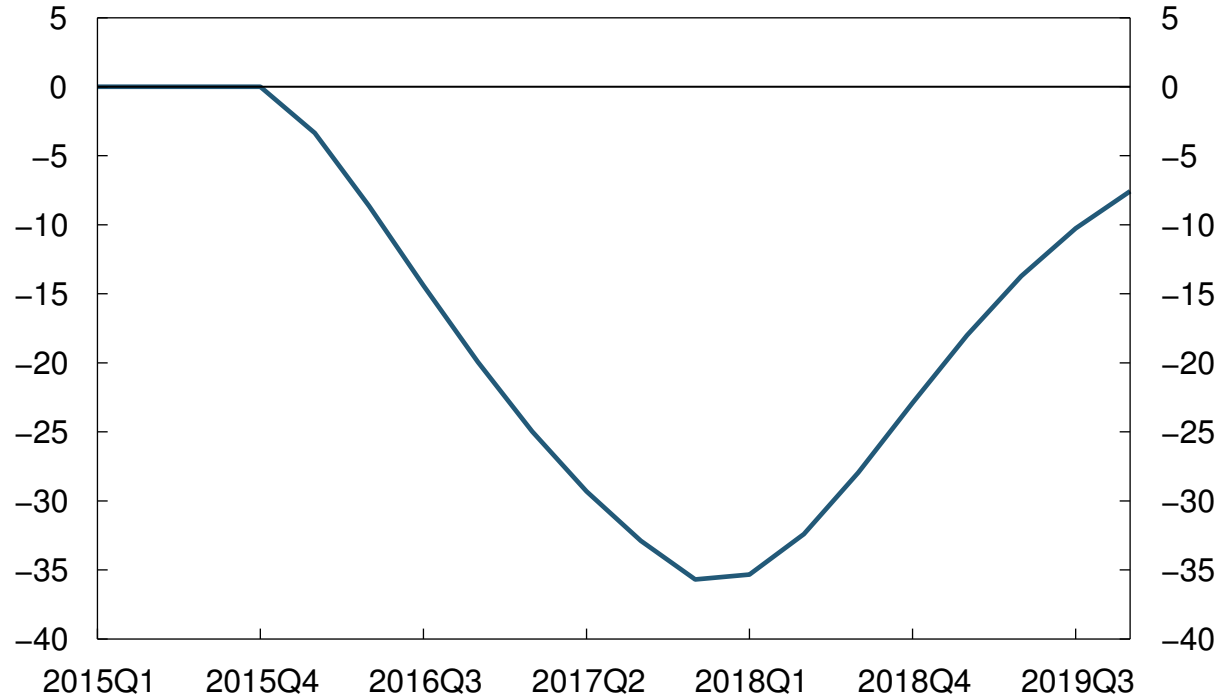
1) Data for 2014.
 Sources: UN Comtrade and Norges Bank

Chart 4 Effect on GDP growth of 2 percentage point lower growth in emerging economies excluding China. Change in four-quarter change compared with baseline scenario. Percentage points. 2015 Q1 – 2019 Q4



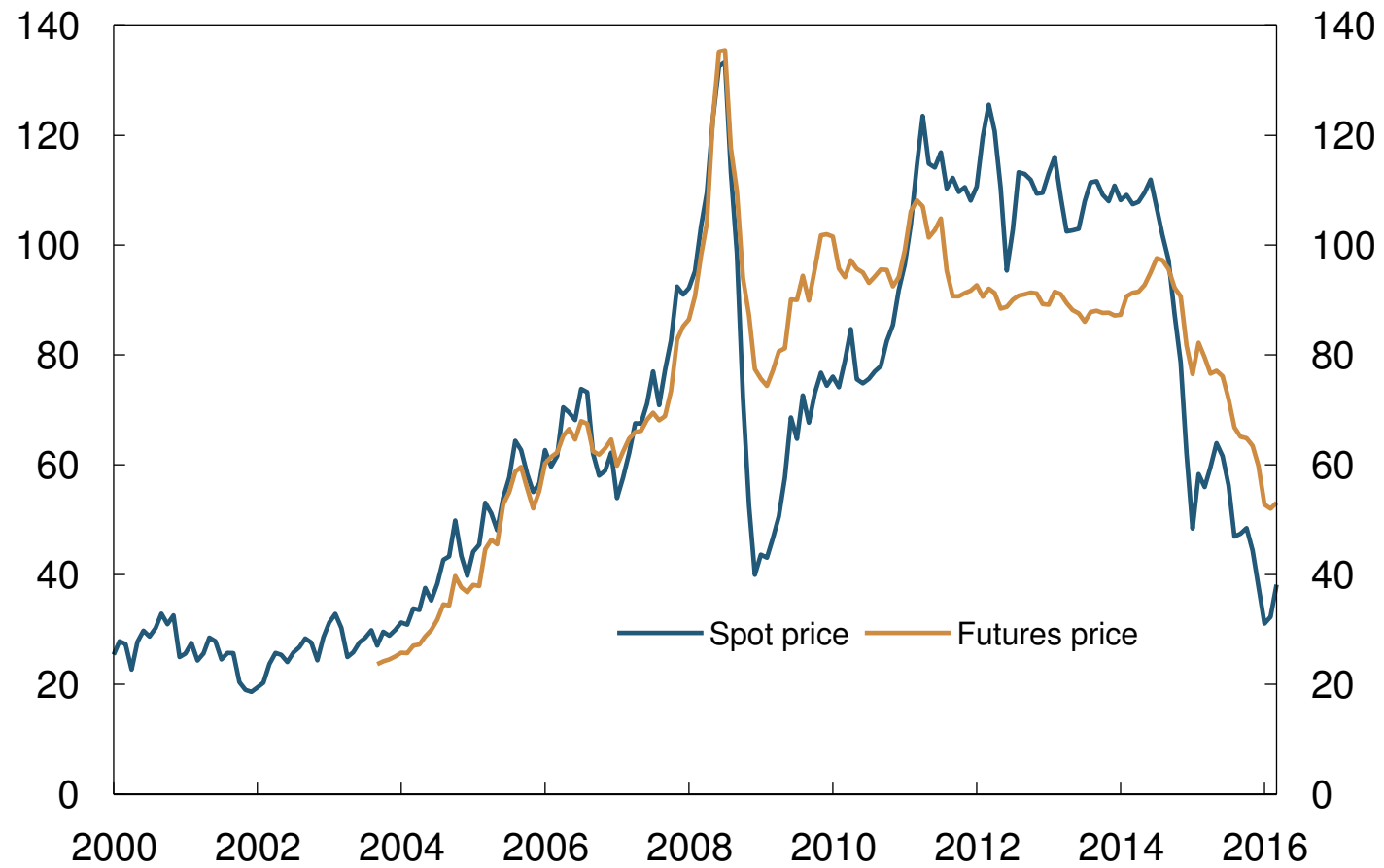
Source: IMF Global Projection Model

Chart 5 Effect on oil price of 2 percentage point lower growth in emerging economies excluding China. Change in percent from baseline scenario. 2015 Q1 – 2019 Q4



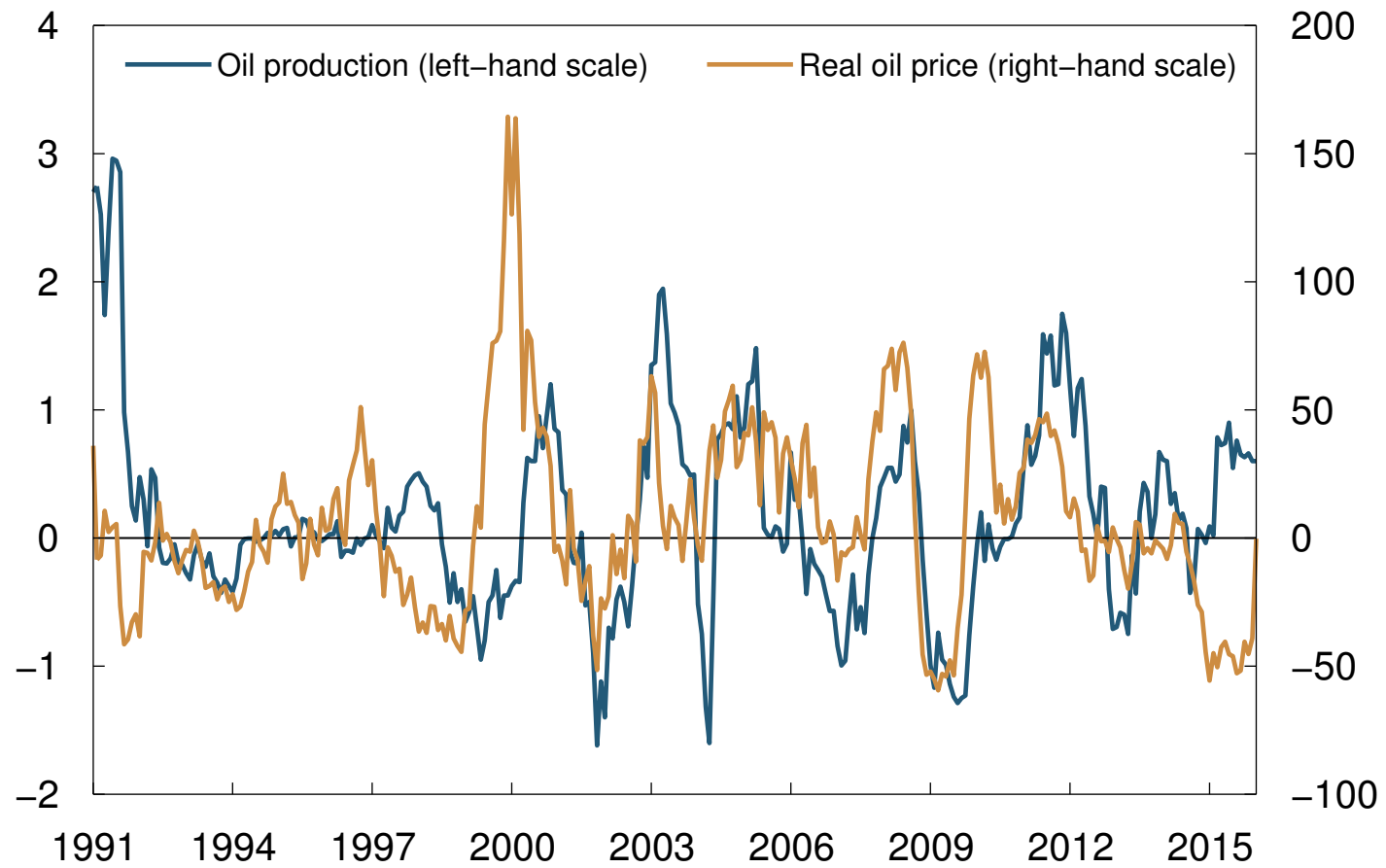
Source: IMF Global Projection Model

Chart 1 Oil prices, Brent Blend. Spot price and futures price with delivery in five years. USD/barrel. January 2000 – March 2016¹⁾



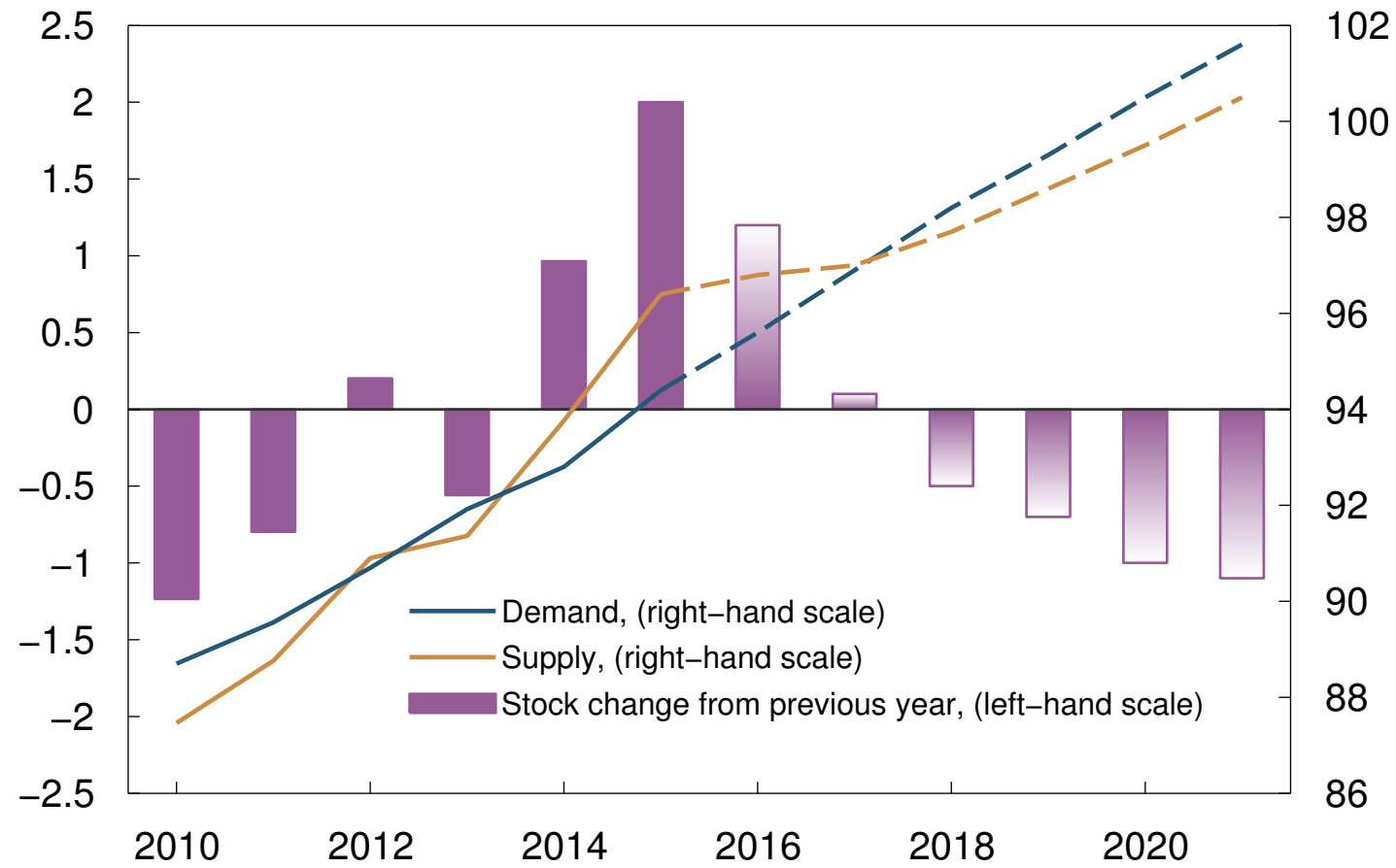
1) For March 2016 the average daily prices 1–11 March are used.
Source: Thomson Reuters

Chart 2 Real oil price.¹⁾ 2016 USD per barrel. Oil production in Saudi–Arabia. Million barrels per day. Twelve–month change. Percent. January 1991 – February 2016



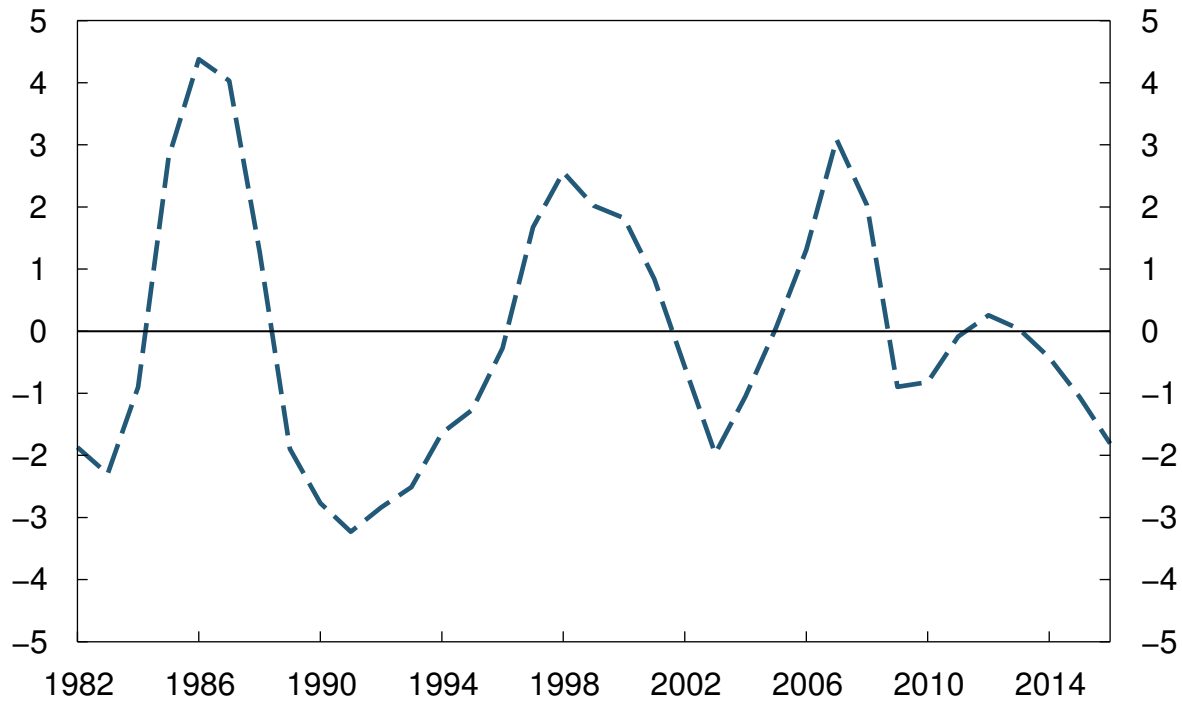
1) Deflated by the U.S. Consumer Price Index.
Sources: IEA and Thomson Reuters

Chart 3 IEA main scenario for oil market balance.
 Million barrels per day. 2010 – 2021 ¹⁾



1) Projections from 2016.
 Source: IEA Medium Term Oil Market Report 2016

Chart 1 Projected output gap.¹⁾
Level. Percent. 1982 – 2016



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

Chart 2 Phases of the business cycle.

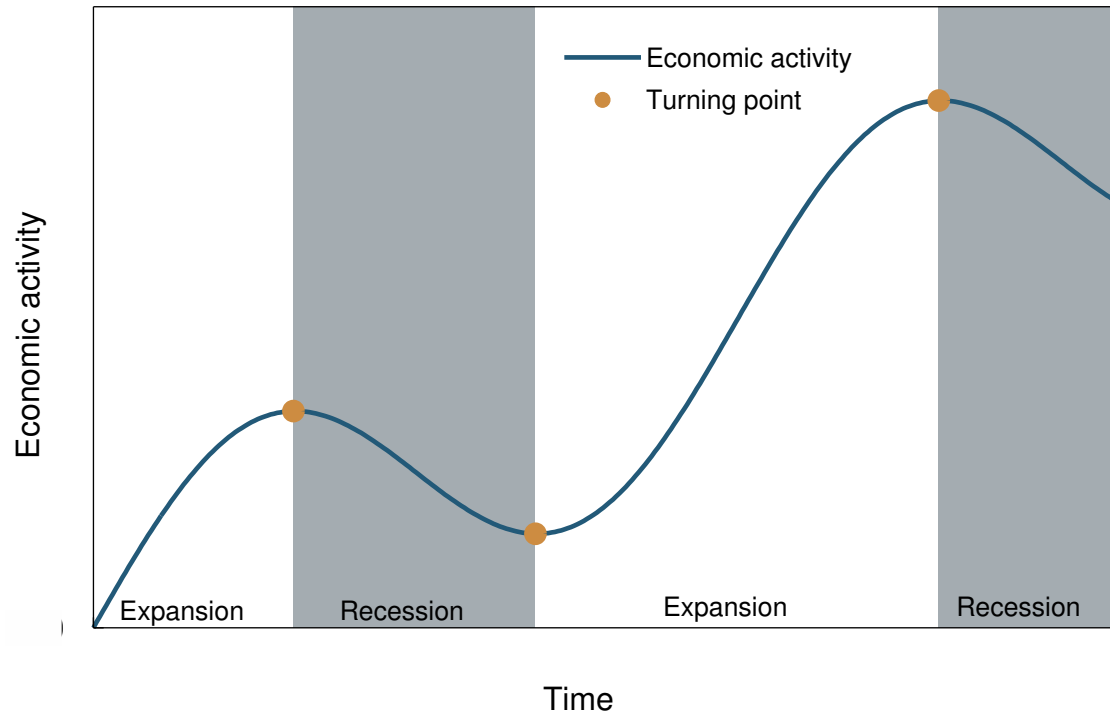
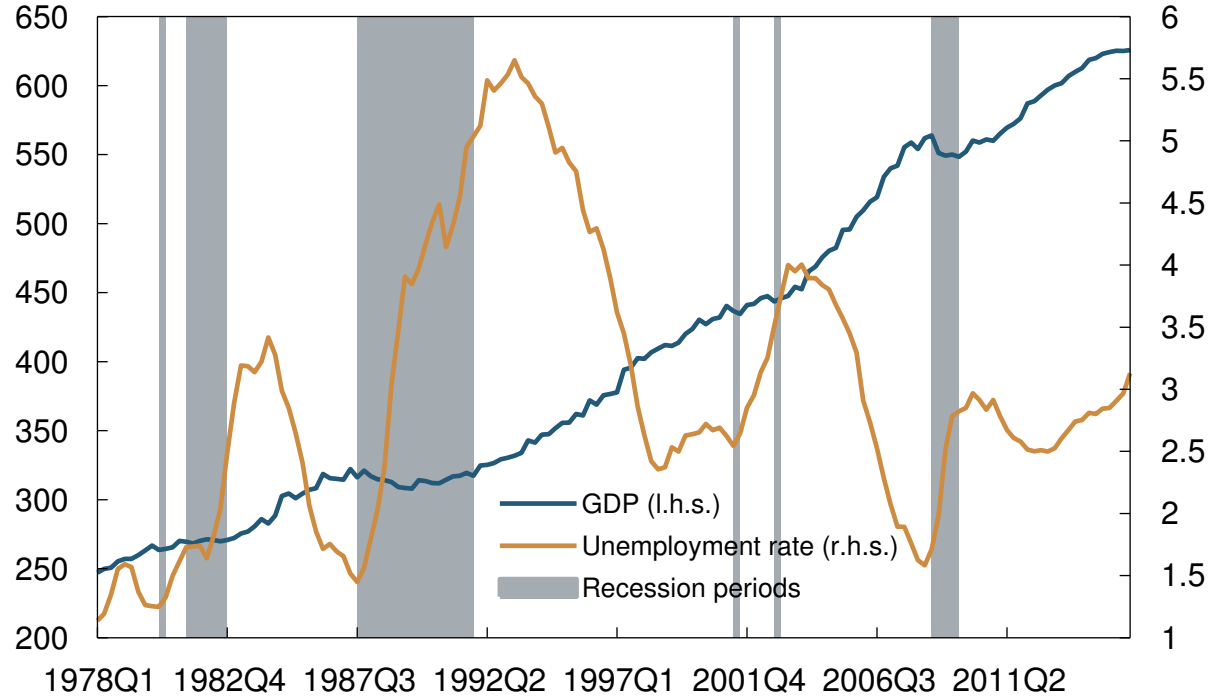
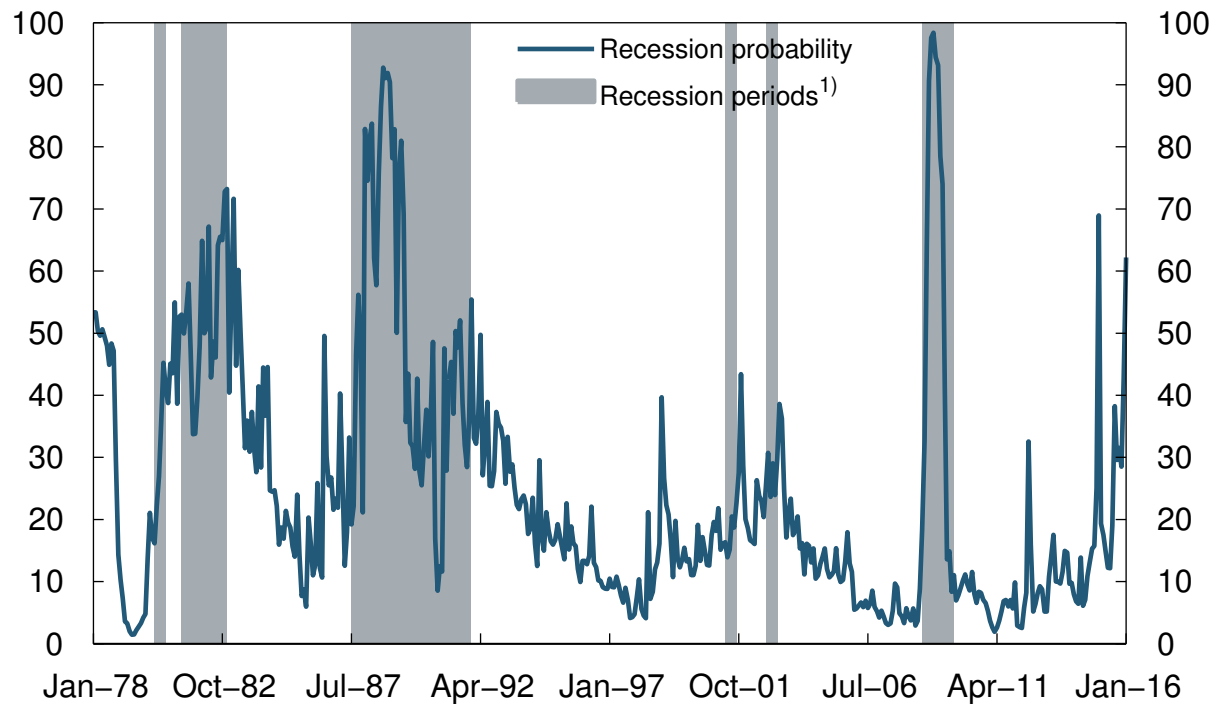


Chart 3 Norwegian recession periods¹⁾, GDP for mainland Norway (in billions of NOK at constant prices) and registered unemployment (as a percentage of the labour force). Seasonally adjusted. 1978 Q1 – 2015 Q4



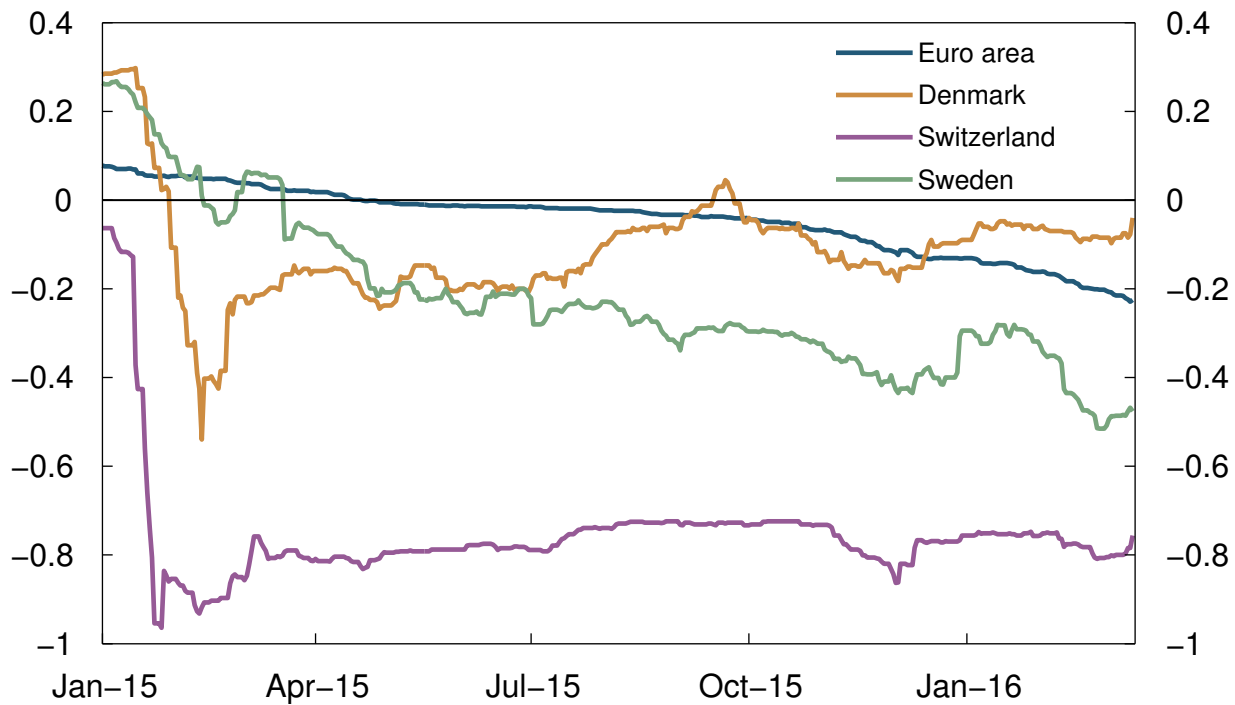
1) Dated in Aastveit, Jore and Ravazzolo (2016).
Sources: NAV, Statistics Norway and Norges Bank

Chart 4 Recession probabilities estimated in real time with monthly indicator model.
Percent. January 1978 – January 2016



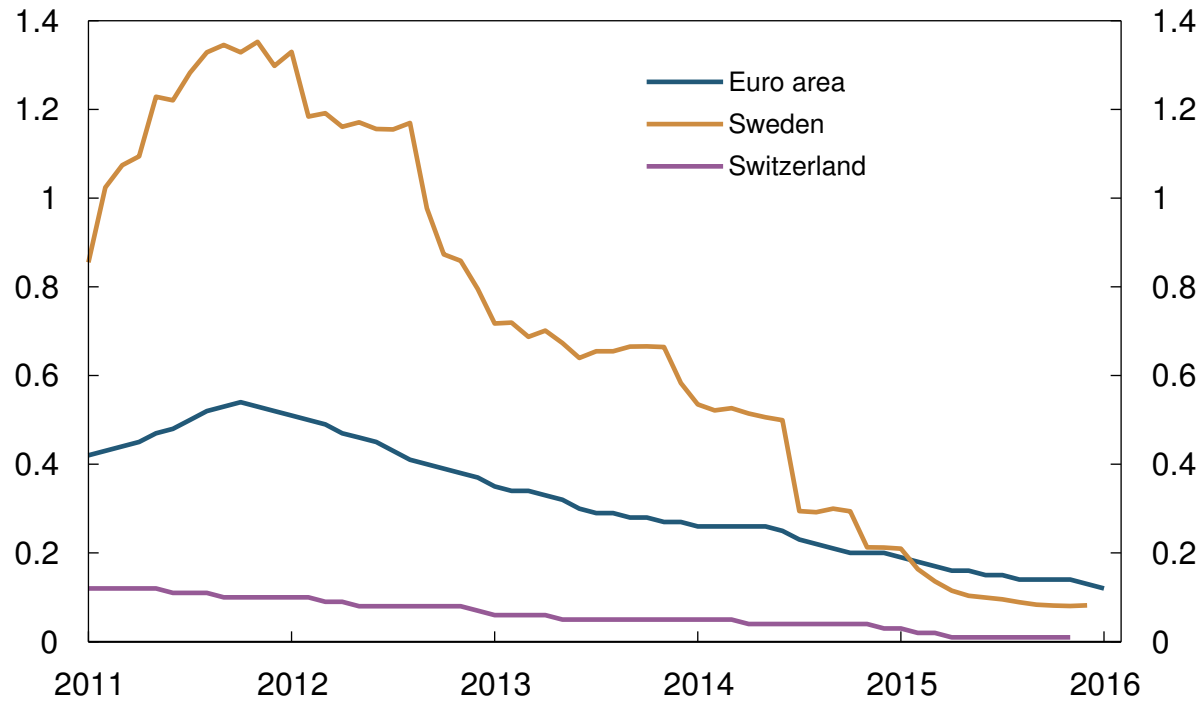
1) Dated in Aastveit, Jore and Ravazzolo (2016).
Source: Norges Bank

Chart 1 Three-month money market rate.
Percent. 1 January 2015 – 11 March 2016



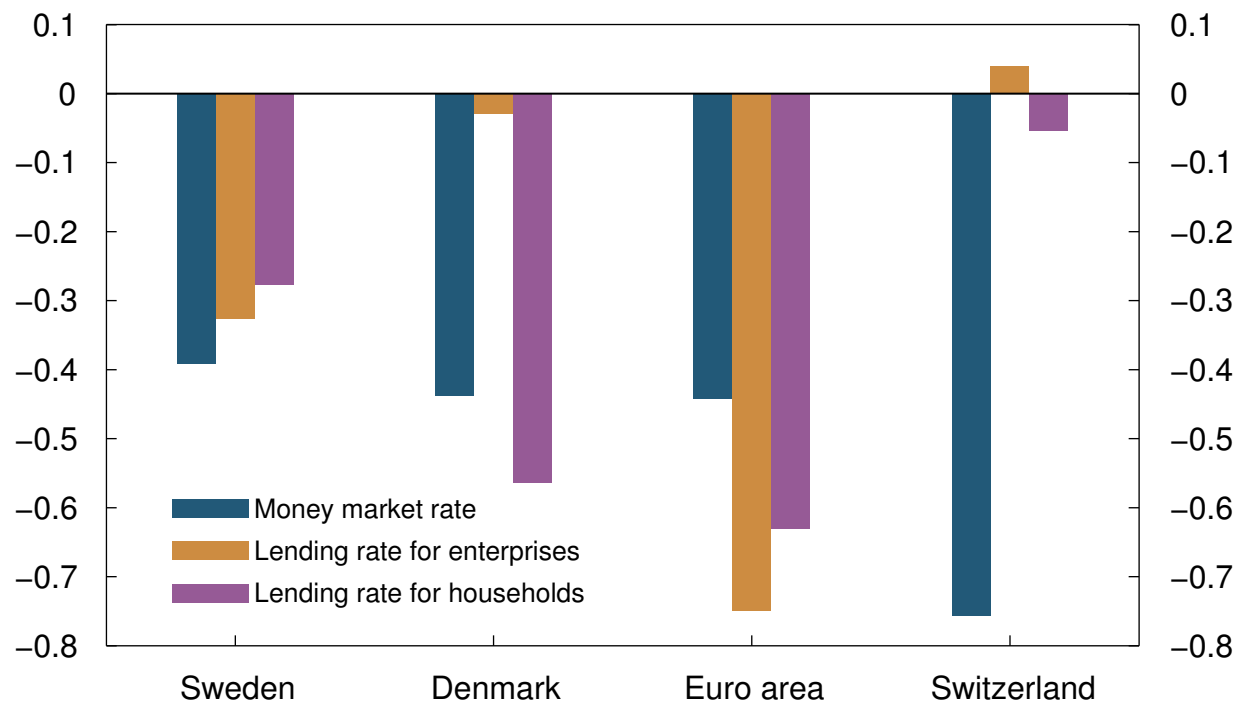
Source: Thomson Reuters

Chart 2 Household deposit rates.¹⁾
Percent. January 2011 – January 2016



1) Deposit rates for new agreements. For Sweden the series includes all maturities. For the euro area and Switzerland the series include sight deposits. For Switzerland the series includes other sectors in addition to households. Sources: Statistics Sweden, ECB and SNB

Chart 3 Three-month money market rates and lending rates for households ¹⁾ and enterprises ²⁾. Percentage points. Change from month when the policy rate became negative ³⁾



1) New mortgage loans from banks and credit institutions. For Switzerland the series is for fixed-rate mortgages (loan sector not specified)

2) New loans to enterprises from banks (including credit institutions for the euro area). For Switzerland the series is for fixed-rate investment loans.

3) Latest observation: 31 December 2015 for money market rates and December 2015 for lending rates (November for Switzerland).

Sources: Thomson Reuters, Statistics Sweden, Danmarks Nationalbank, SNB and ECB