

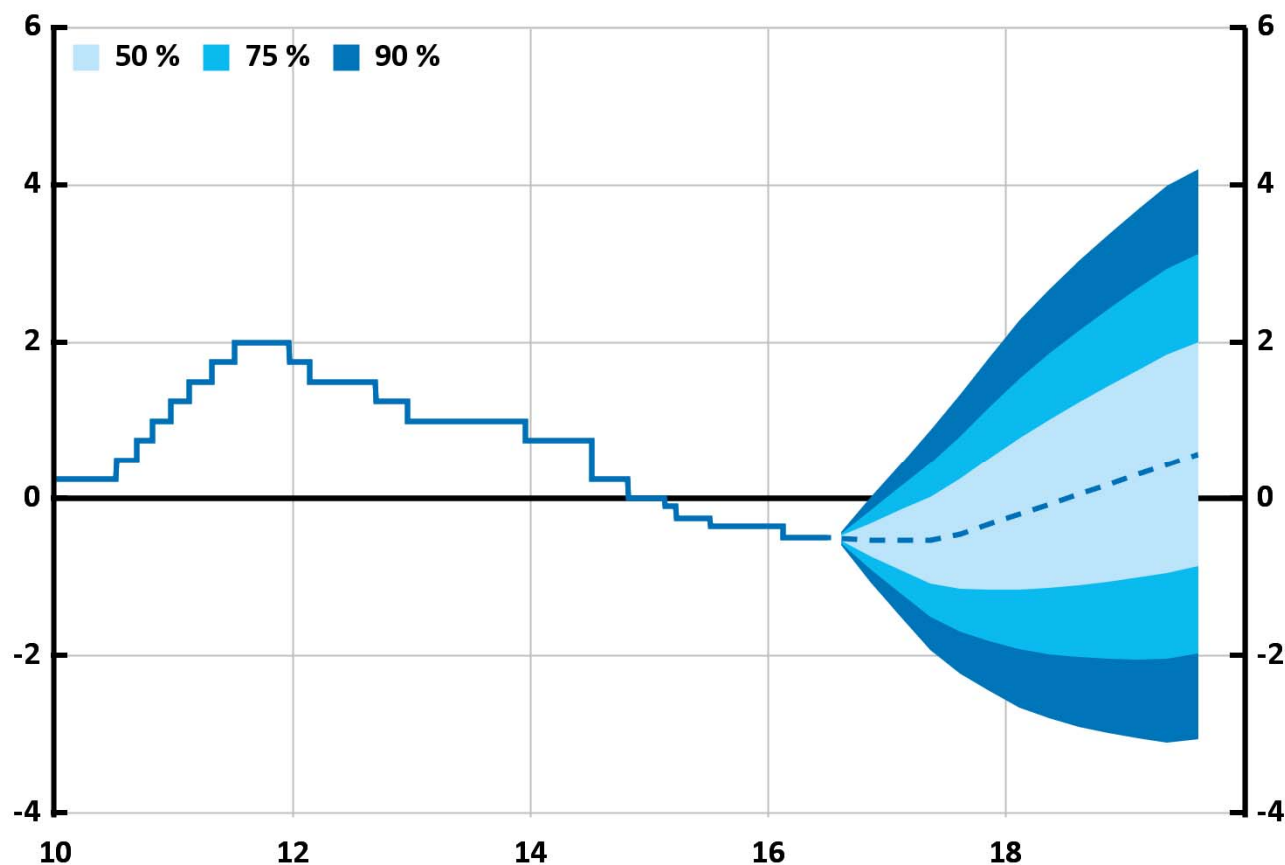


Monetary Policy Report July 2016

S V E R I G E S R I K S B A N K

Figure 1.1. Repo rate with uncertainty bands

Per cent

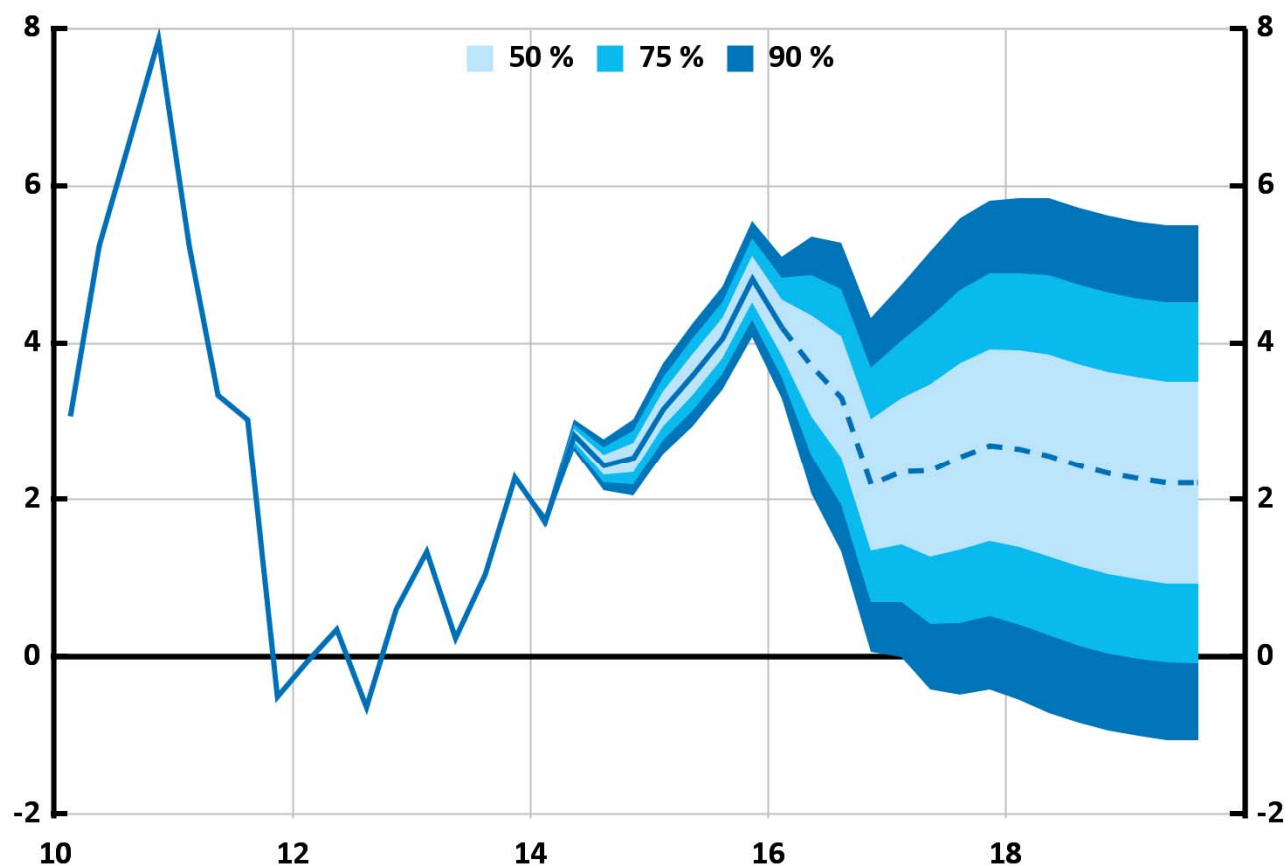


Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007. The uncertainty bands do not take into account the fact that there may be a lower bound for the repo rate. Outcomes are daily rates and forecasts refer to quarterly averages.

Source: The Riksbank

Figure 1.2. GDP with uncertainty bands

Annual percentage change, seasonally-adjusted data

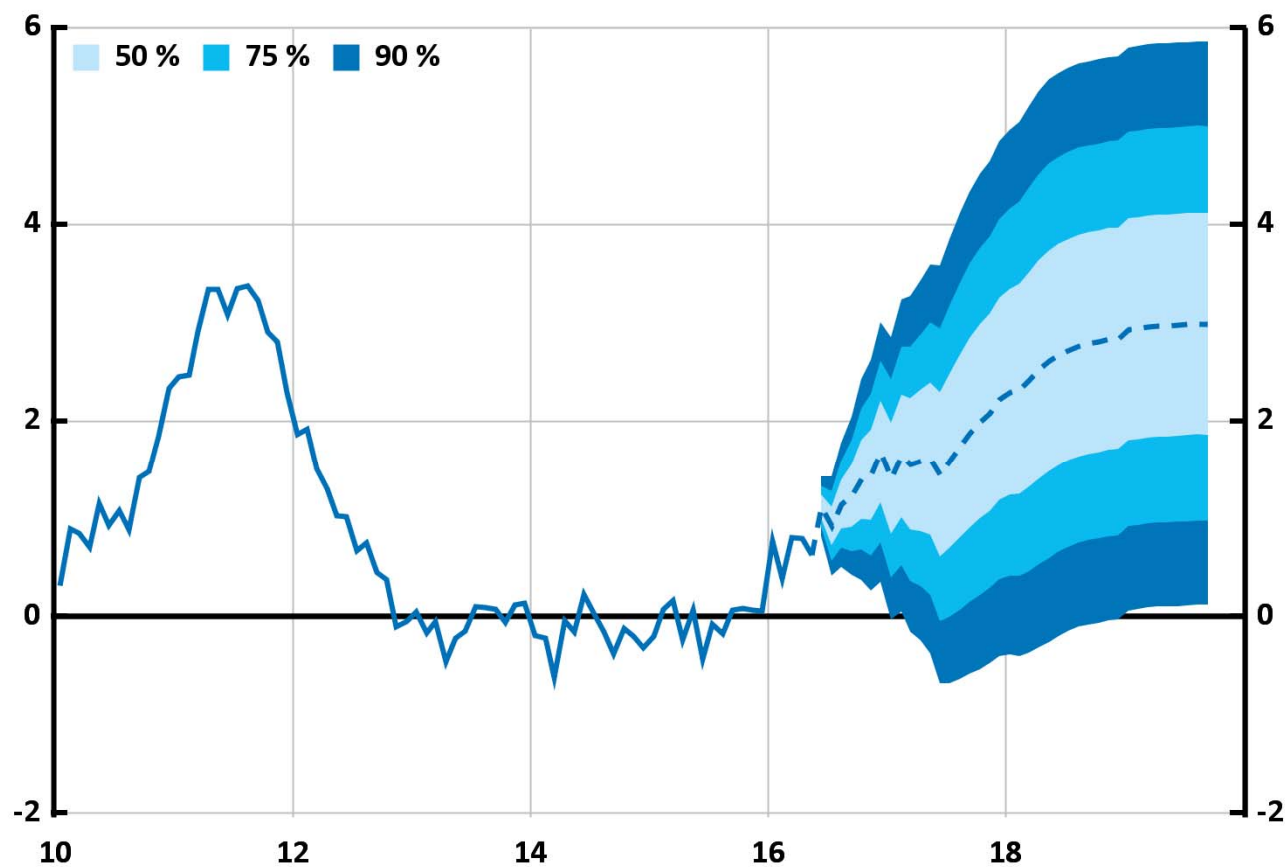


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. There is also uncertainty for the outcomes for GDP, as the figures in the National Accounts are revised several years after the preliminary publication.

Sources: Statistics Sweden
and the Riksbank

Figure 1.3. CPI with uncertainty bands

Annual percentage change

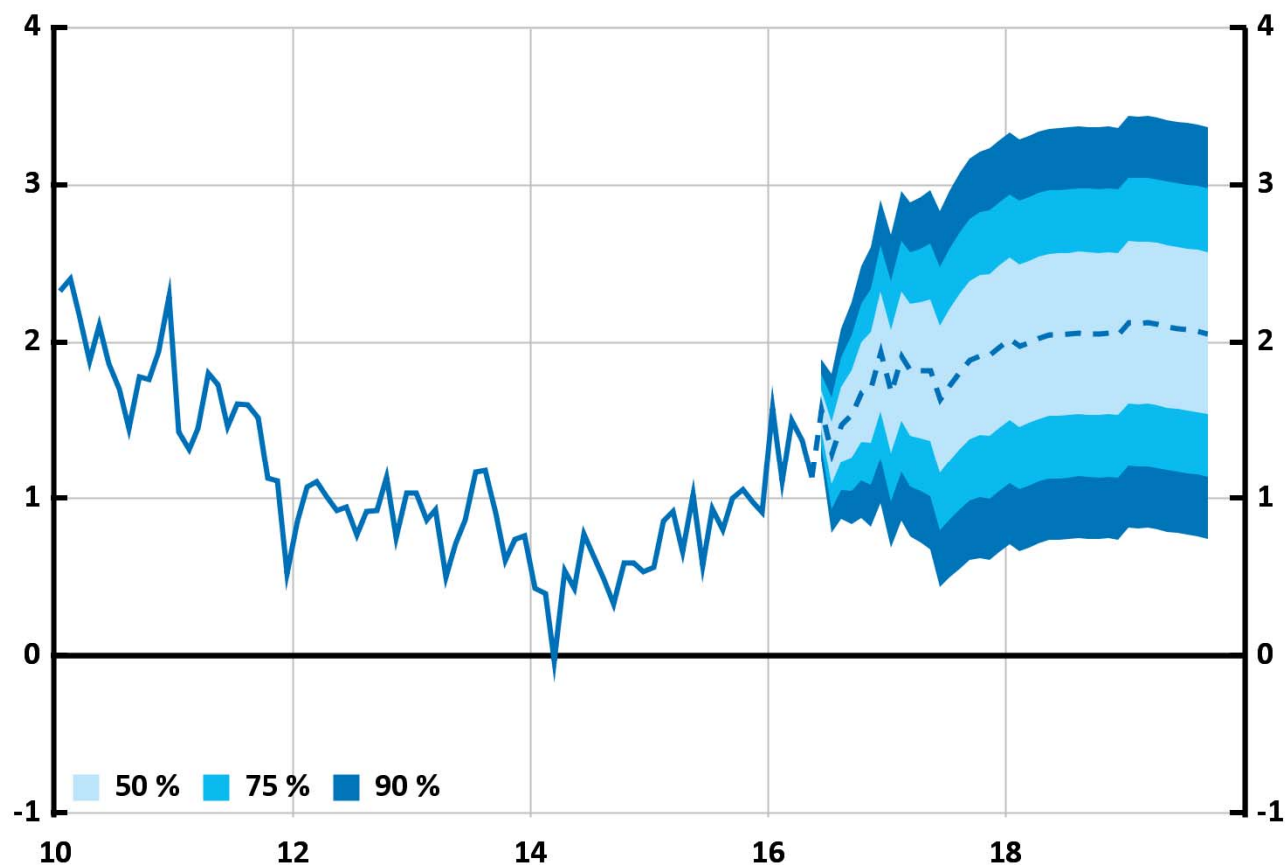


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors.

Sources: Statistics Sweden and the Riksbank

Figure 1.4. CPIF with uncertainty bands

Annual percentage change

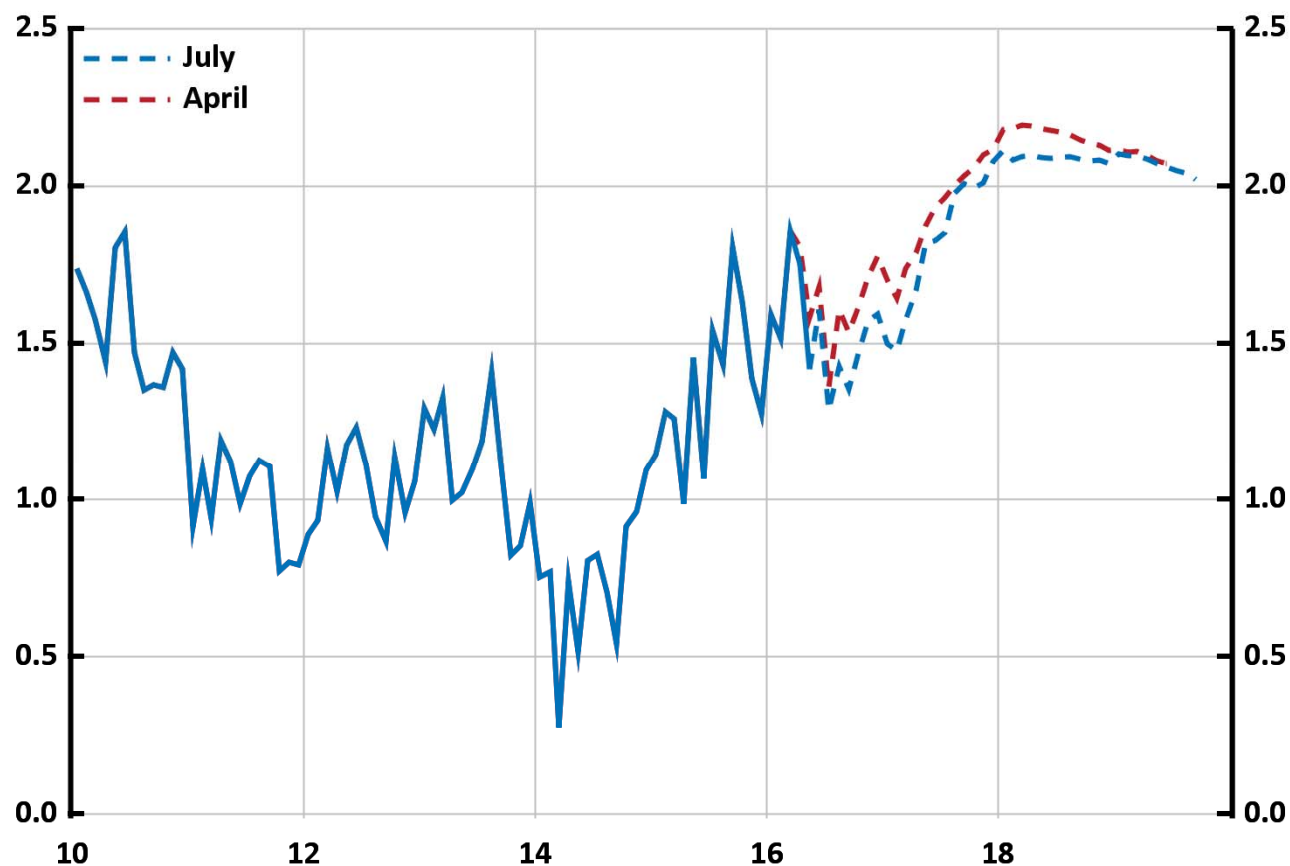


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 1.5. CPIF excluding energy

Annual percentage change

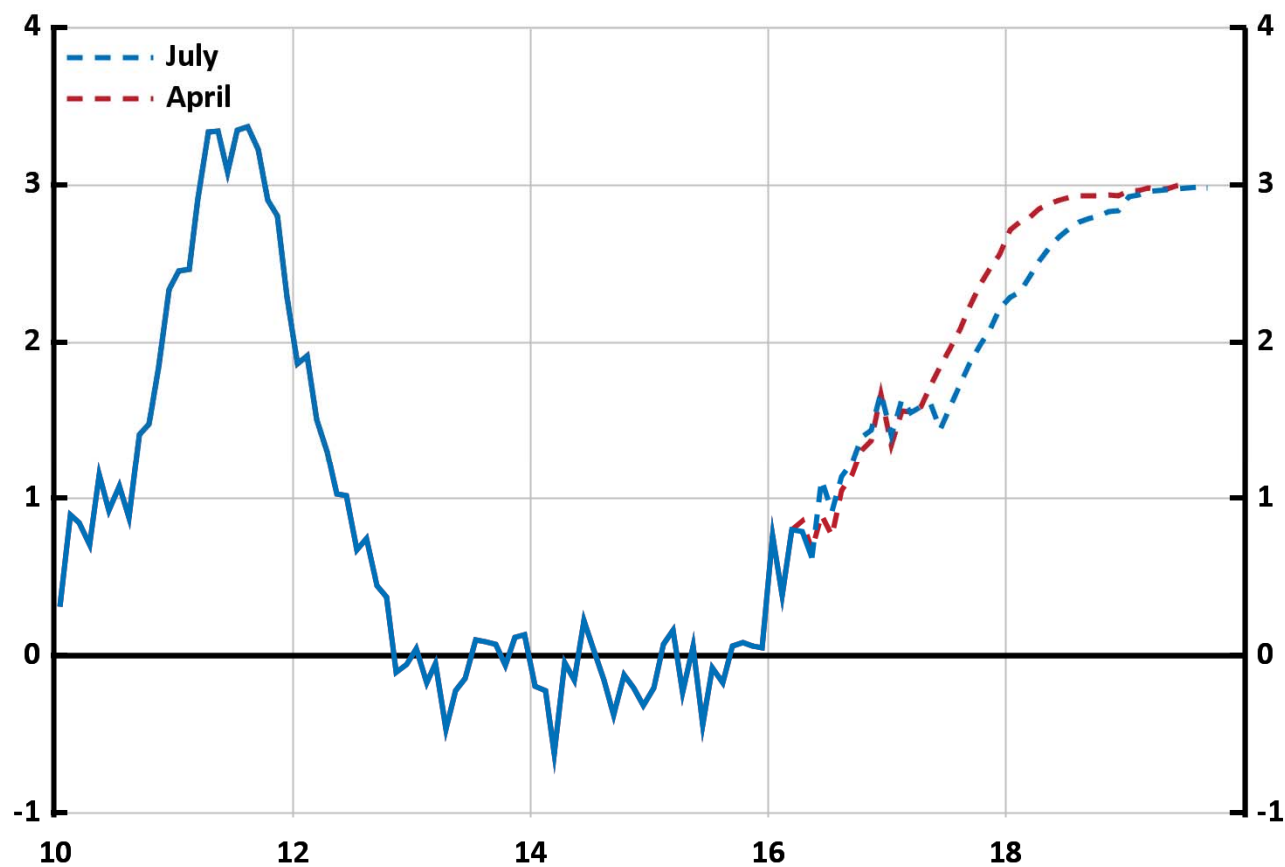


Note. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 1.6. CPI

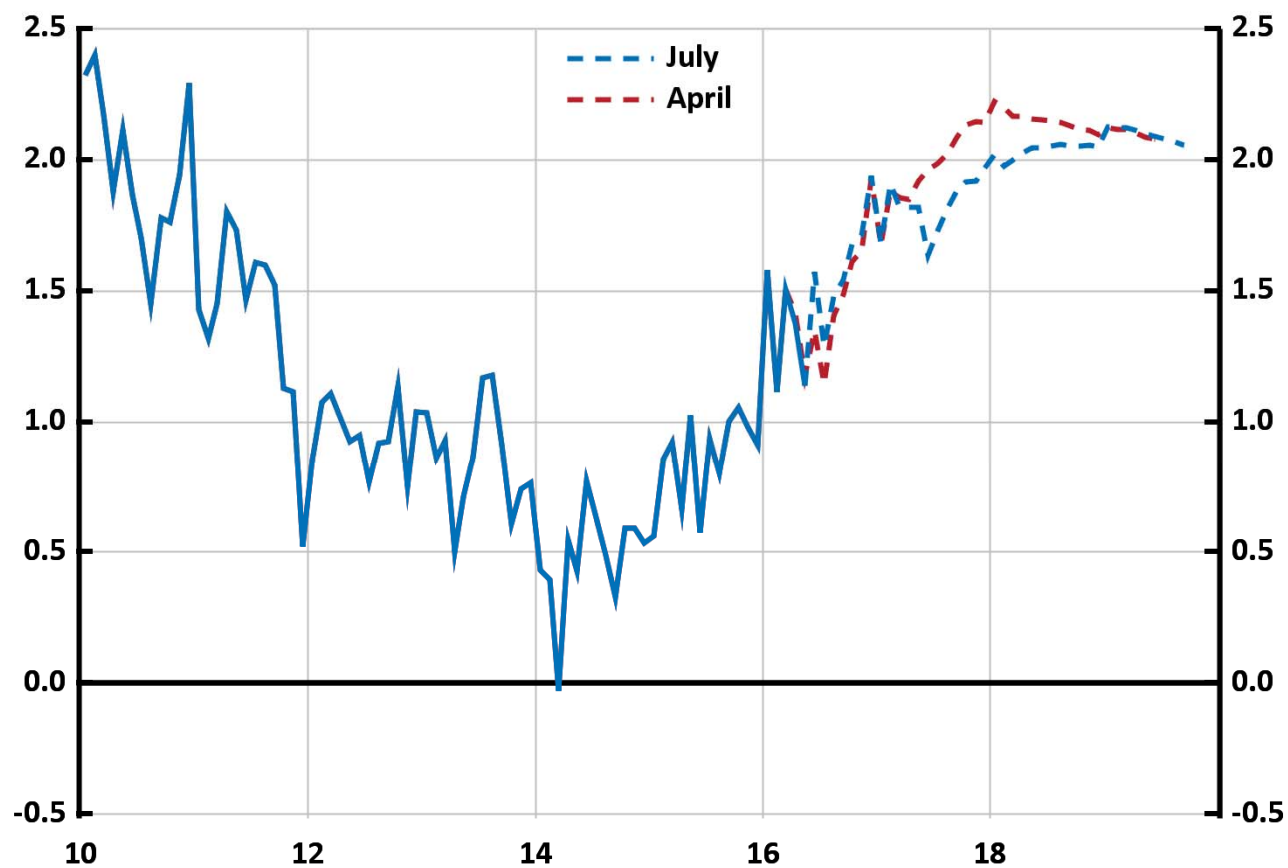
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 1.7. CPIF

Annual percentage change

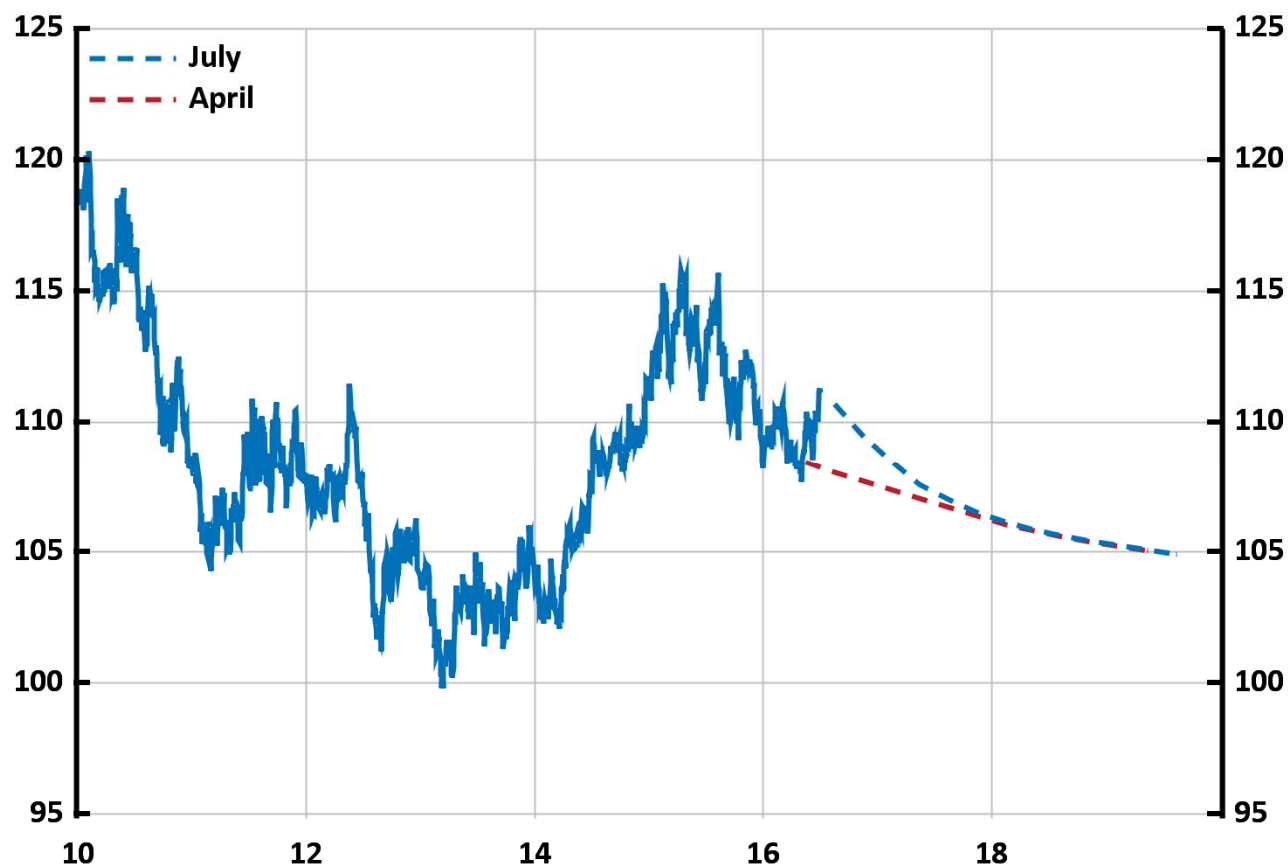


Note. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 1.8. KIX-weighted nominal exchange rate

Index, 1992-11-18 = 100

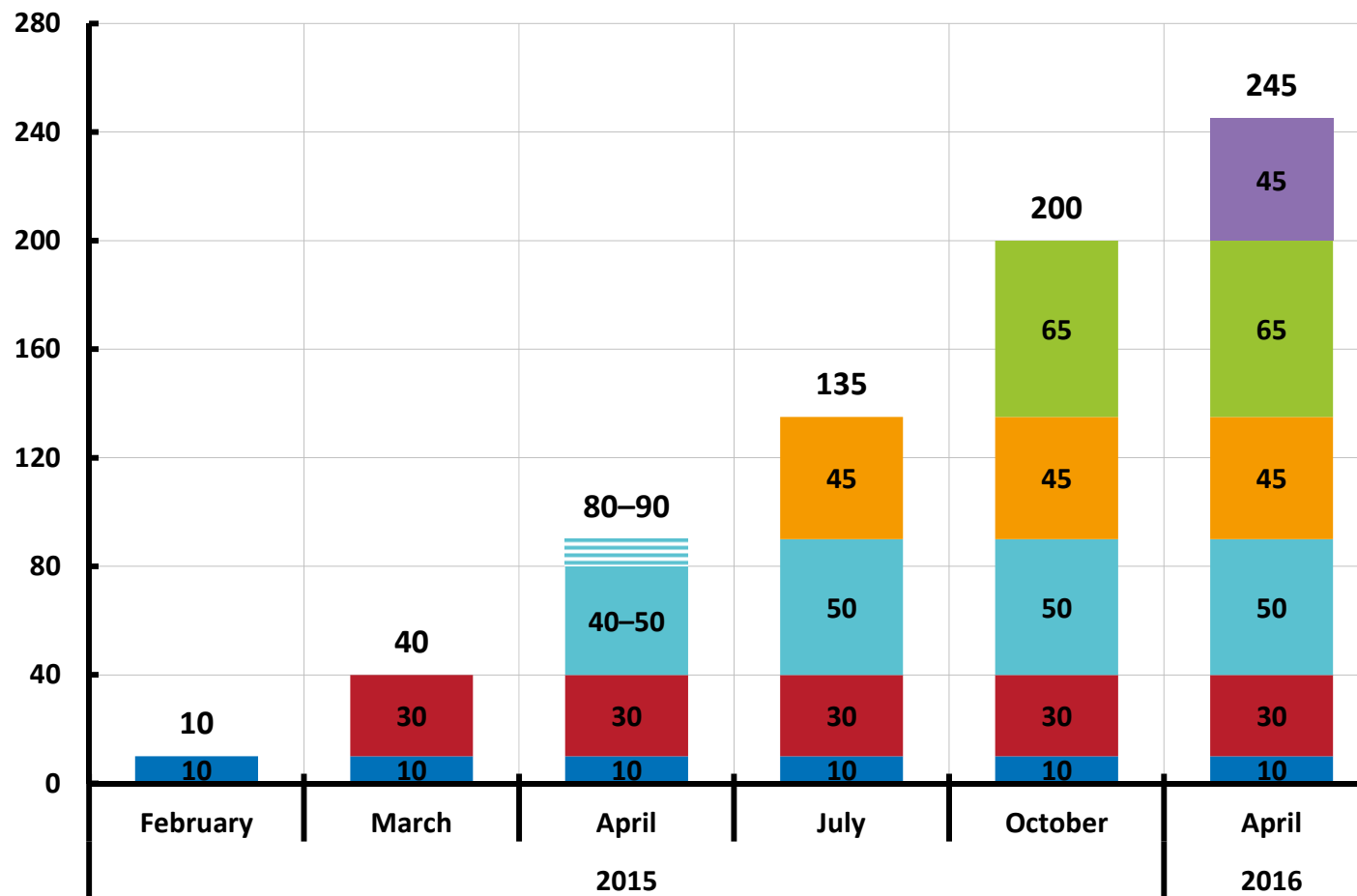


Note. Outcomes are daily rates and forecasts refer to quarterly averages. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources and the Riksbank

Figure 1.9. Purchases of government bonds decided by the Riksbank

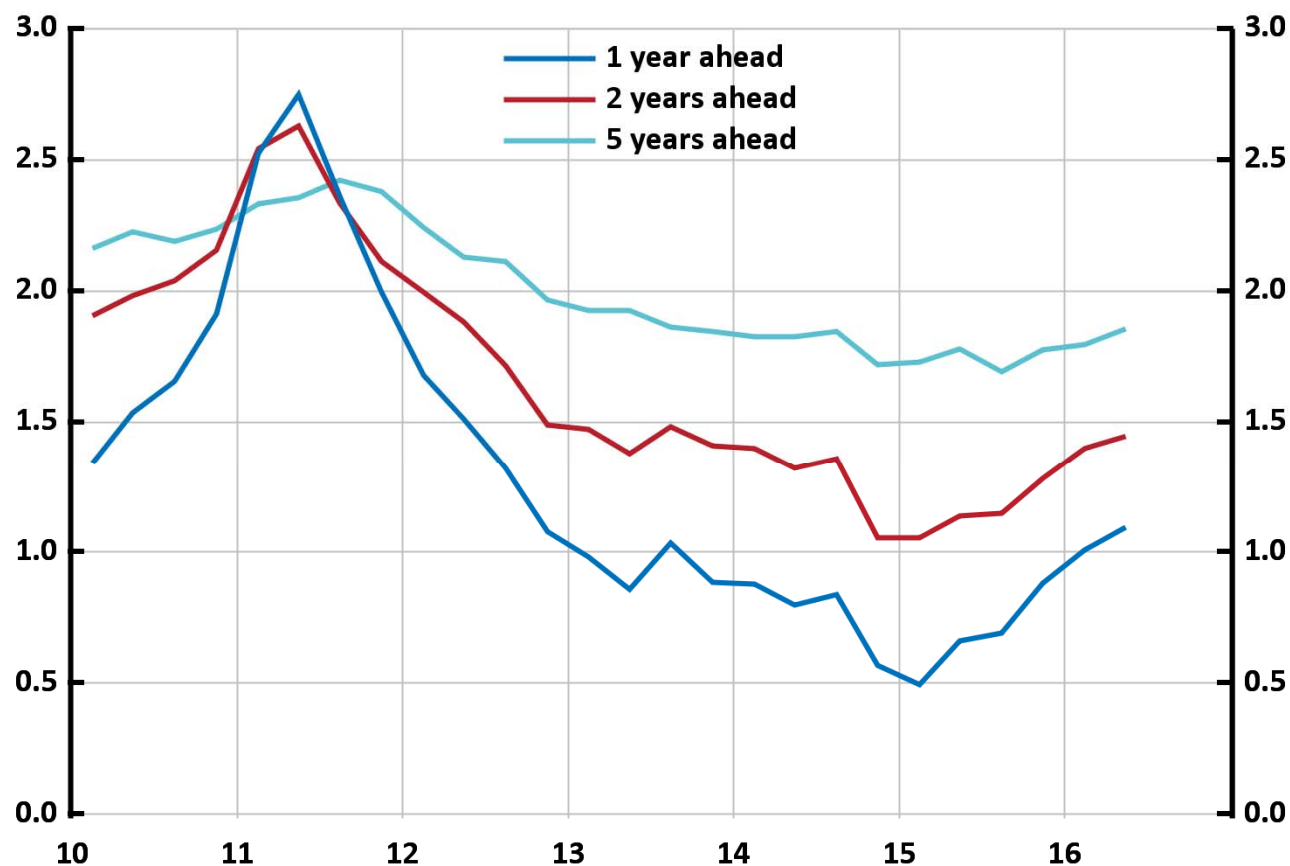
SEK billion



Note. Government bond purchases will continue until the end of 2016. As the Riksbank intends to reinvest coupon payments on holdings of nominal government bonds, the nominal amount will not total exactly SEK 245 billion. Source: The Riksbank

Figure 1.10. Inflation expectations among all respondents

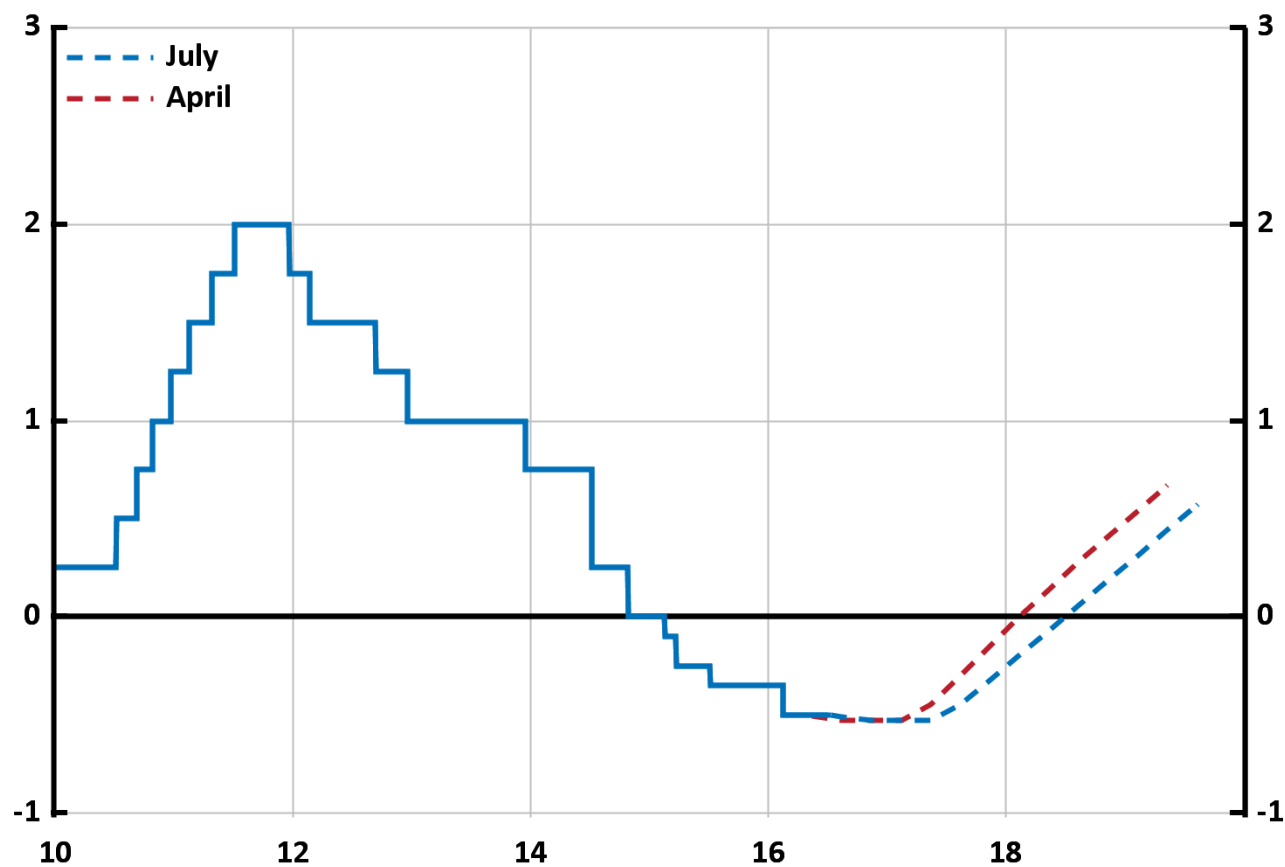
Per cent, mean value



Source: TNS Sifo Prospera

Figure 1.11. Repo rate

Per cent

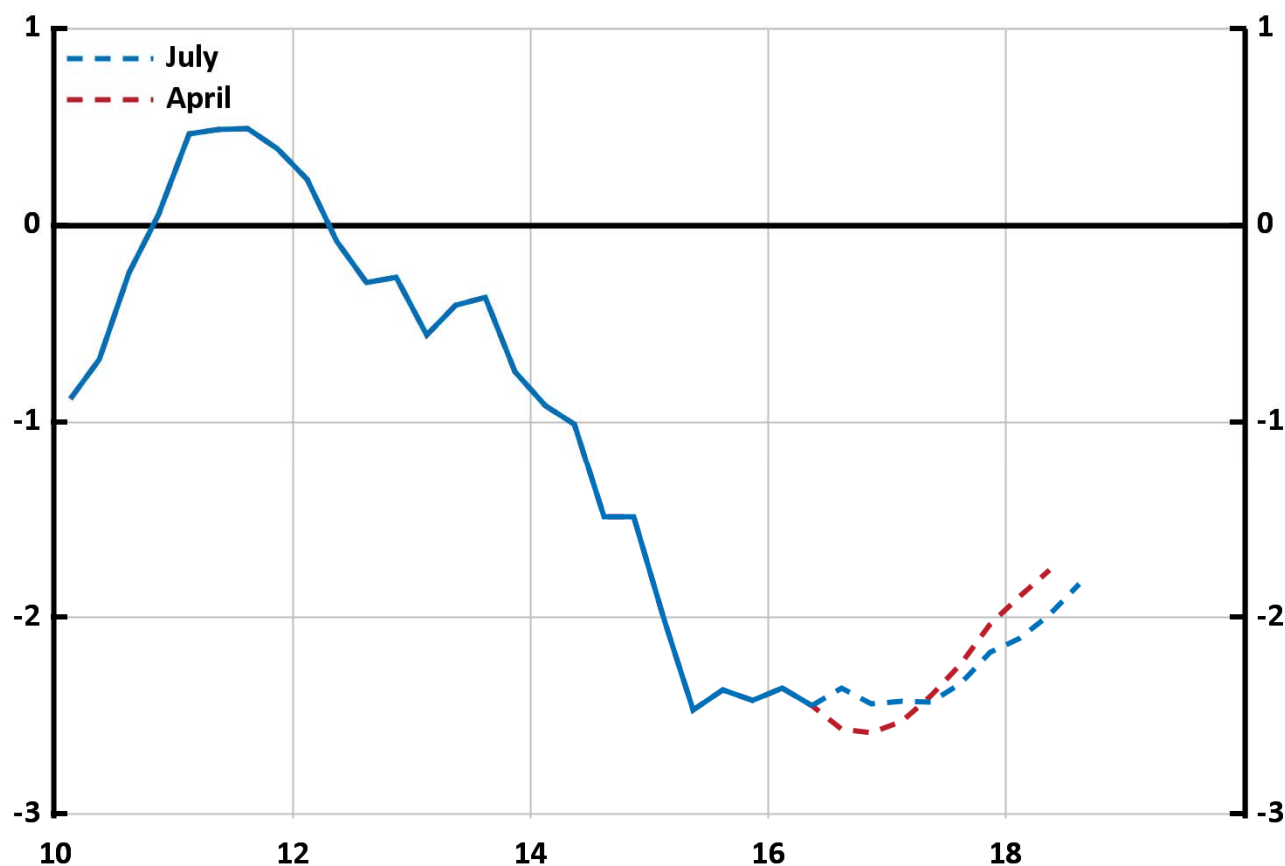


Note. Outcomes are daily data and the forecasts refer to quarterly averages.

Source: The Riksbank

Figure 1.12. Real repo rate

Per cent, quarterly averages

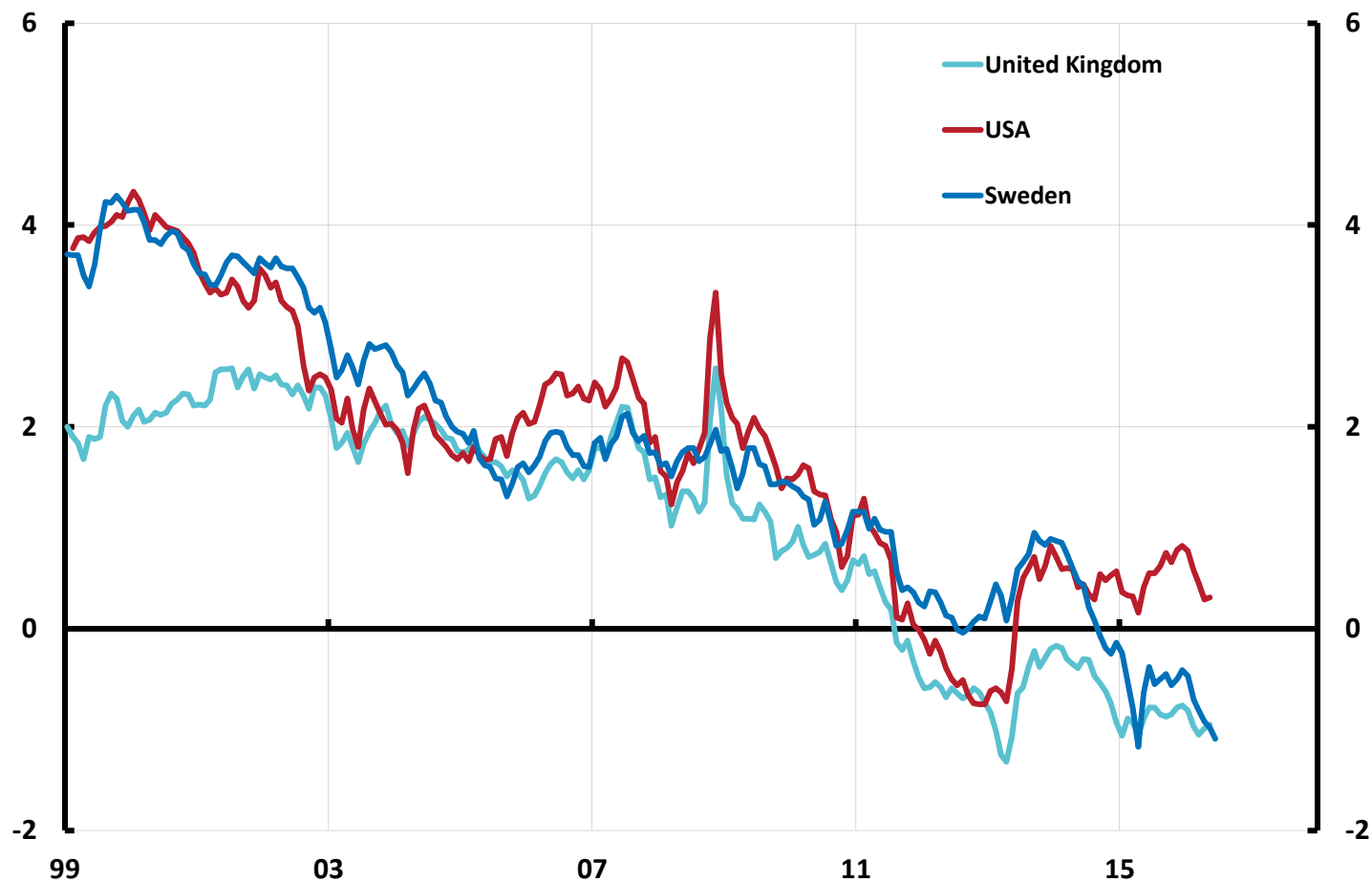


Note. The real repo rate is a mean value of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period.

Sources: Statistics Sweden and the Riksbank

Figure 1.13. Real interest rates

Per cent

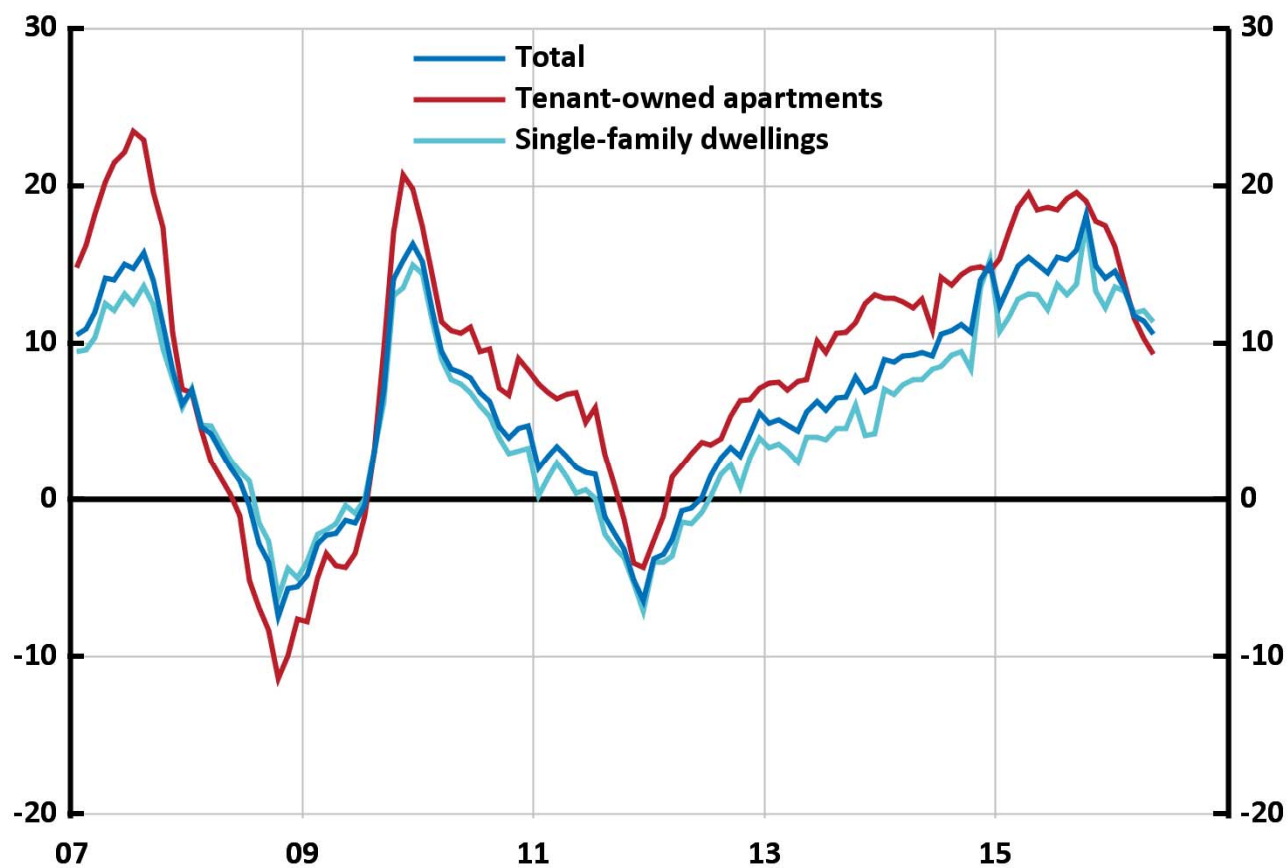


Note. 10-year yield on real government bonds in Sweden, the United Kingdom and the United States. Swedish real interest rate is zero coupon yields interpolated from bond prices using the Nelson-Siegel method.

Sources: Bank of England, Federal Reserve, Thomson Reuters and the Riksbank

Figure 1.14. Housing prices

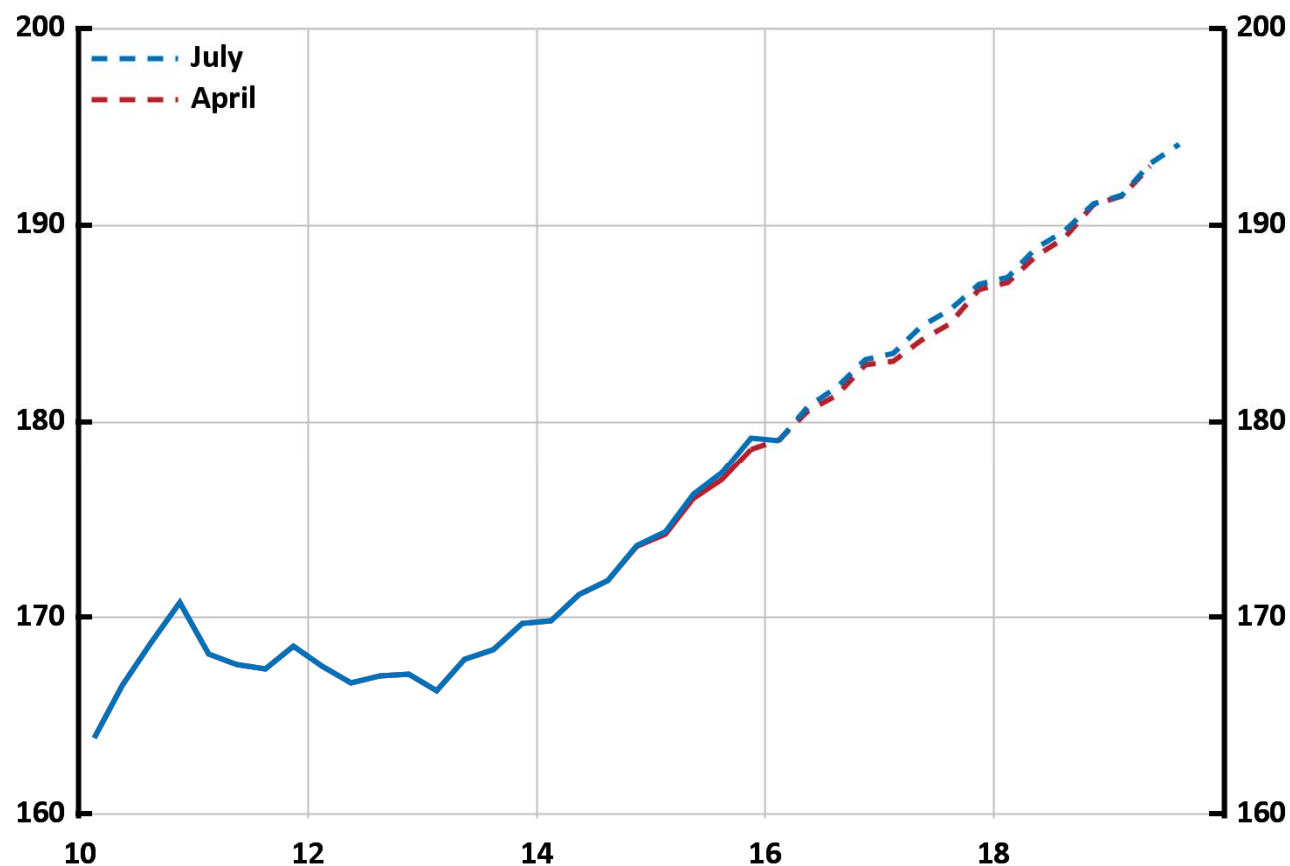
Annual percentage change



Source: Valueguard

Figure 1.15. Household debt ratio

Per cent of disposable income

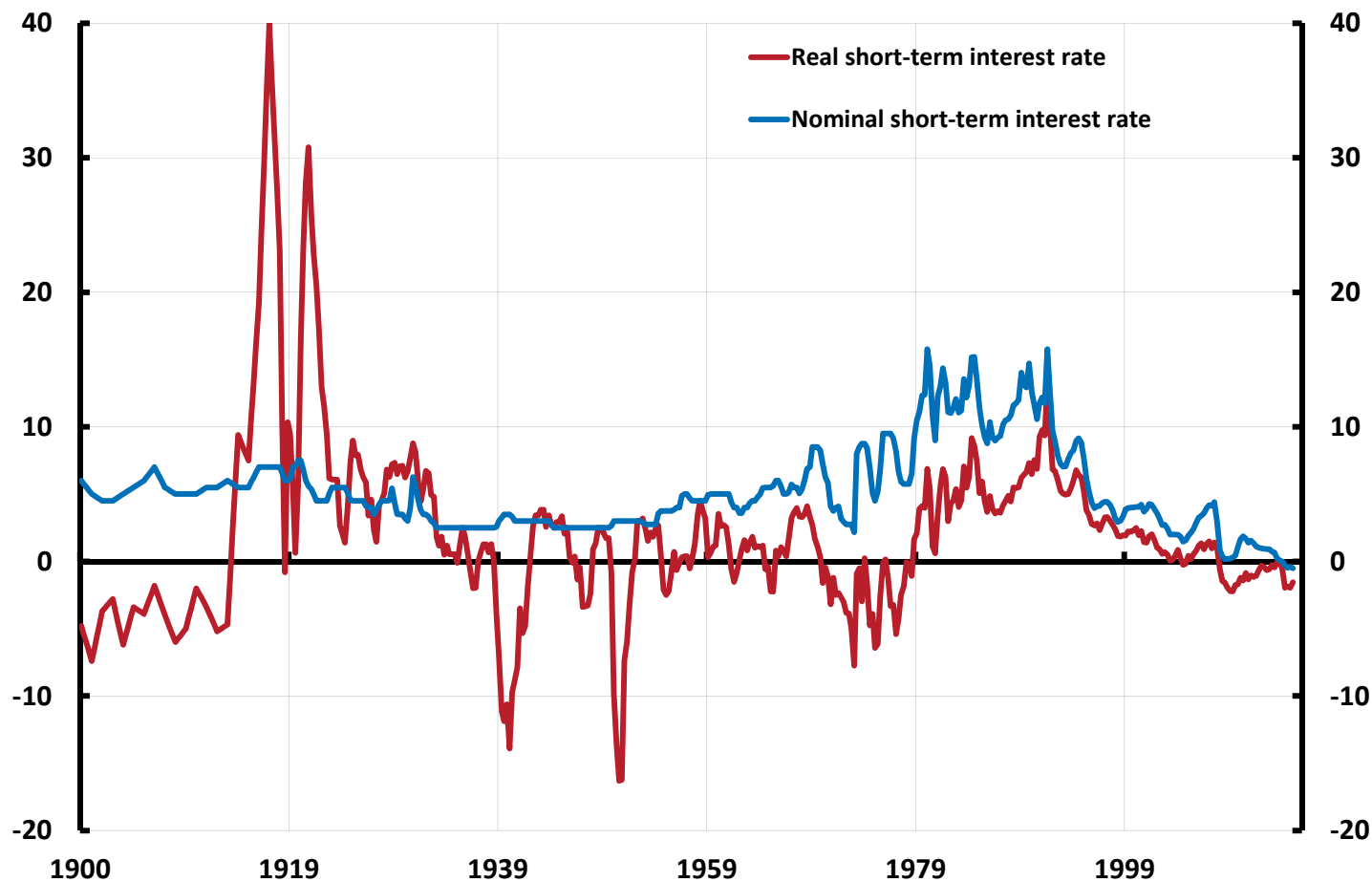


Note. Households' total debts as a share of their disposable incomes summed over the past four quarters.

Sources: Statistics Sweden and the Riksbank

Figure 1.16. Nominal and real short-term interest rates in Sweden

Per cent

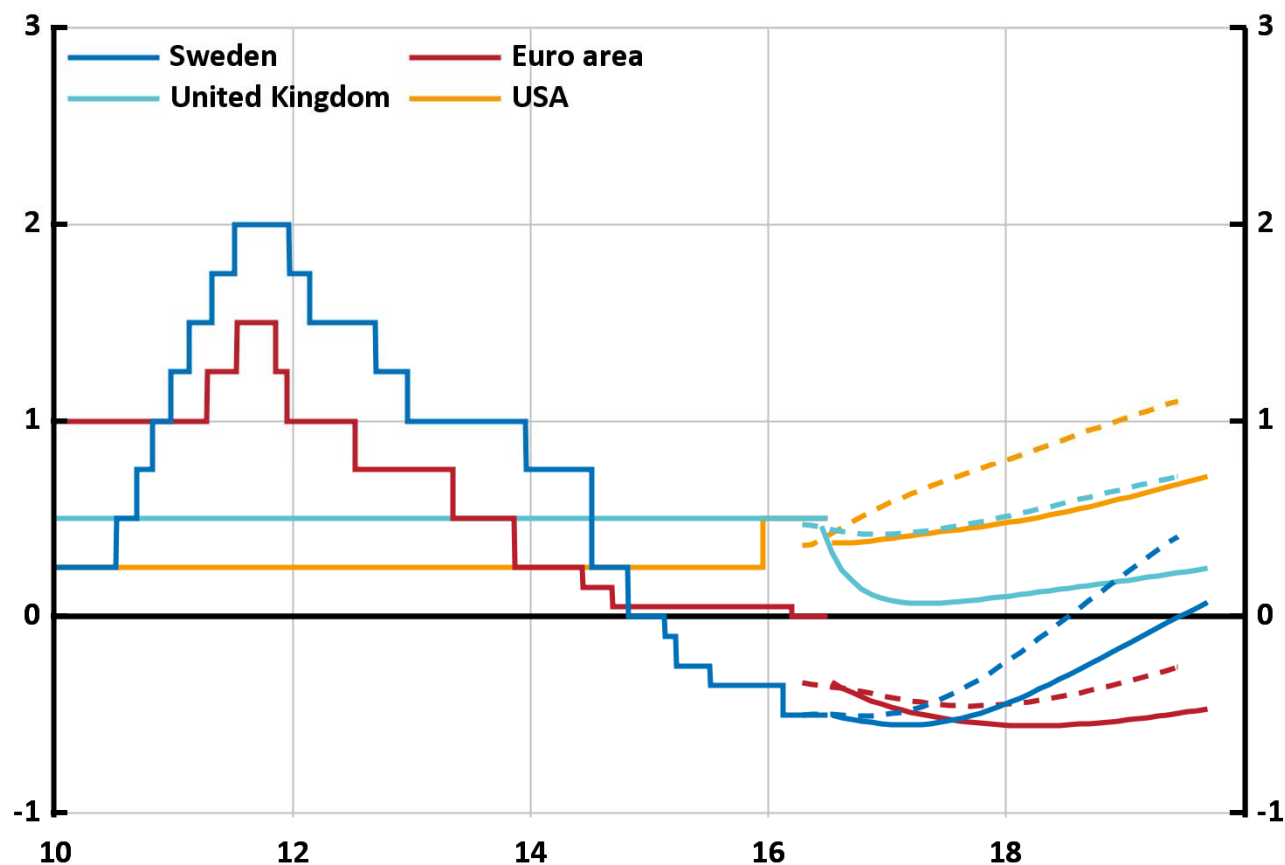


Note. The real interest rate is calculated using series for the nominal interest rate and inflation/inflation expectations. For the nominal interest rate and inflation, annual data from historical monetary statistics is used for the period 1900-1918. For the nominal interest rate and inflation, the Riksbank's discount rate is used for the period 1918-1983 and after that the rate on a three-month treasury bill is used. For inflation, the cost-of-living index or CPI from Statistics Sweden is used for 1918-1979 and after that inflation expectations in the household sector for one year ahead, as calculated by the National Institute of Economic Research.

Sources: The National institute of Economic Research, Statistics Sweden and the Riksbank

Figure 2.1. Policy rates and rate expectations according to forward rates

Per cent

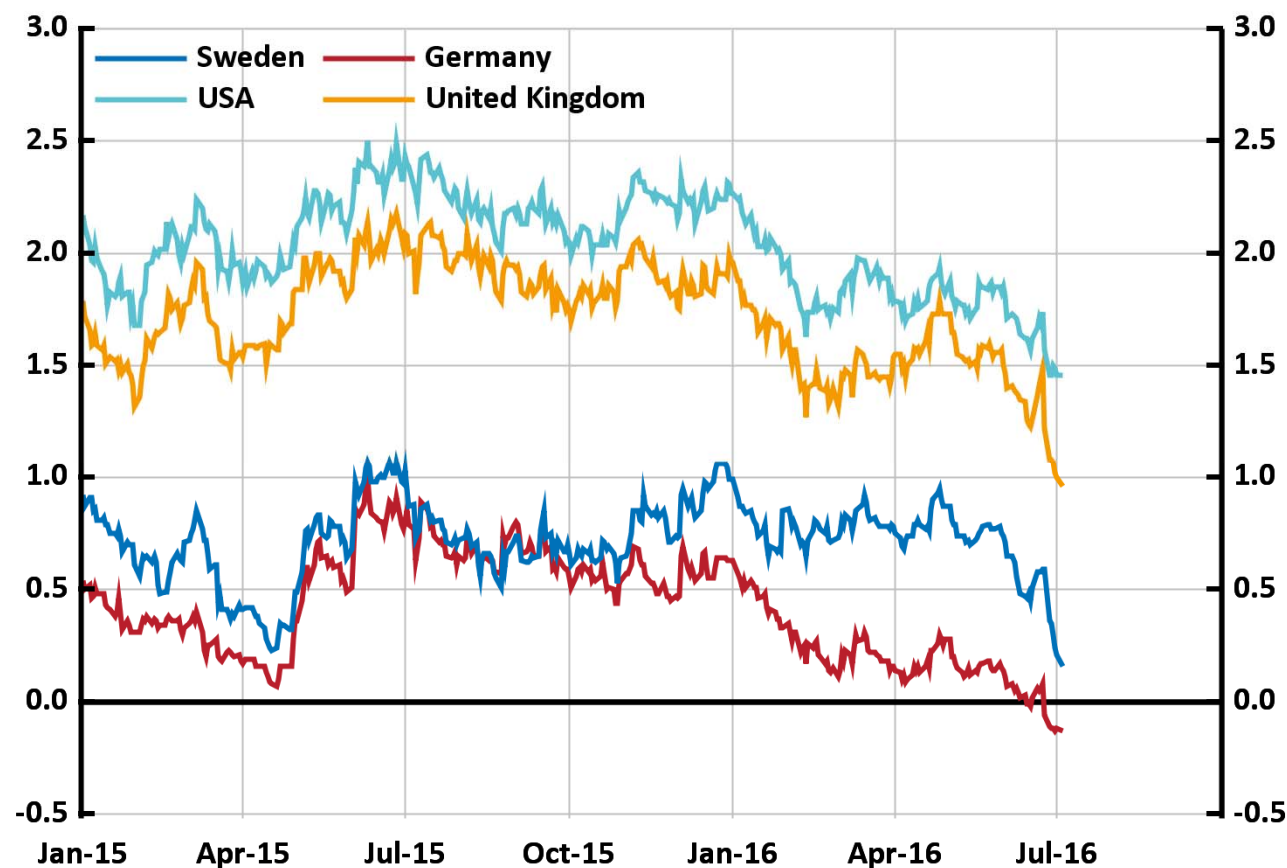


Note. Forward rates describe the expected overnight rate, which does not always correspond to the policy rate. There is no published overnight rate in Sweden, but it normally follows the repo rate closely. Unbroken lines are estimated on 4 July 2016 apart from the United States which is estimated on 1 July 2016. Broken lines are estimated on 20 April 2016.

Sources: Macrobond
and the Riksbank

Figure 2.2. Government bond rates with 10 years left to maturity

Per cent

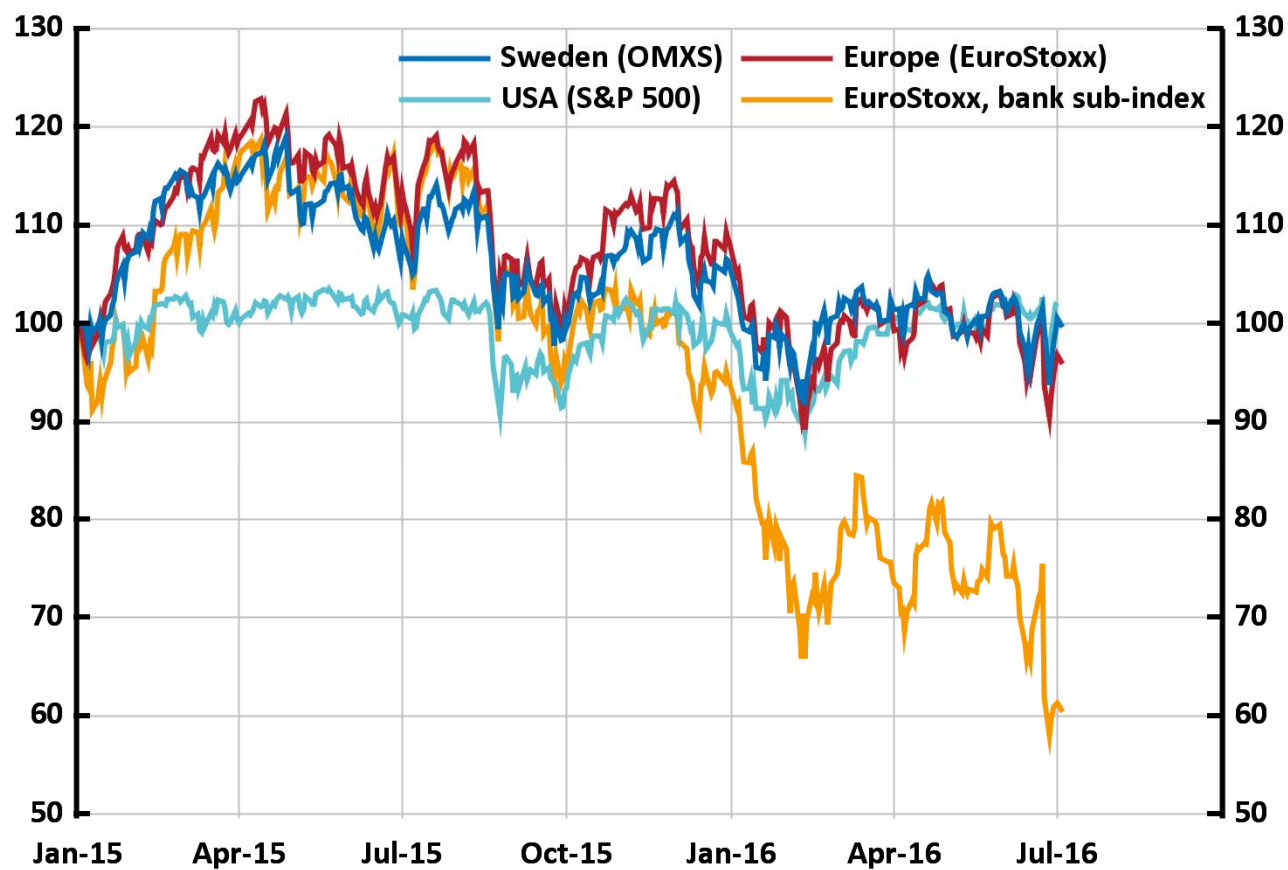


Note: Zero-coupon rates interpolated from bond prices using the Nelson-Siegel method.

Sources: Macrobond and the Riksbank

Figure 2.3. Stock market movements

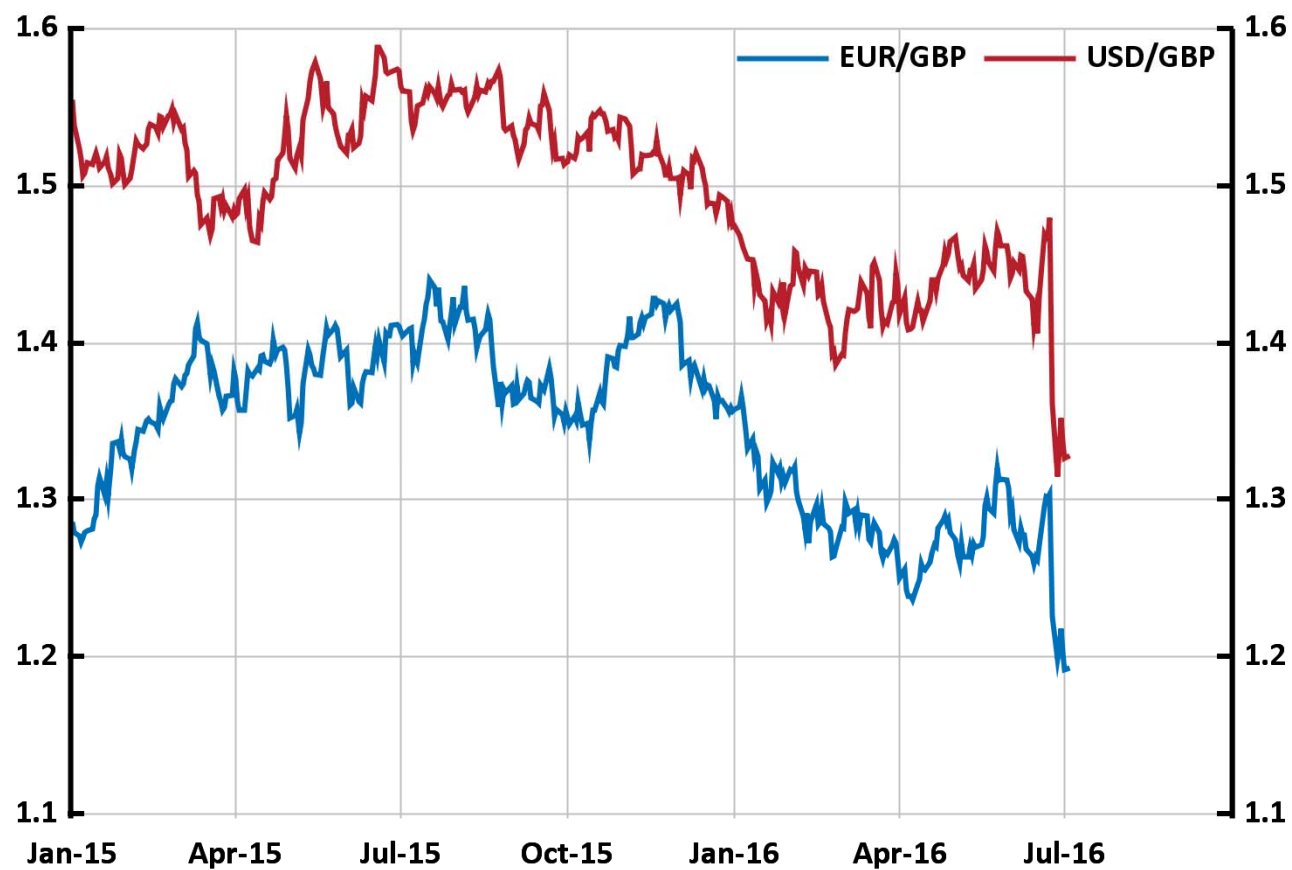
Index, 2 January 2015 = 100



Sources: Macrobond and Thomson Reuters

Figure 2.4. Sterling exchange rate

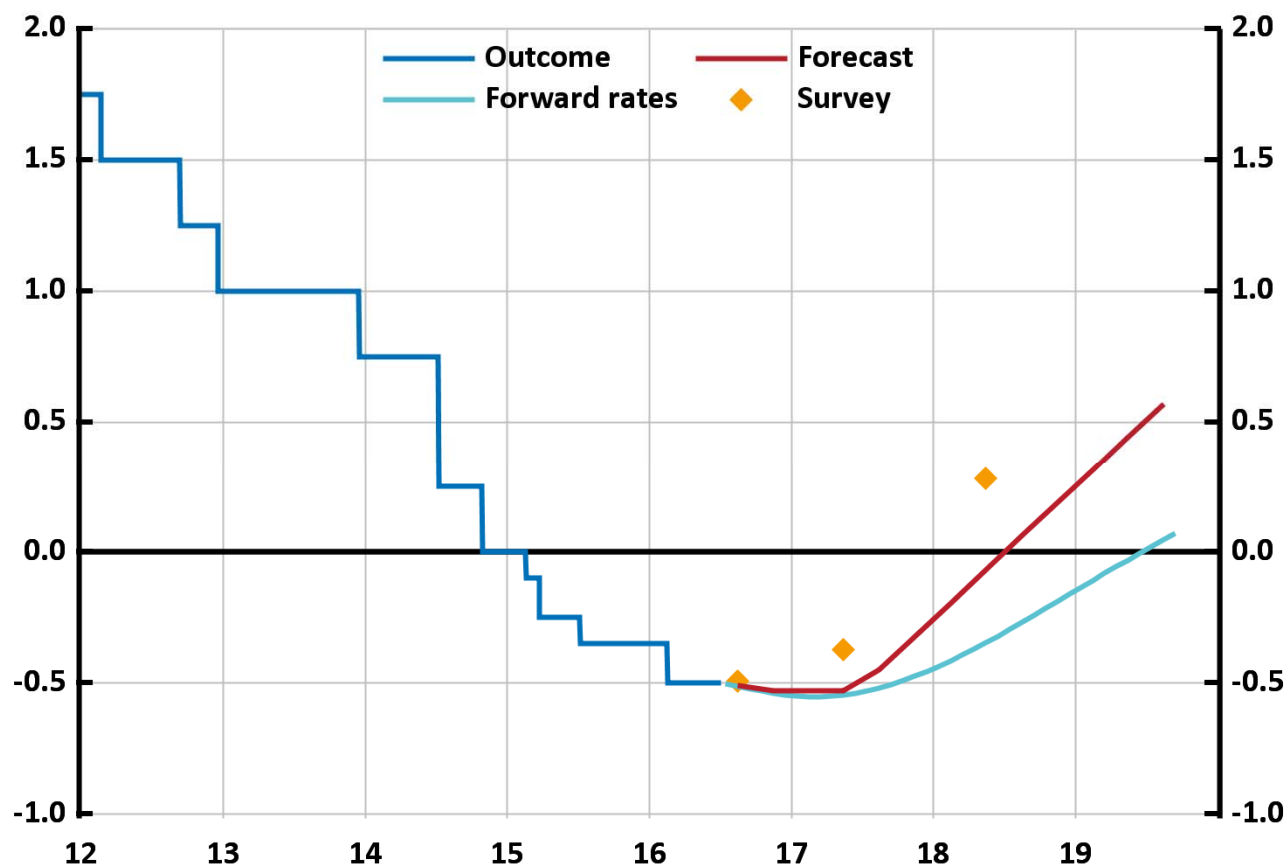
EUR/GBP and USD/GBP



Source: Macrobond

Figure 2.5. Repo rate and market expectations

Per cent, average

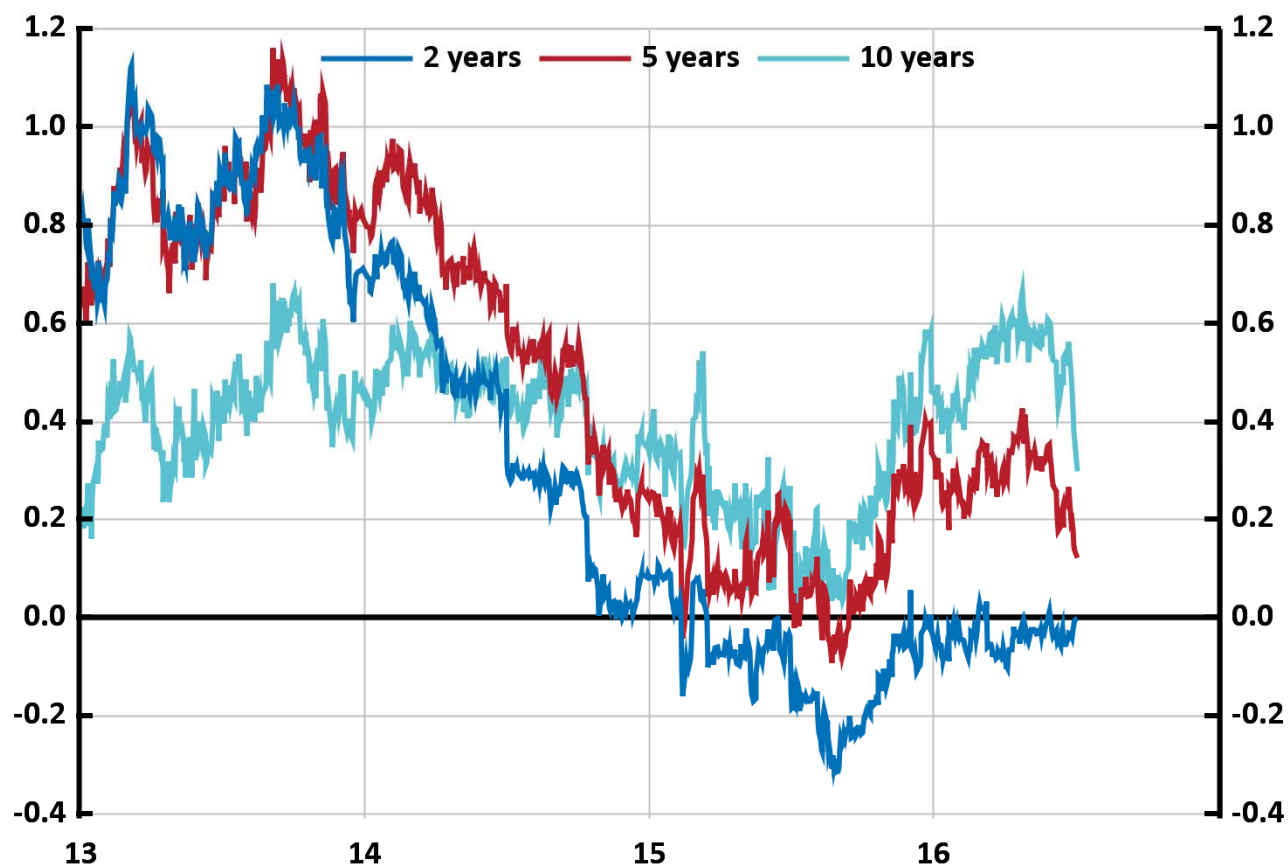


Note: The forward rates are estimated as of 1 July 2016 and measure the expected repo rate. The survey responses show the average for money market participants on 1 June 2016.

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

Figure 2.6. Yield differential in relation to Germany

Percentage points

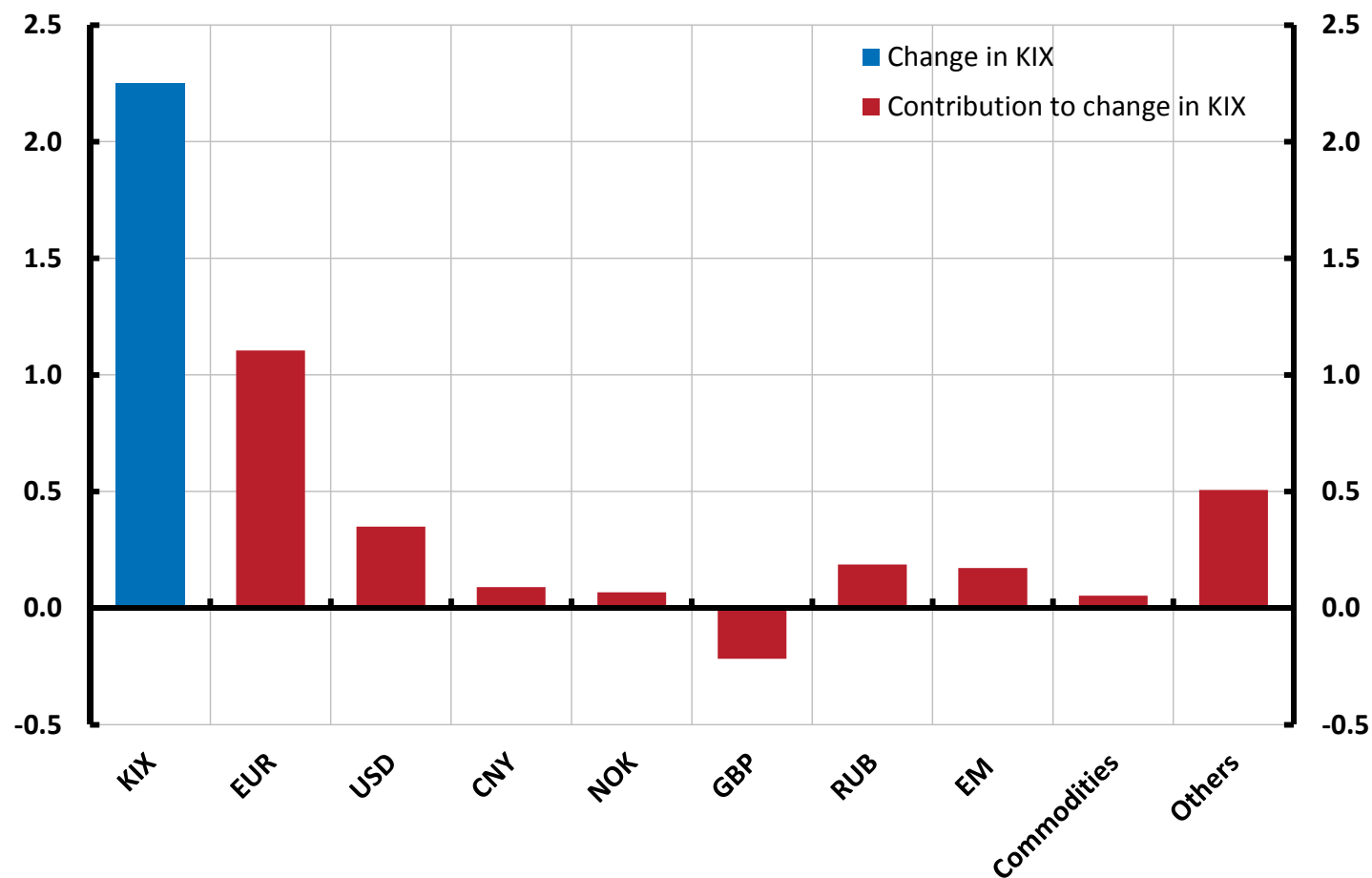


Note: Zero-coupon rates interpolated from bond prices using the Nelson-Siegel method.

Sources: Macrobond, Thomson Reuters and the Riksbank

Figure 2.7. Changes and contributions to KIX exchange rates

Per cent and percentage points, respectively

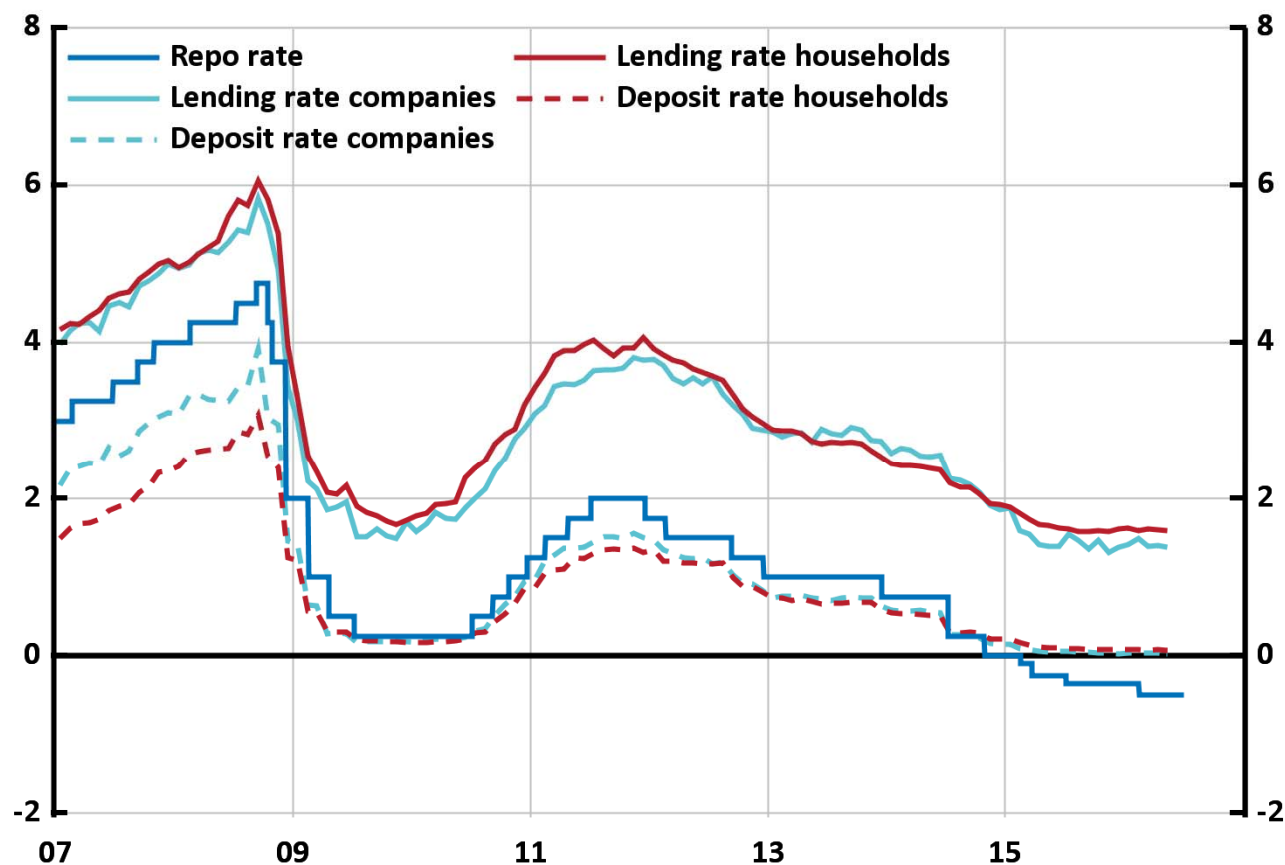


Note. The figure shows change in KIX and contributions from different currencies between 21 April 2016 and 4 July 2016. EM refers to Brazil, Hungary, India, Mexico, Poland and Turkey. Commodities refer to Australia, Canada and New Zealand. Others refers to Czech Republic, Denmark, Iceland, Japan, South Korea and Switzerland.

Sources: Thomson Reuters
and the Riksbank

Figure 2.8. Repo rate together with the deposit and lending rate to households and companies, new contracts

Per cent

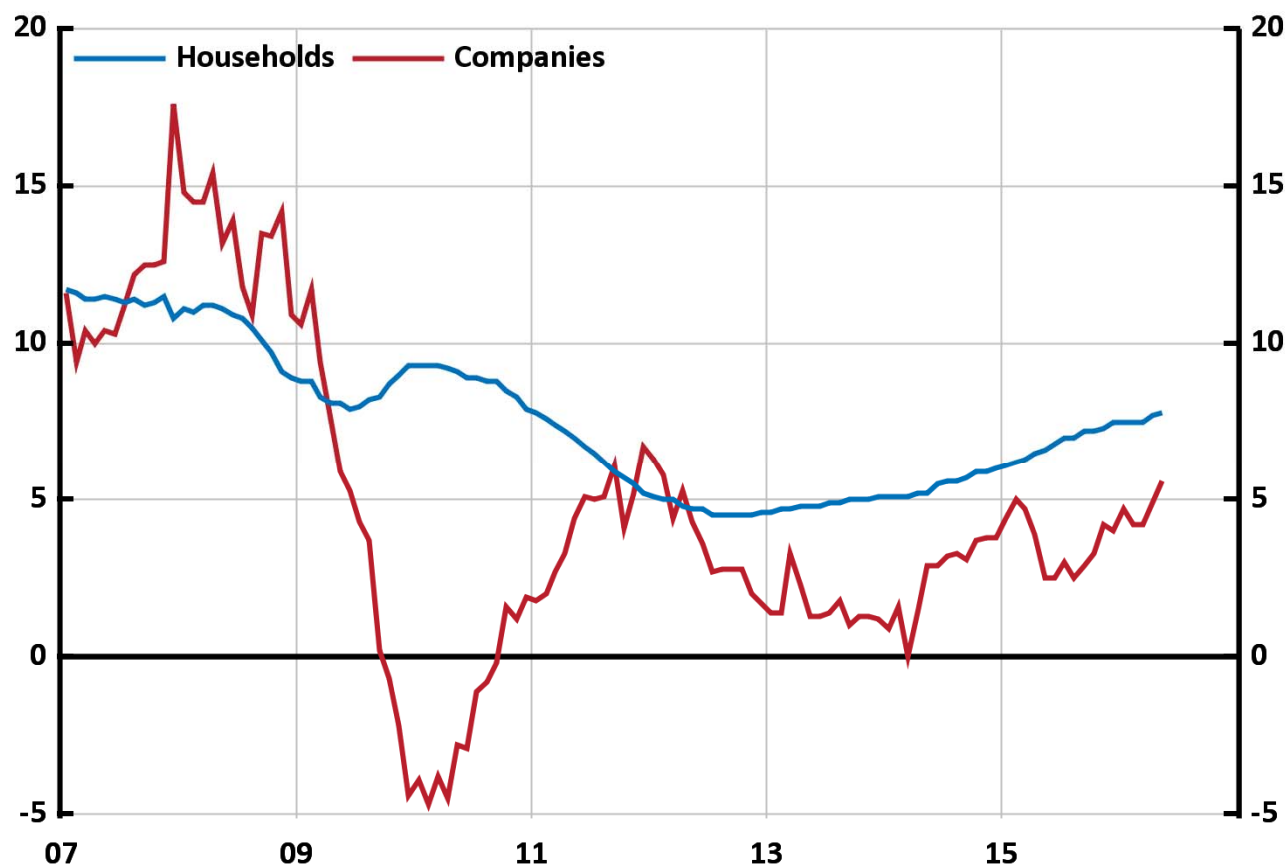


Note. MFIs' average deposit and lending rates for households and companies.

Sources: Statistics Sweden and the Riksbank

Figure 2.9. Bank lending to households and companies

Annual percentage change

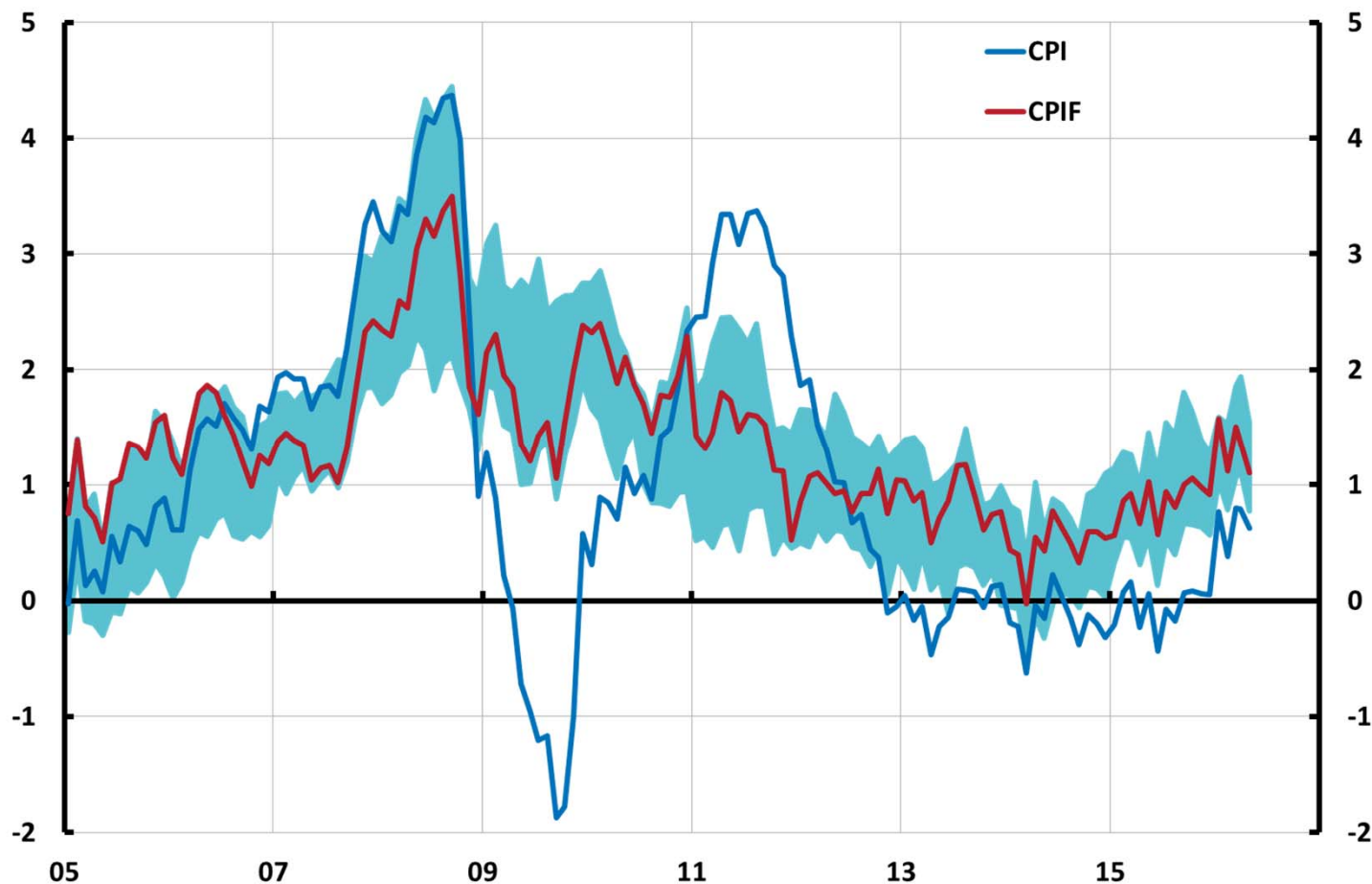


Note. MFIs' lending to households and non-financial companies according to financial market statistics adjusted for reclassifications and traded loans since 2006.

Source: Statistics Sweden

Figure 3.1. The CPI, CPIF and different measures of underlying inflation

Annual percentage change

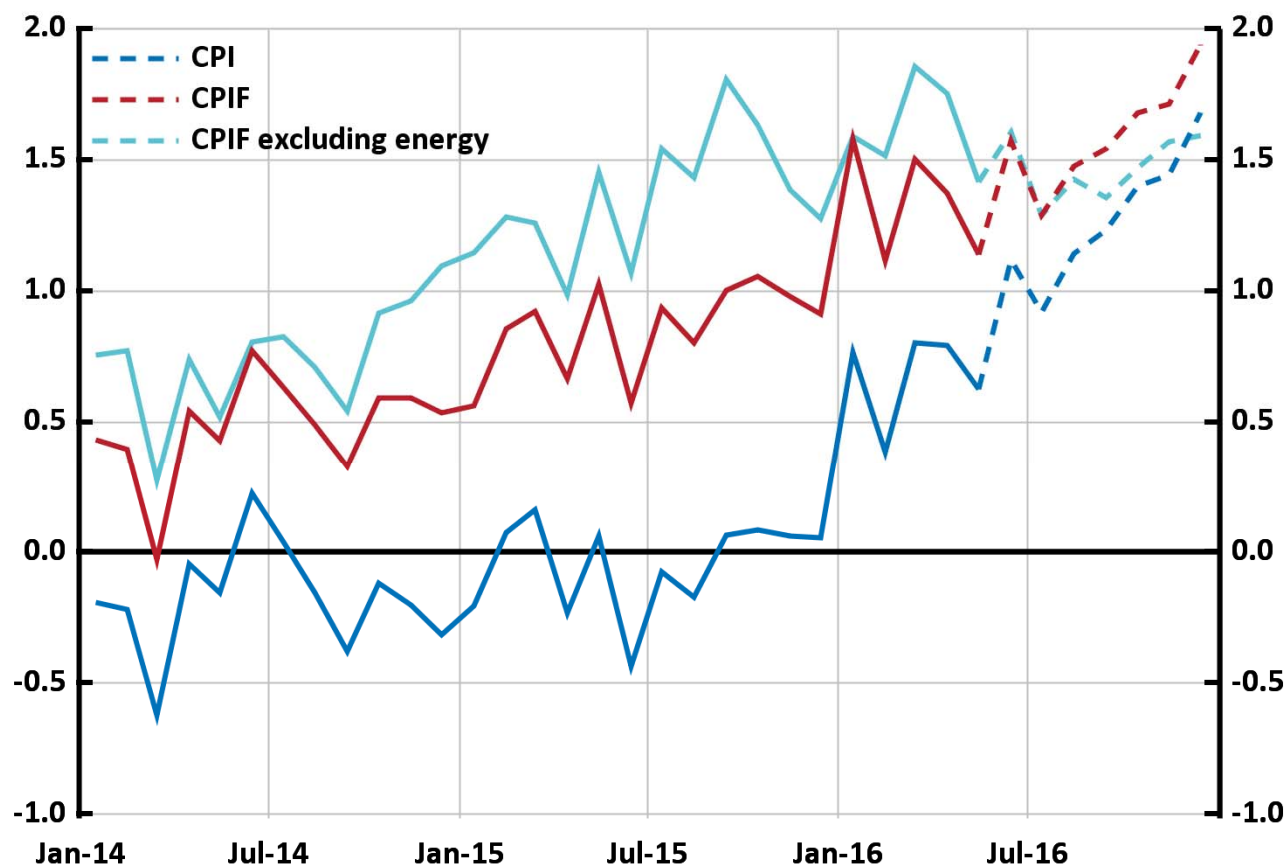


Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, the CPIF with constant tax, UND24, Trim85, HICP excluding energy and unprocessed food, persistence-weighted inflation, factors from principal component analysis and weighted mean inflation.

Sources: Statistics Sweden and the Riksbank

Figure 3.2. CPI, CPIF and CPIF excluding energy

Annual percentage change

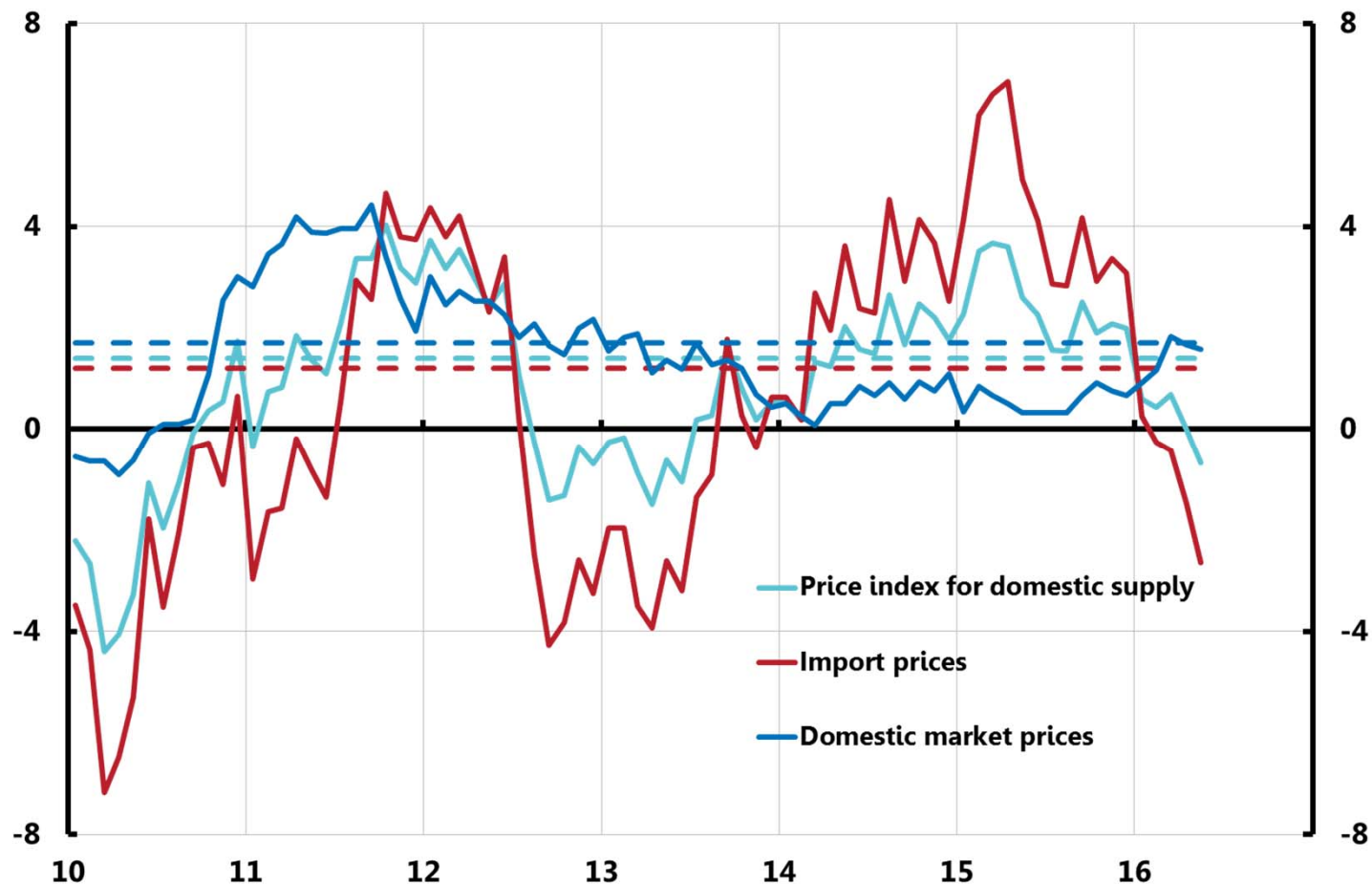


Note. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 3.3. Producer prices for consumer goods

Annual percentage change

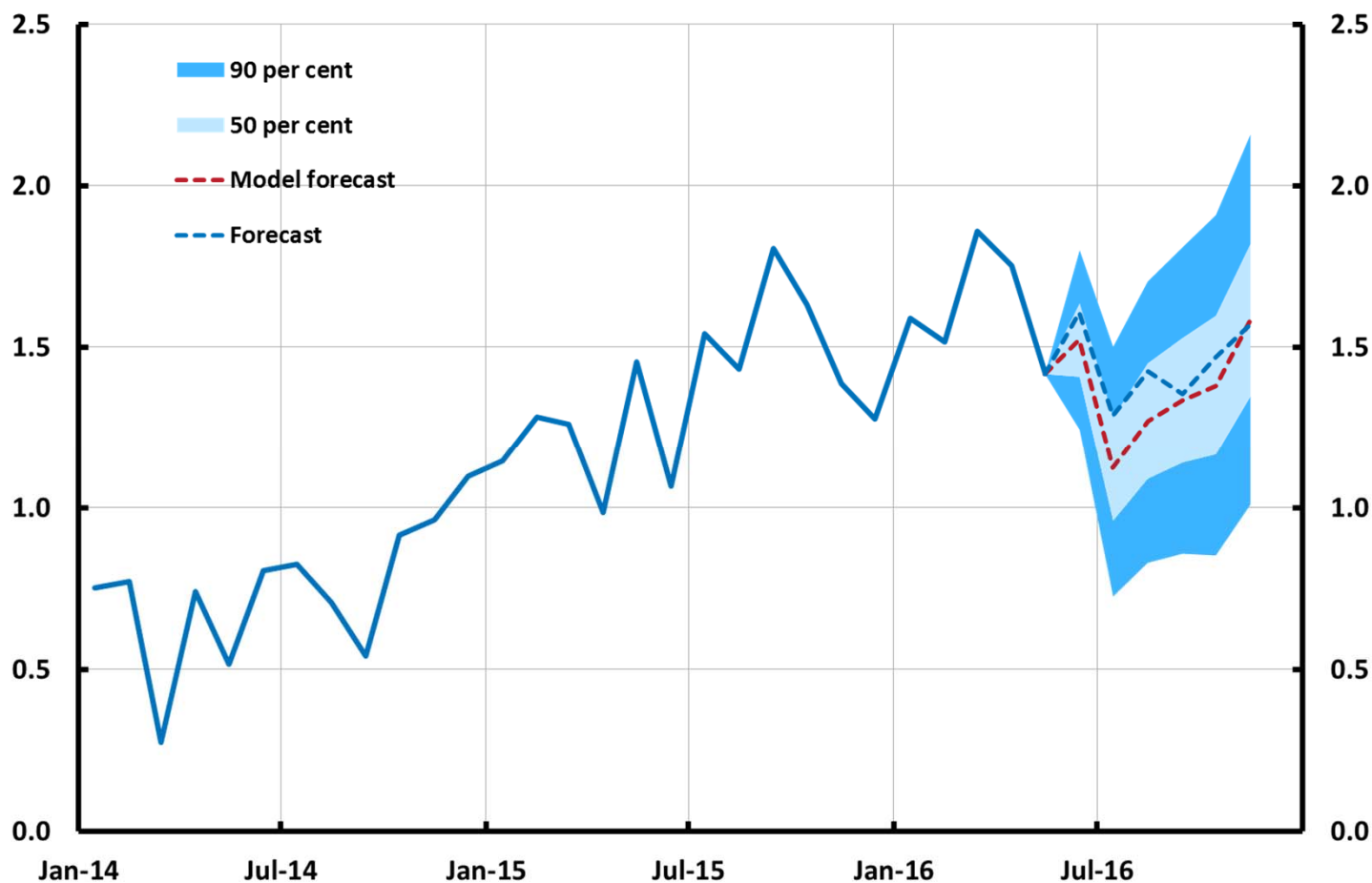


Note. Broken lines refer to average rate of increase since the year 2000.

Sources: Statistics Sweden and the Riksbank

Figure 3.4. Model forecast CPIF excluding energy with uncertainty bands

Annual percentage change

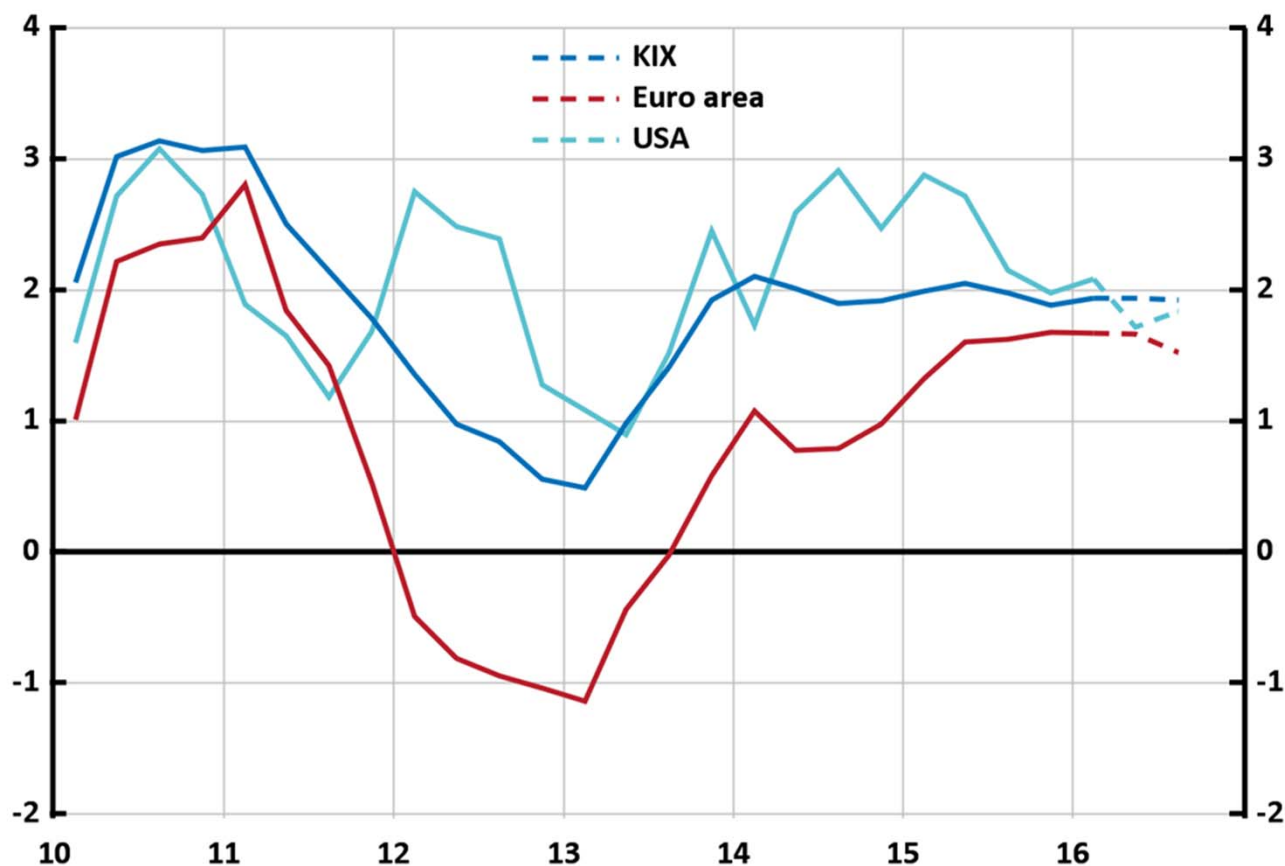


Note. The uncertainty bands are based on the models' historical forecasting errors. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 3.5. GDP abroad

Annual percentage change, seasonally-adjusted data

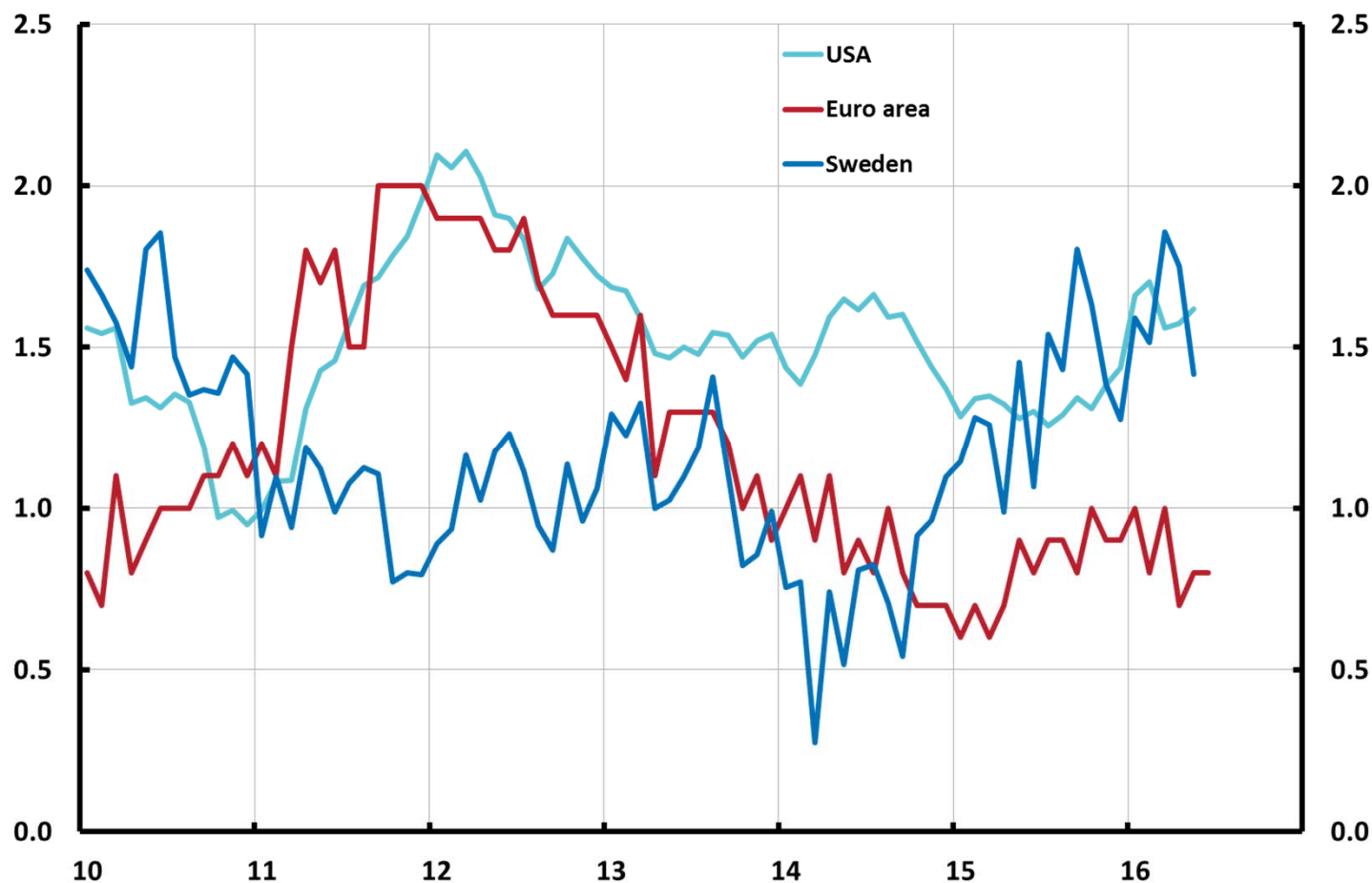


Note. KIX refers to an aggregate of countries that are important for Sweden's international transactions.

Sources: Bureau of Economic Analysis, Eurostat, national sources and the Riksbank

Figure 3.6. Core inflation in various countries and regions

Annual percentage change

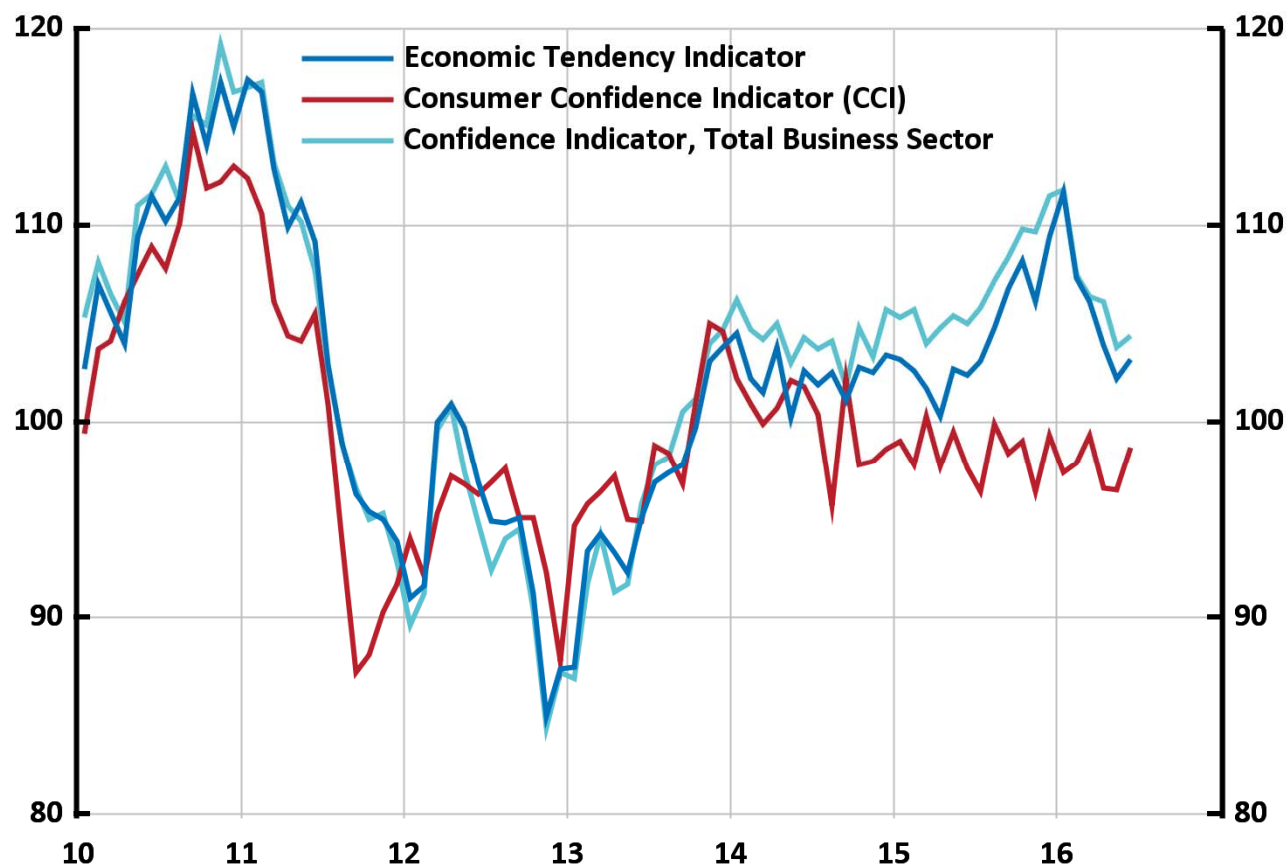


Note. HICP excluding energy and unprocessed food is shown for the euro area. PCE excluding energy and food is shown for the United States and CPIF excluding energy is shown for Sweden.

Sources: Bureau of Economic Analysis, Eurostat and Statistics Sweden

Figure 3.7. Confidence indicators

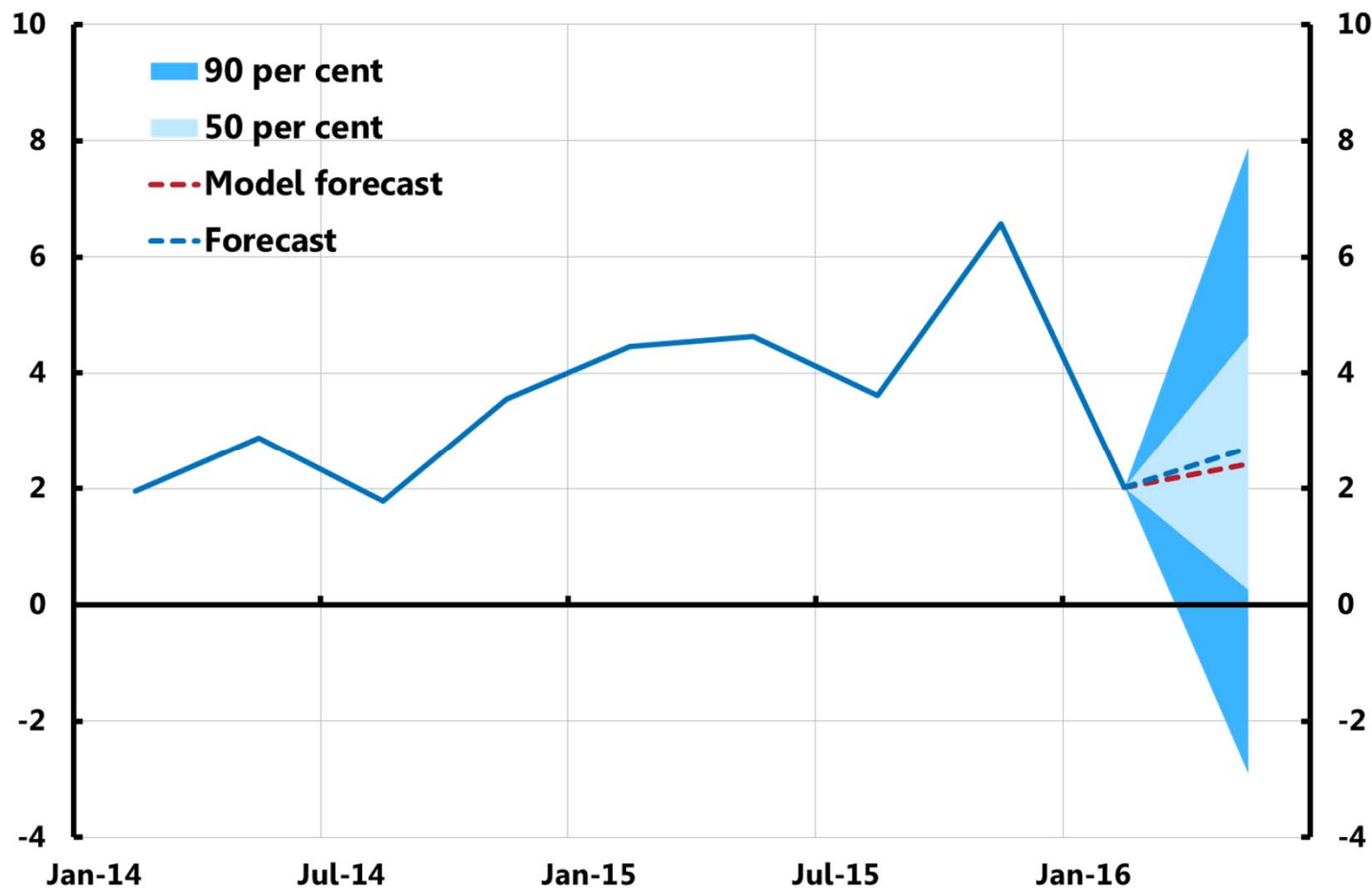
Index, average = 100, standard deviation = 10, seasonally-adjusted data



Source: National Institute of Economic Research

Figure 3.8. Model forecast GDP with uncertainty bands

Quarterly changes in per cent, calculated as an annual percentage change, seasonally-adjusted data

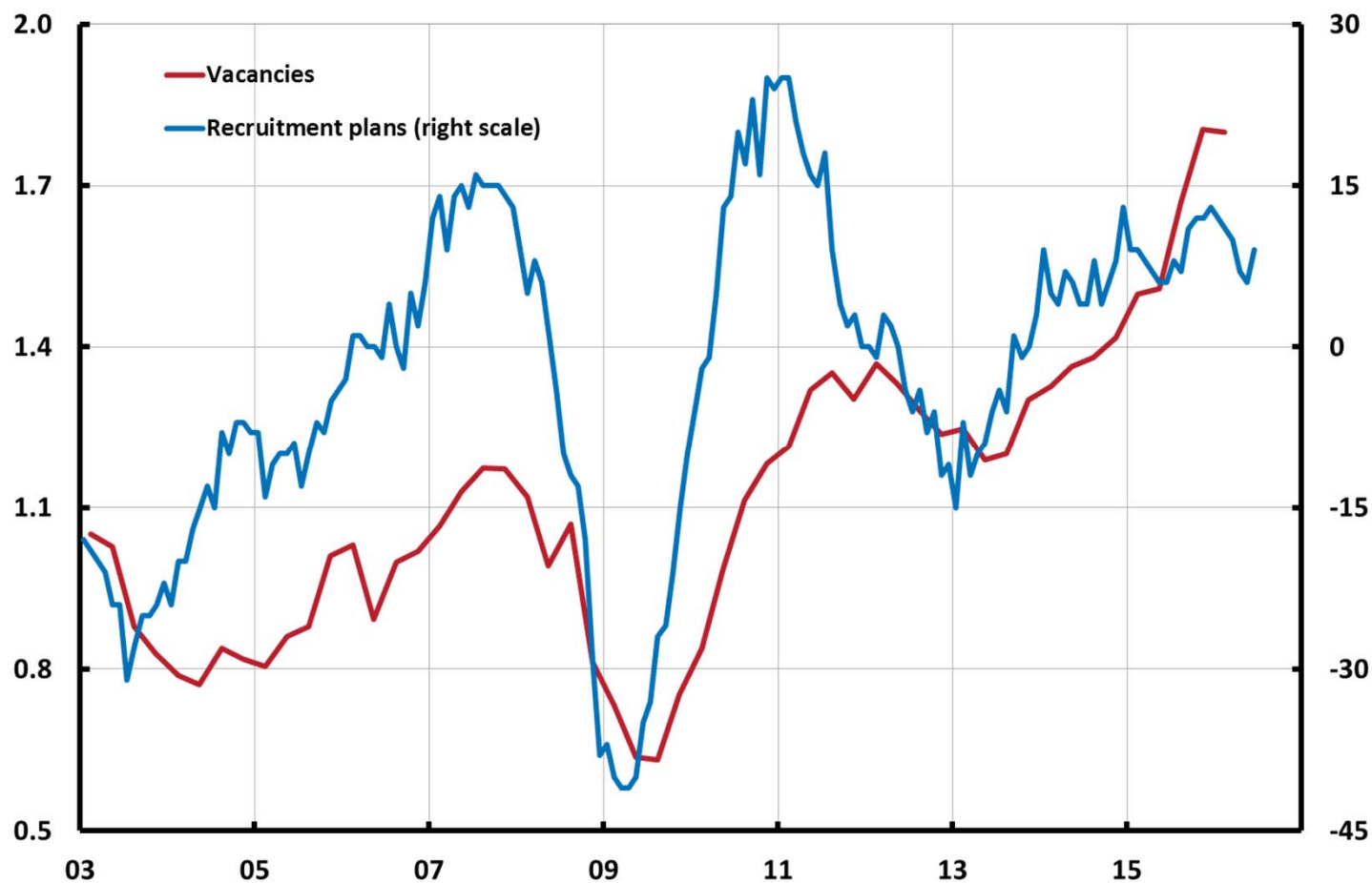


Note. The model forecast is an average of forecasts from different statistical models that take into account monthly statistics for demand and production and survey data in the Business Tendency Survey and Purchasing managers index. The uncertainty bands are based on the models' historical forecasting errors.

Sources: Statistics Sweden and the Riksbank

Figure 3.9. Vacancies and recruitment plans

Percent of labour force and net figures, respectively, seasonally-adjusted data

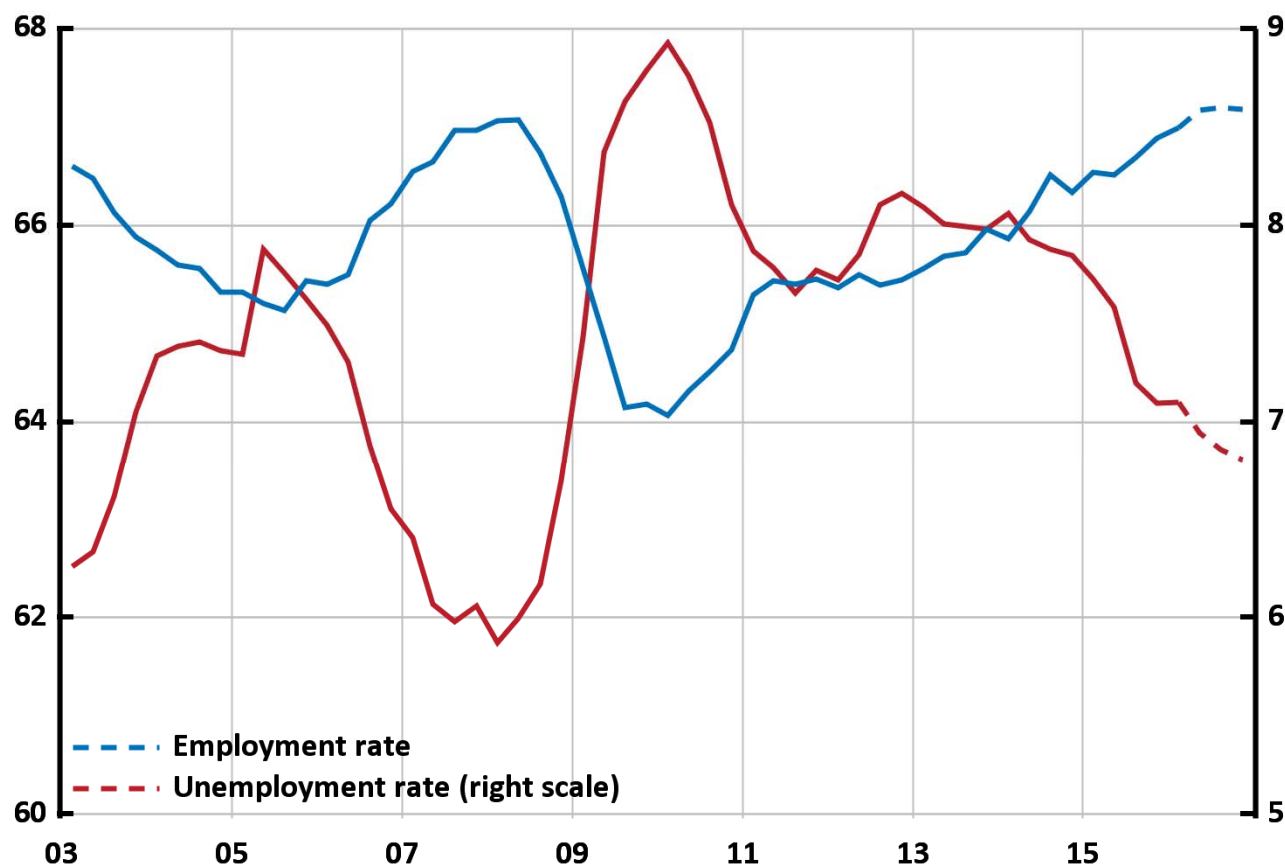


Note. Recruitment plans refer to expectations of the number of employed in the business sector.

Sources: The National Institute of Economic Research and Statistics Sweden

Figure 3.10. Employment and unemployment rate

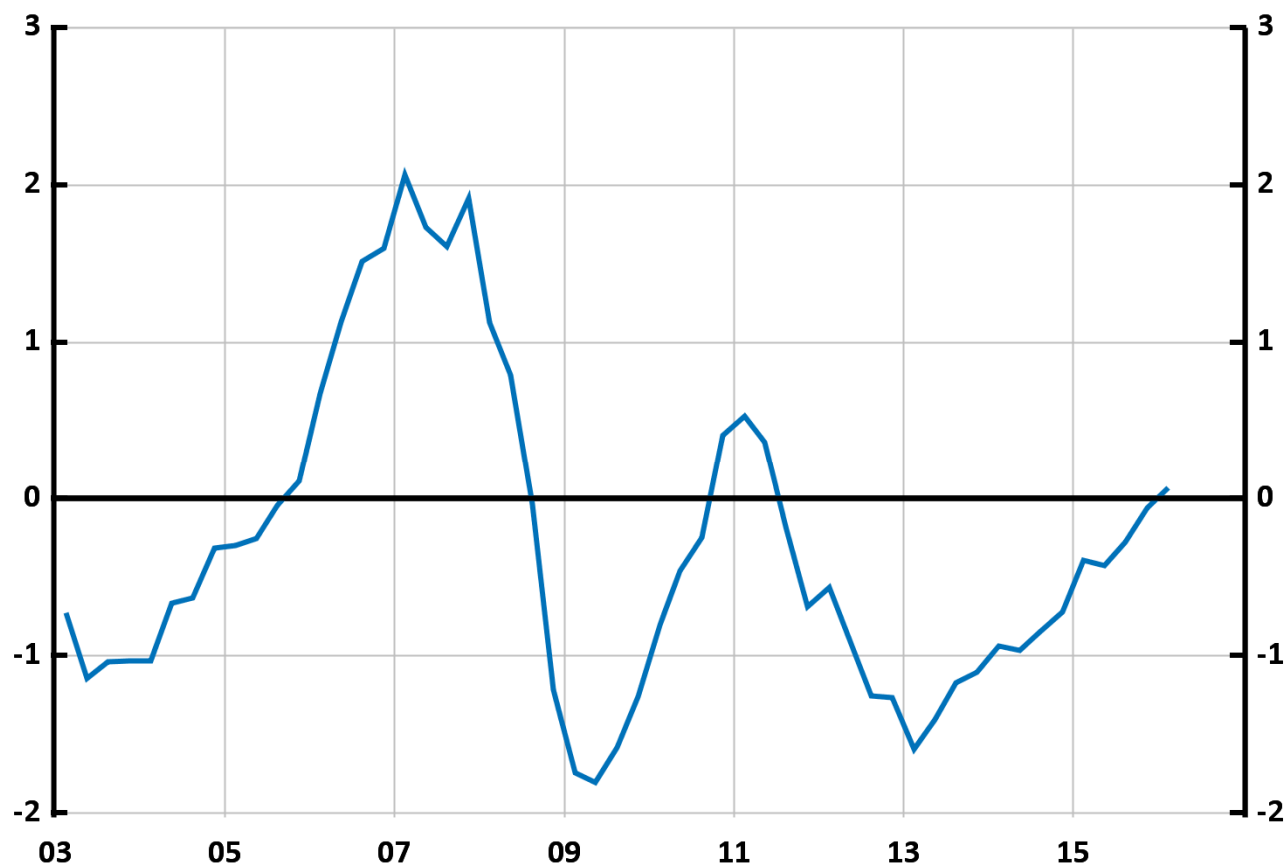
Per cent of population and labour force, respectively, 15–74 years



Sources: Statistics Sweden and the Riksbank

Figure 3.11. RU indicator

Standard deviation

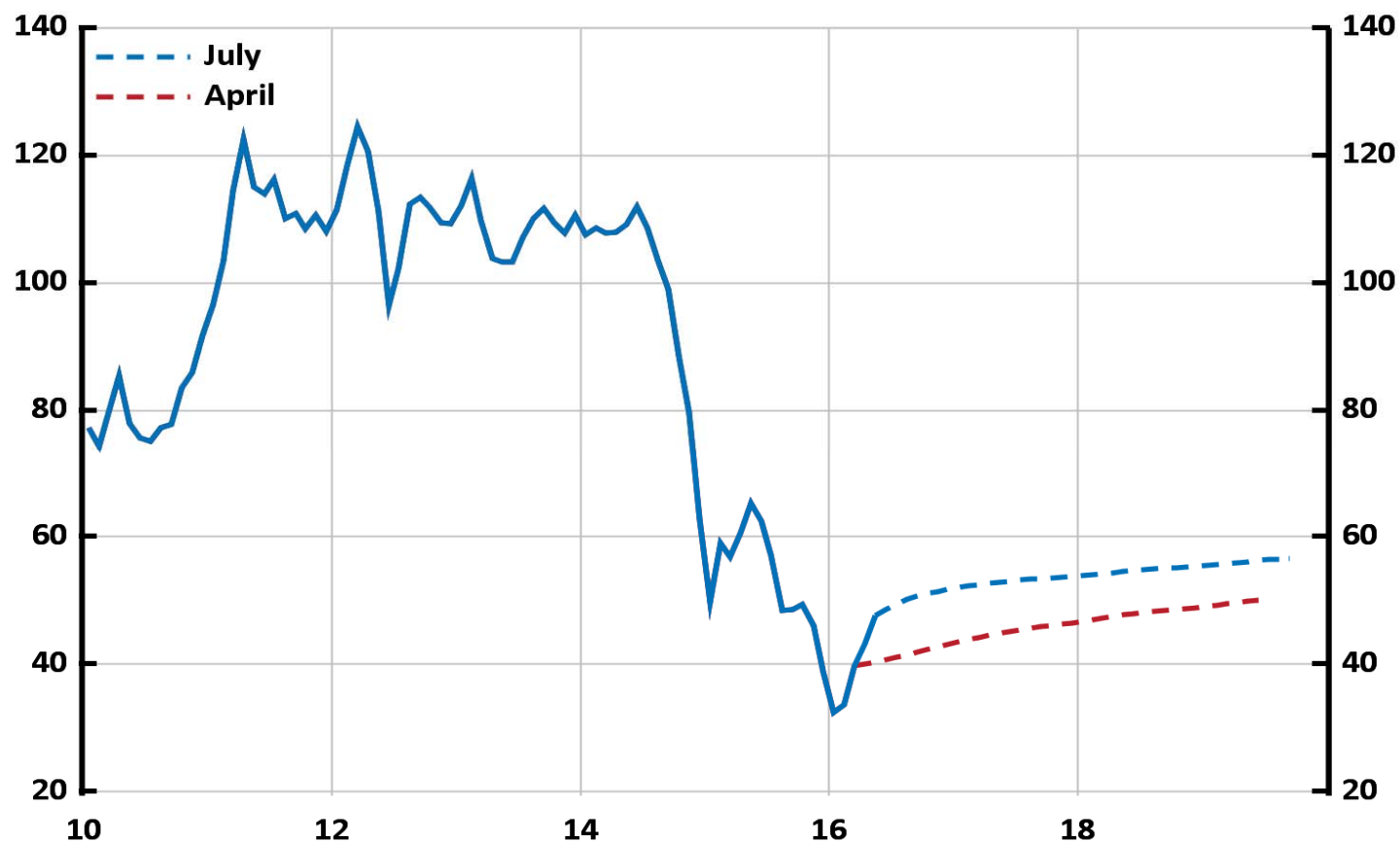


Note. The RU indicator is a measure of resource utilisation. It is normalised so that the mean value is 0 and the standard deviation is 1.

Source: The Riksbank

Figure 4.1. Crude oil price

USD per barrel

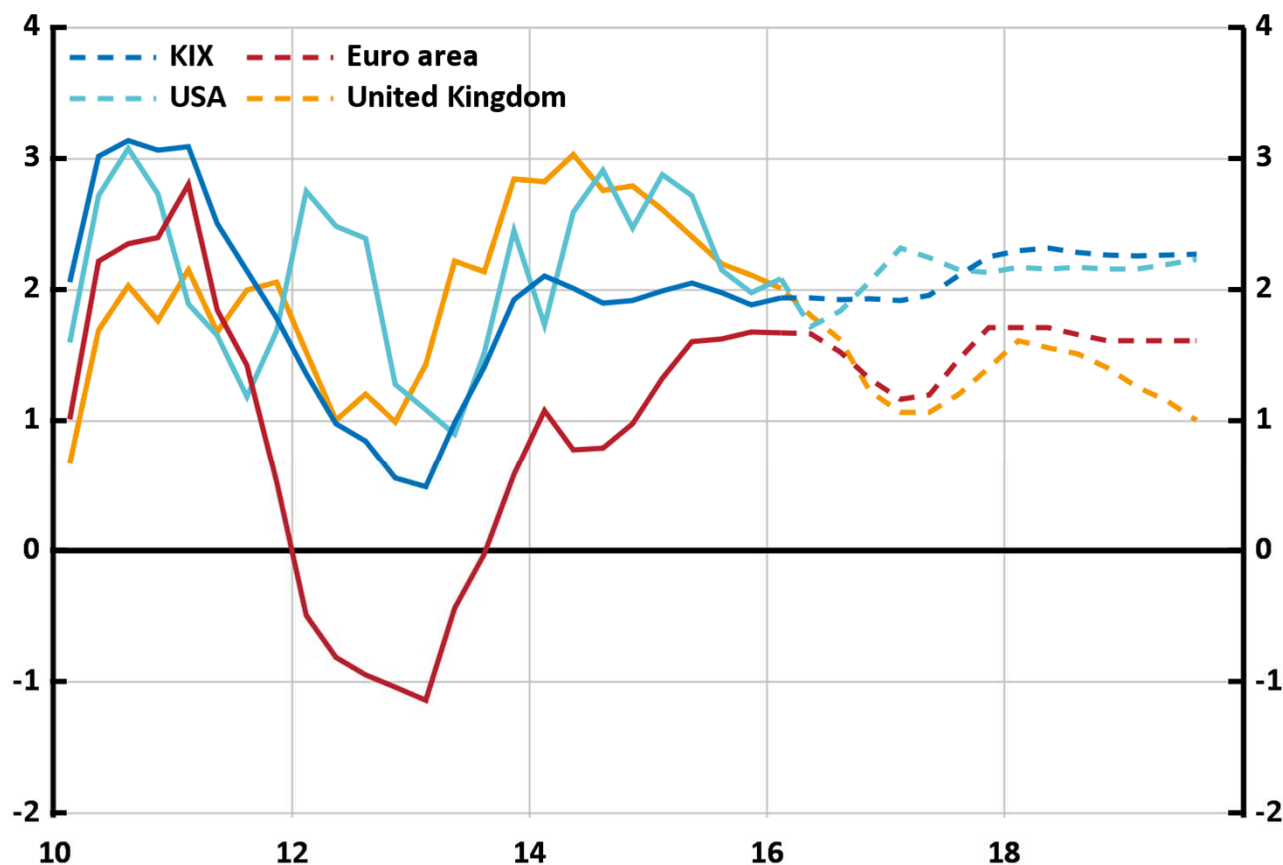


Note. Brent oil, futures are calculated as a 15-day average. Outcomes represent monthly averages of spot prices.

Sources: Macrobond and the Riksbank

Figure 4.2. Growth in various countries and regions

Annual percentage change



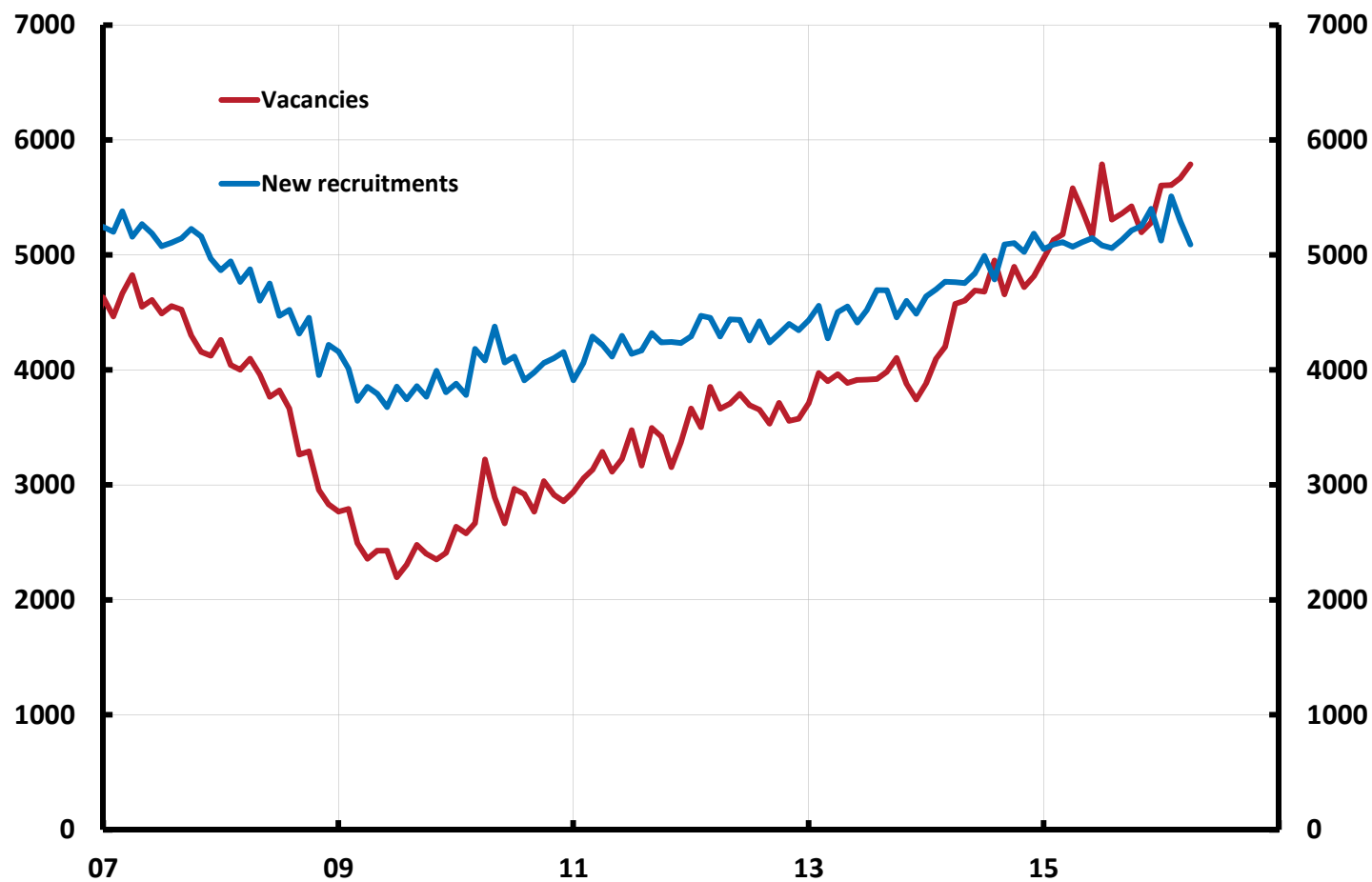
Note. Kix is an aggregate of the countries that are important to Sweden's international transactions.

Sources: Bureau of Economic Analysis, Eurostat, national sources, Office for National Statistics and the Riksbank

Figure 4.3. New recruitments and vacancies



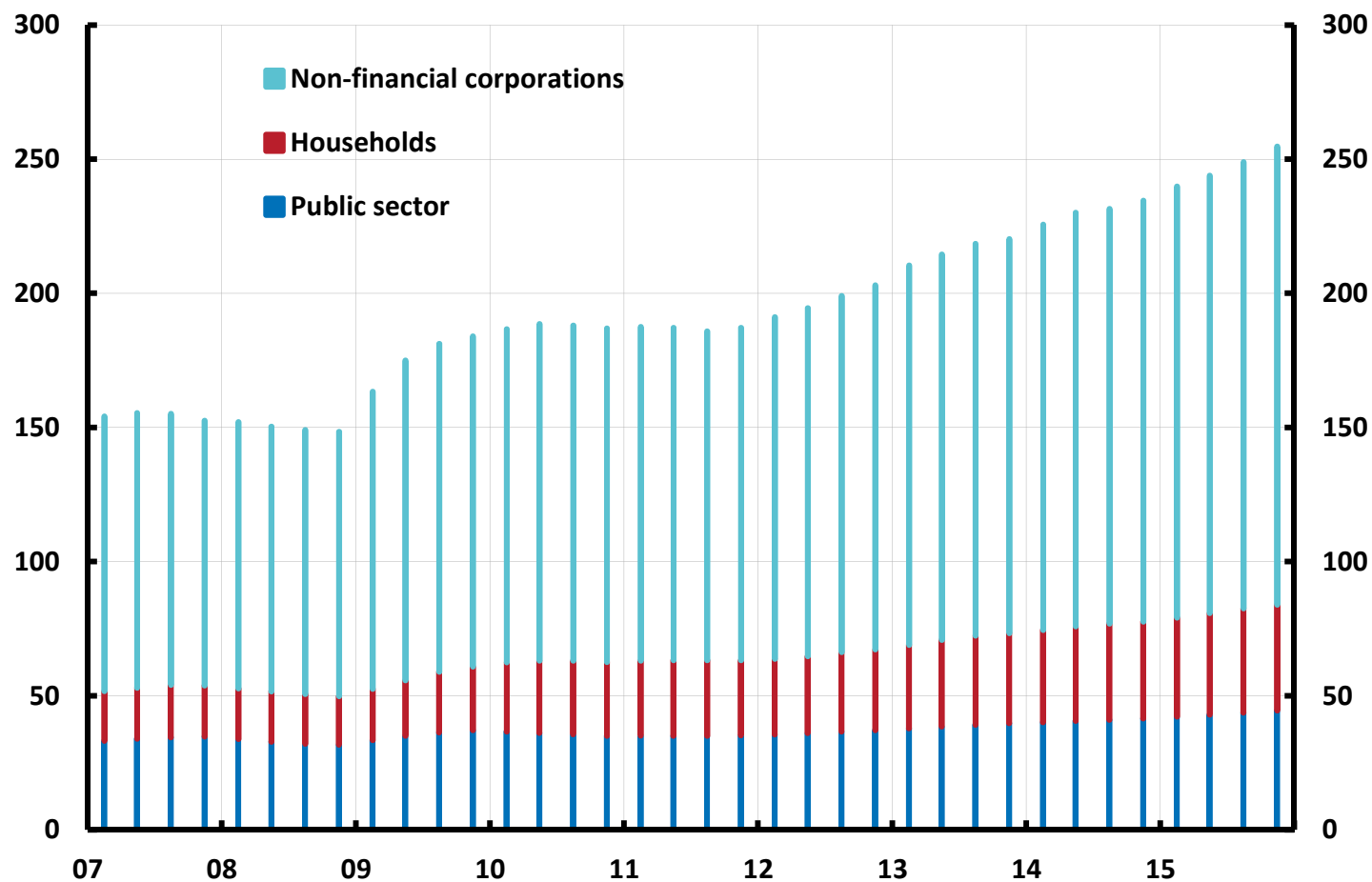
Thousands



Source: Bureau of Labor Statistics

Figure 4.4. Credit to non-financial sector, China

Per cent of GDP

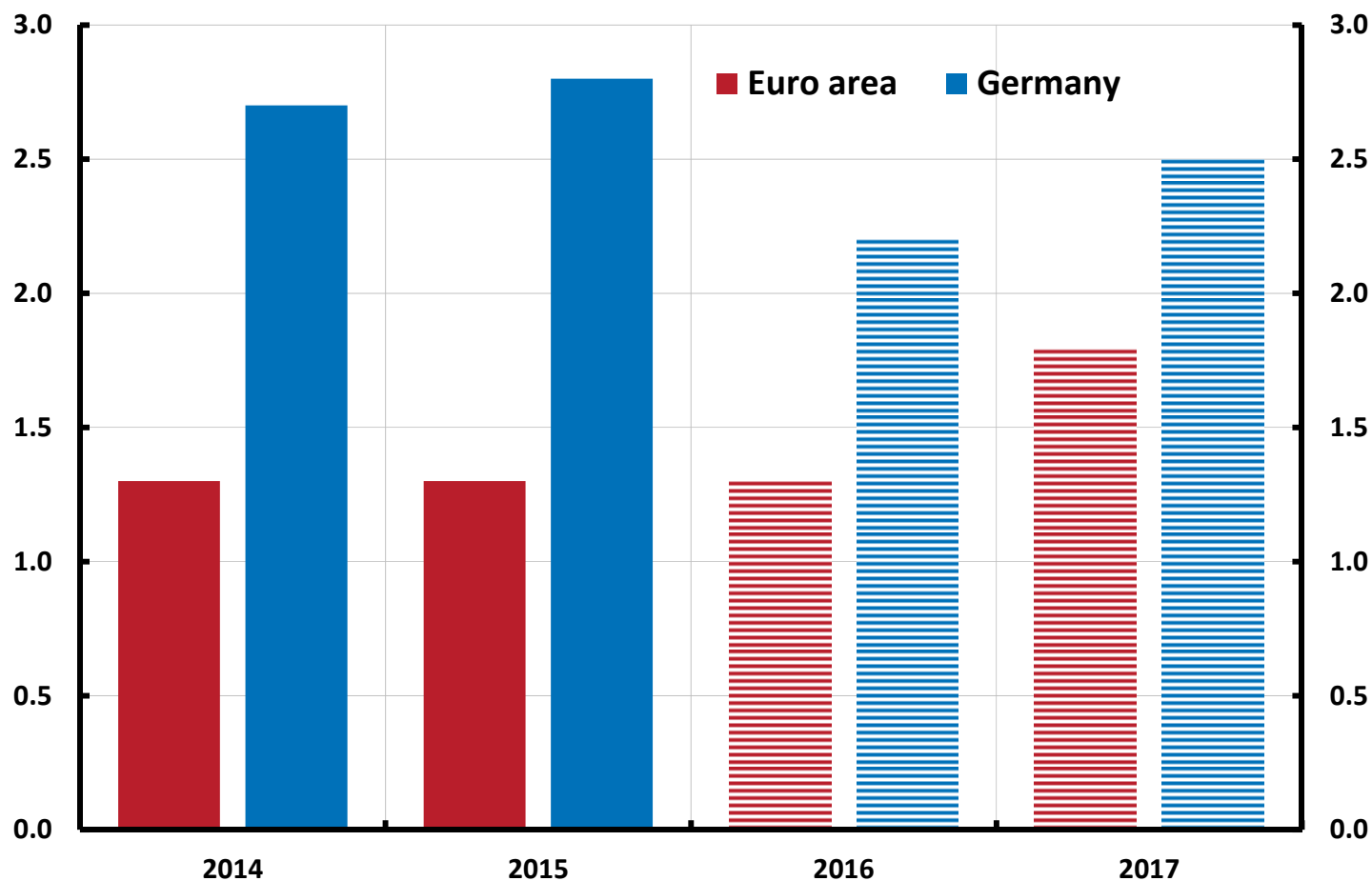


Note. Households includes non-profit organisations aimed at households.

Source: Bank of international Settlements

Figure 4.5. Wage growth in Europe

Annual percentage change

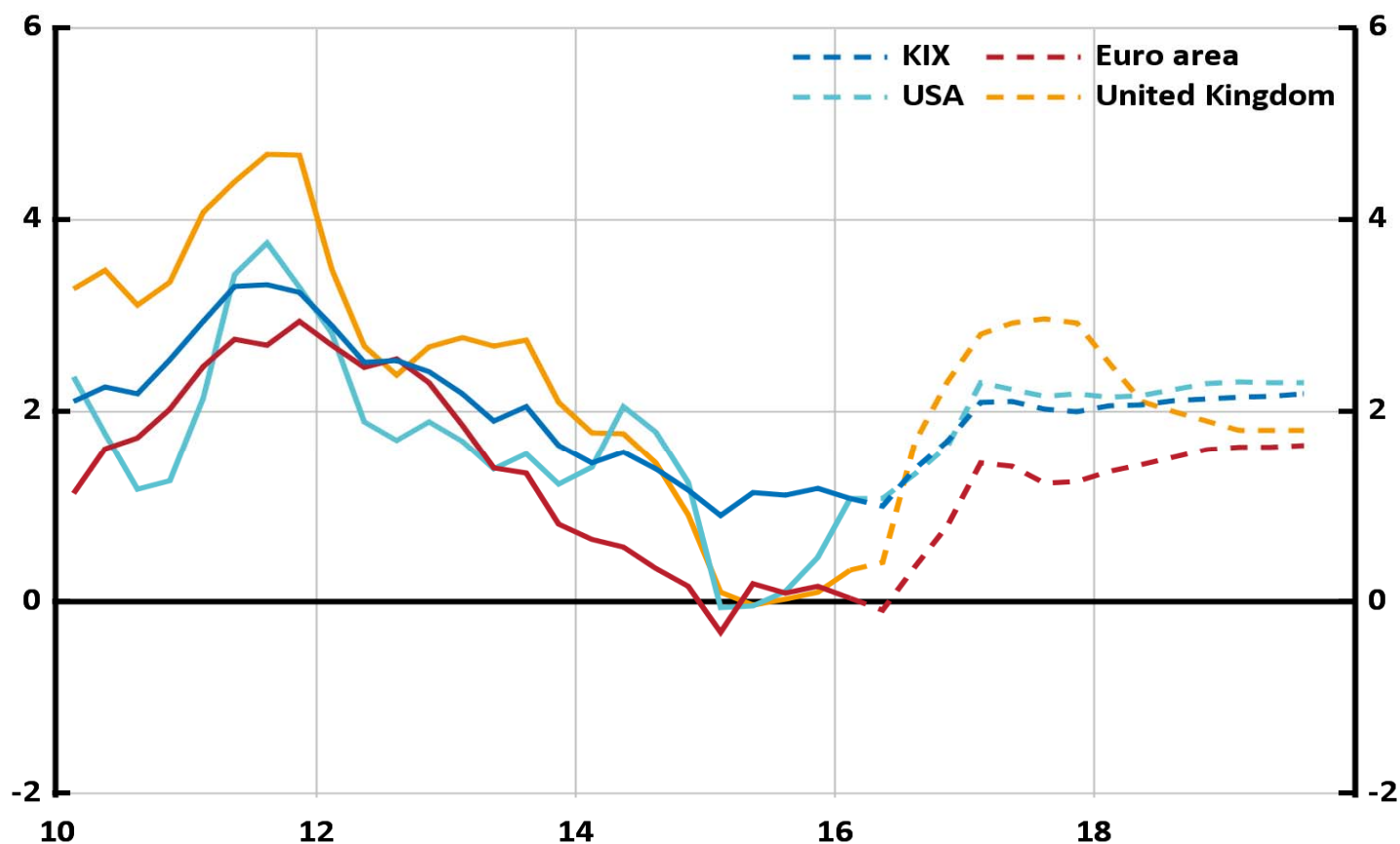


Note. For the euro area wage growth refers to labour costs and for Germany wage growth refers to salary increases. The forecast for the euro area from ECB's latest assessment in early June. Wage forecast for Germany from the Bundesbank were also published at the beginning of June.

Sources: Bundesbank and ECB

Figure 4.6. Inflation in various countries and regions

Annual percentage change



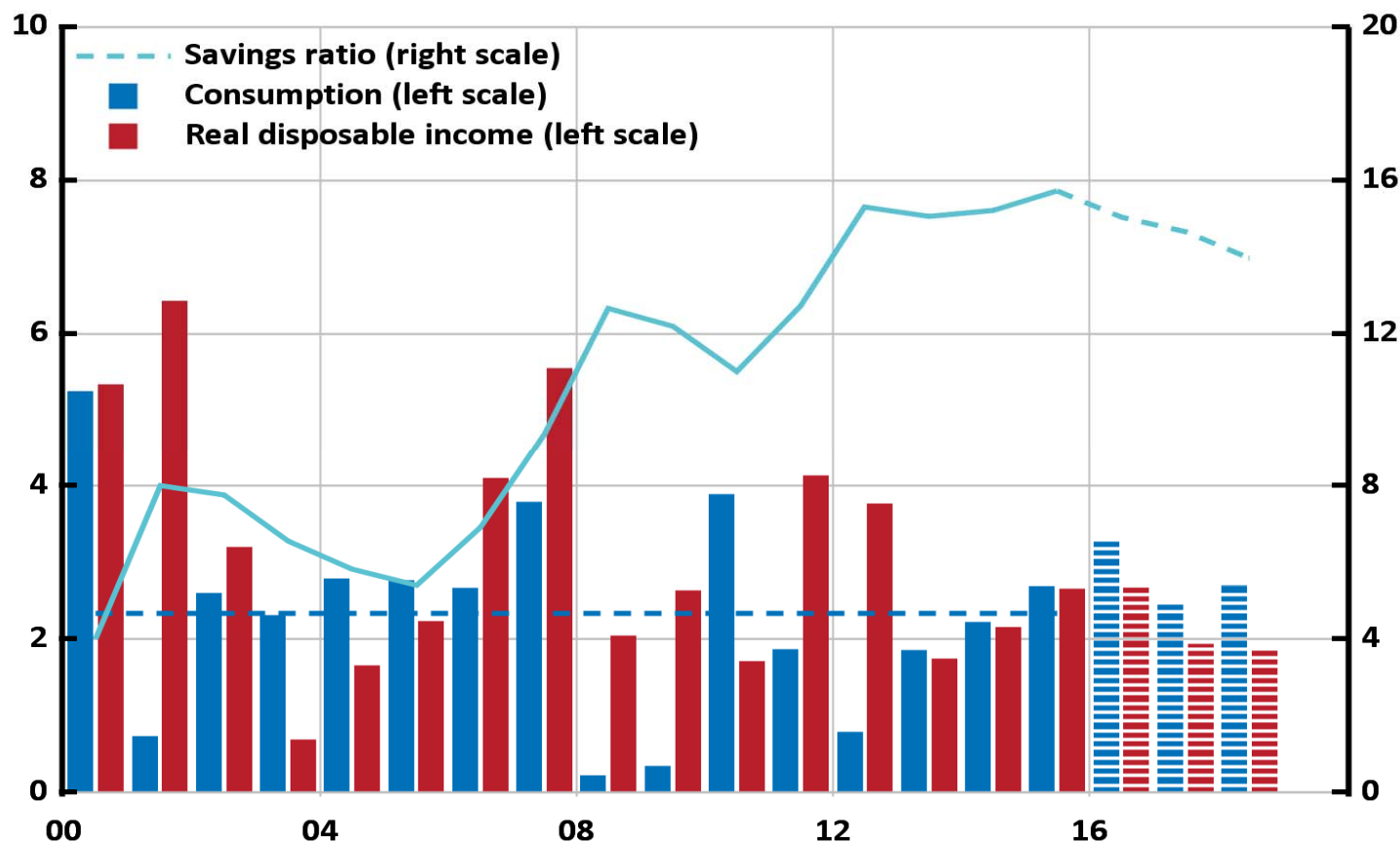
Note. KIX is an aggregate of the countries that are important to Sweden's international transactions. When calculating KIX-weighted inflation, the HICP is used for the euro area and the CPI for other countries. Inflation for the euro area is shown measured using the HICP and for the United States and the United Kingdom measured using the CPI.

Sources: The Bureau of Labor Statistics, Eurostat, national sources, Office for National Statistics and the Riksbank

Figure 4.7. Households' real disposable incomes, consumption and savings ratio



Annual percentage change and per cent of disposable income

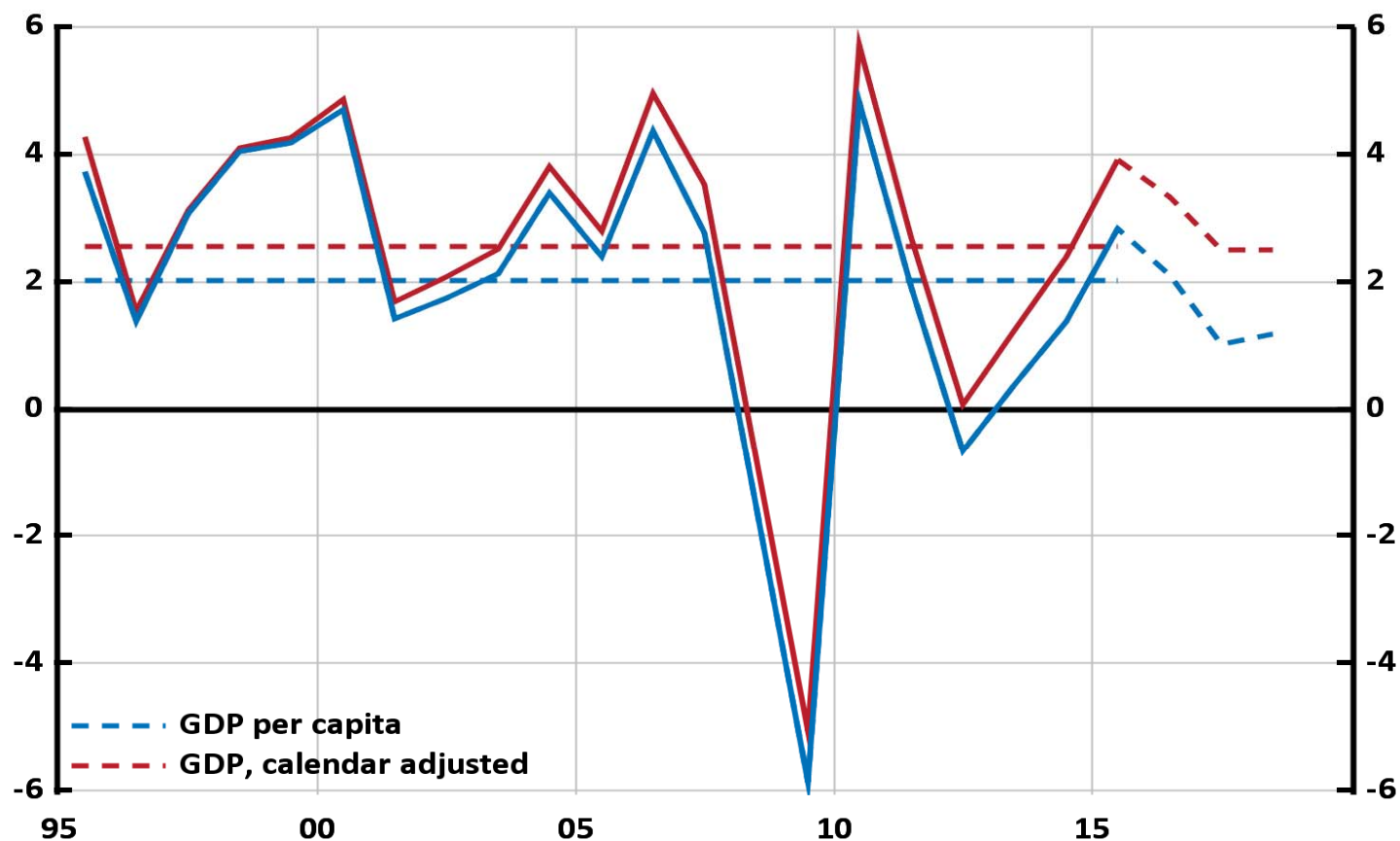


Note. The savings ratio includes collective insurance schemes. Disposable income has been deflated using the household consumption deflator. Broken line is the average of consumption between 1994 and 2015.

Sources: Statistics Sweden and the Riksbank

Figure 4.8. GDP and GDP per capita

Annual percentage change

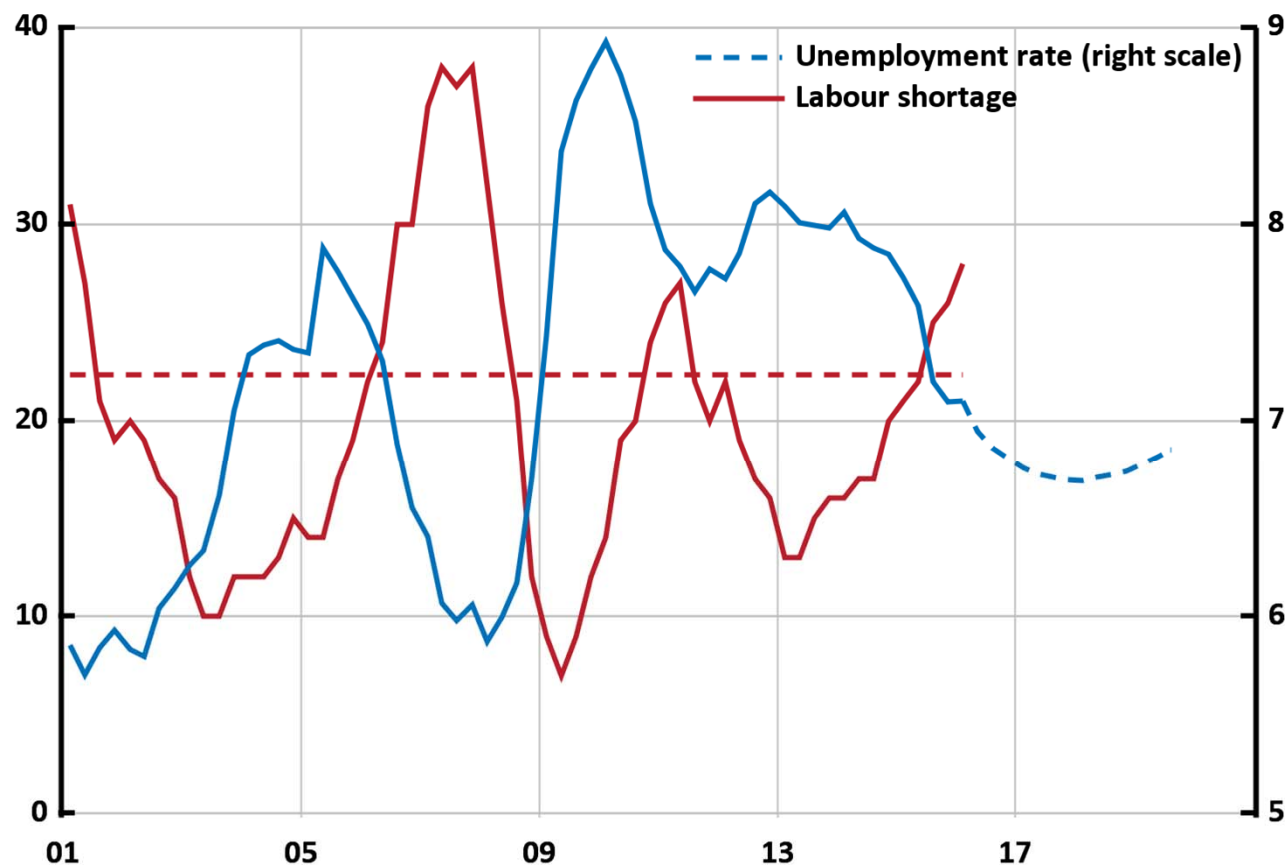


Note. Broken lines refer to averages between 1995 and 2015.

Sources: Statistics Sweden and the Riksbank

Figure 4.9. Unemployment and labour shortage

Per cent of labour force 15–74 years and net figures, respectively

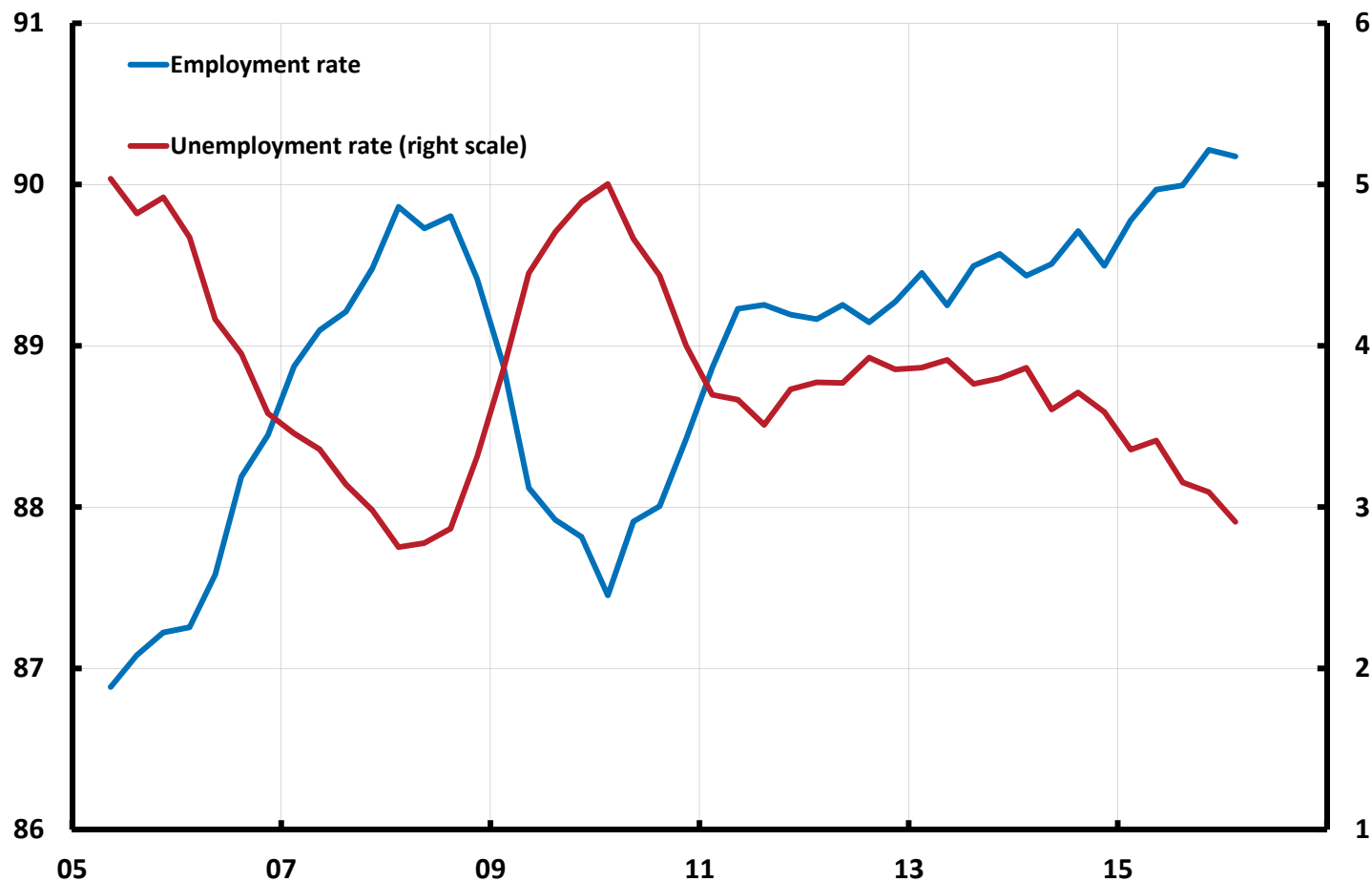


Note. Red broken line refers to the average of labour shortage from 1996 up to and including the most recent outcome.

Sources: The national institute of Economic Research, Statistics Sweden and the Riksbank

Figure 4.10. Employment rate and unemployment rate, born in Sweden

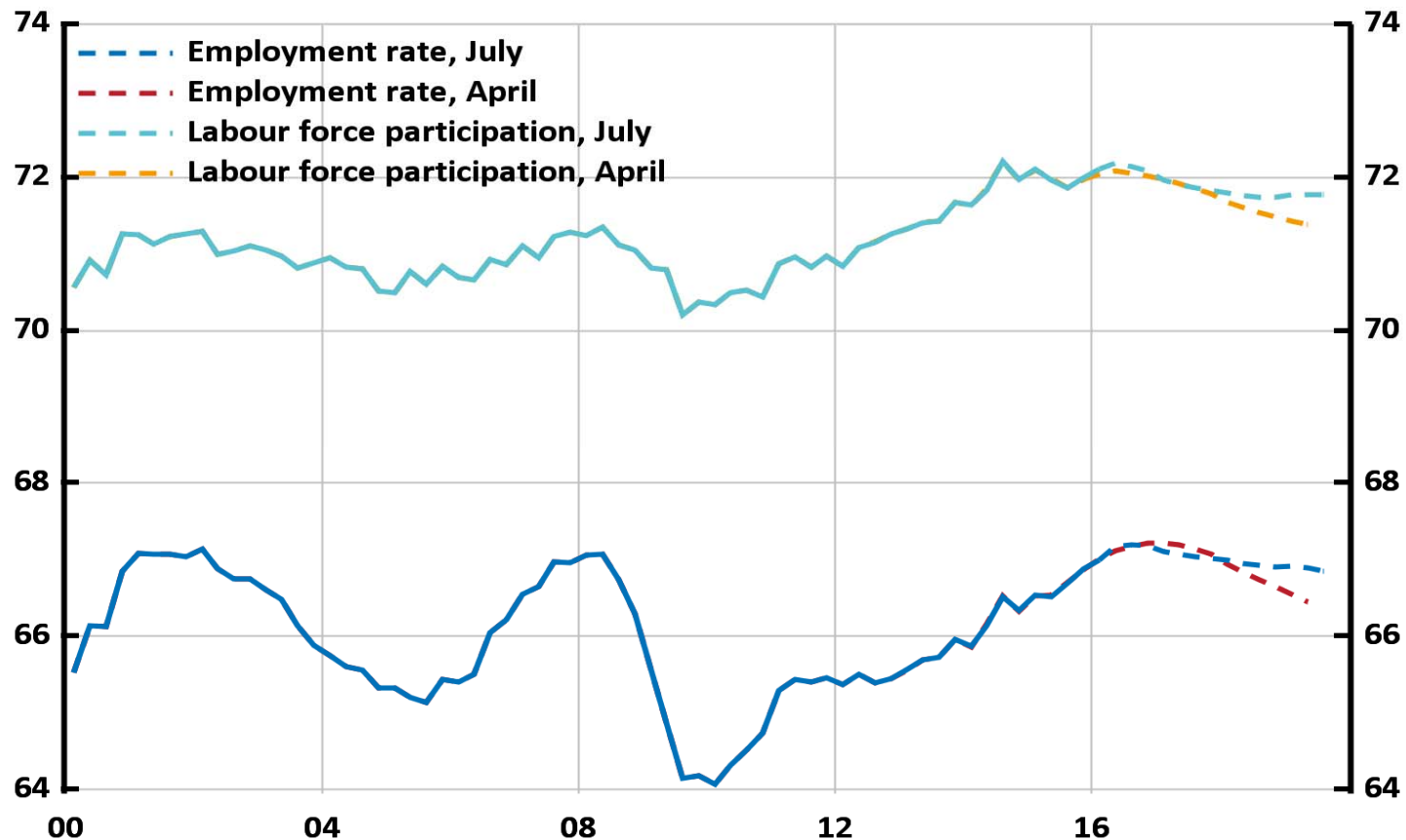
Per cent of total population and labour force, respectively, 25–54 years



Source: Statistics Sweden

Figure 4.11. Employment rate and labour force participation

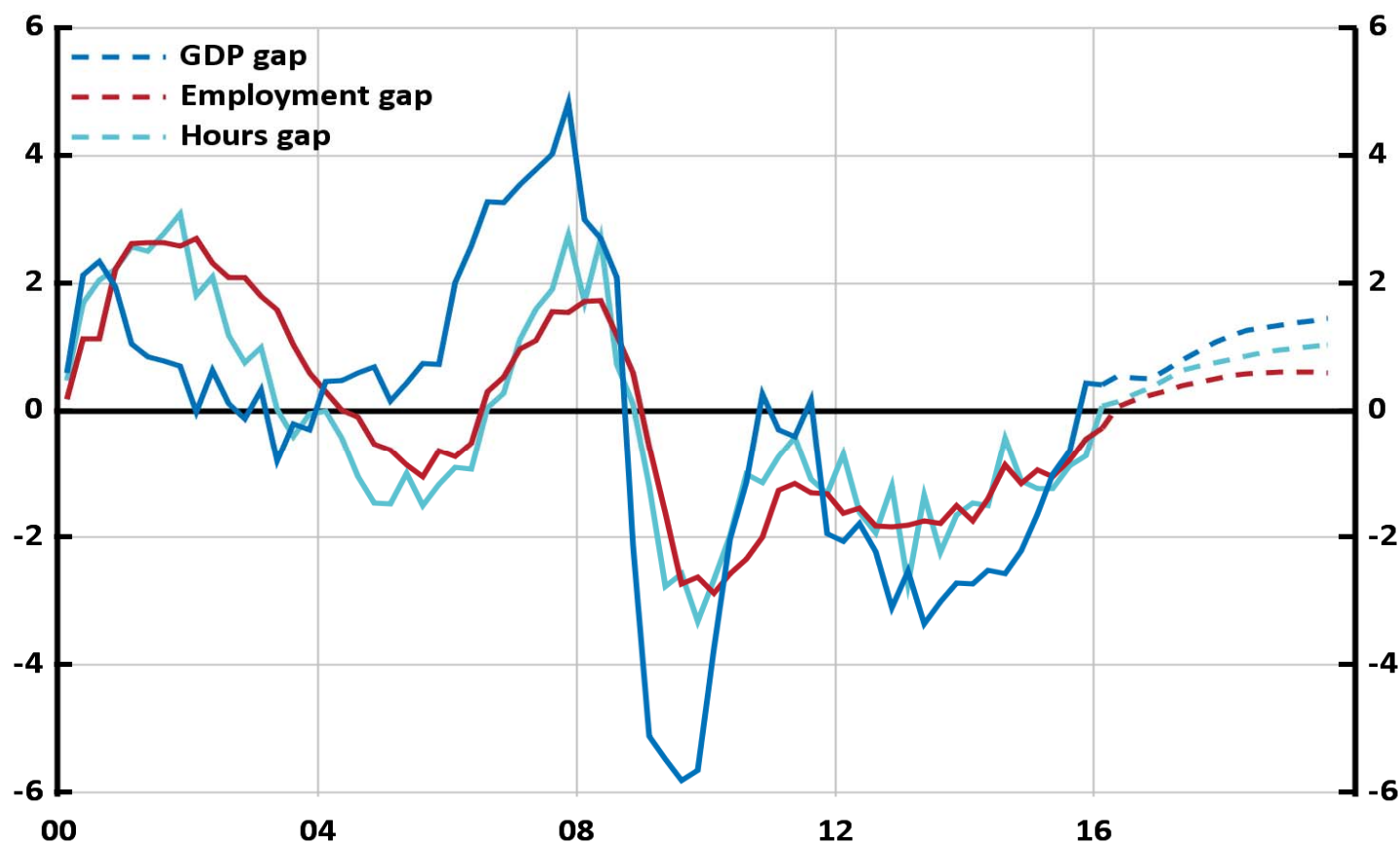
Employment and labour force as percentage of the population, aged 15–74, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 4.12. GDP gap, employment gap and hours gap

Per cent

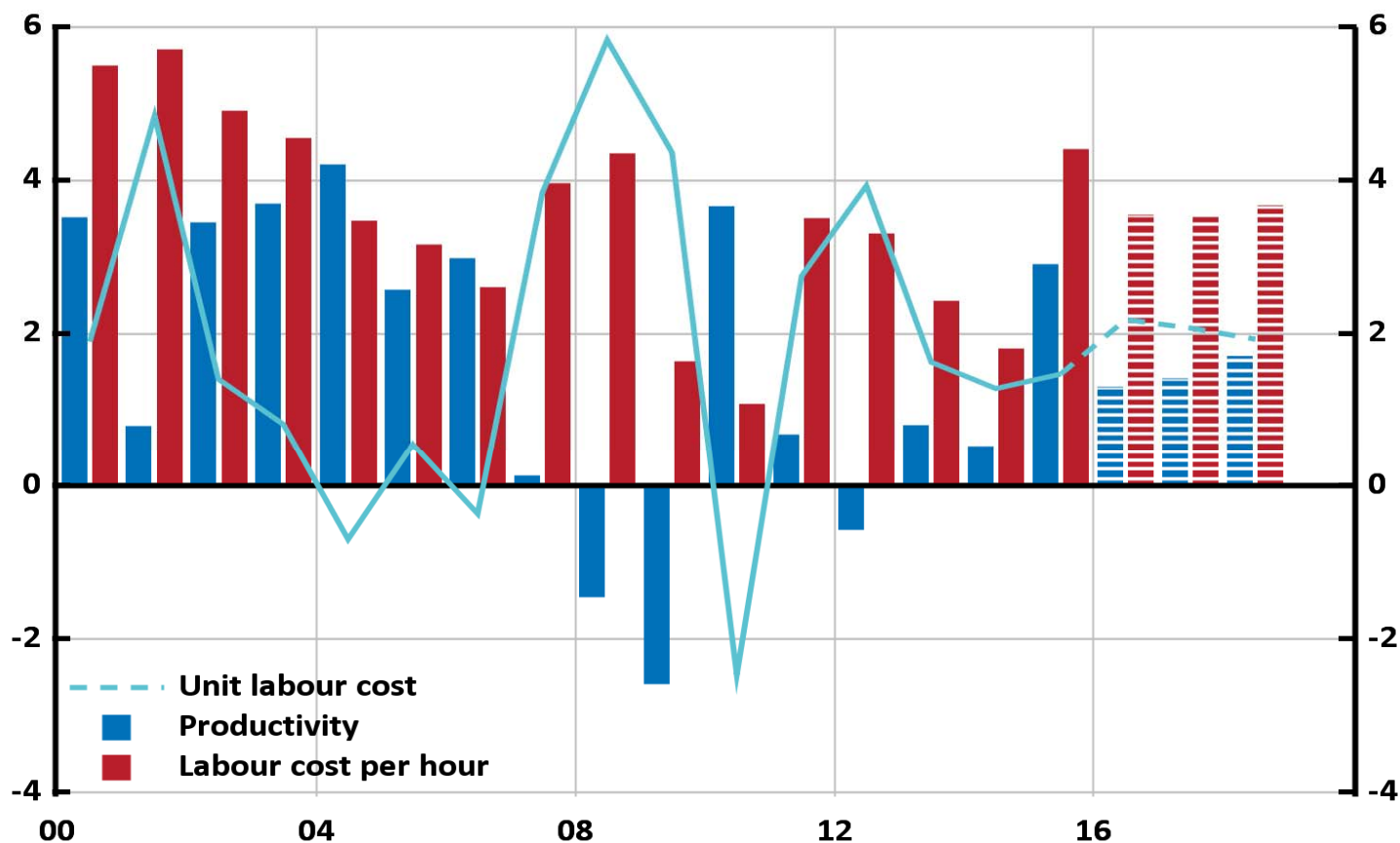


The gaps refer to the deviation in GDP, the number of hours worked and the number of those employed from the Riksbank's assessed trends.

Sources: Statistics Sweden and the Riksbank

Figure 4.13. Cost pressures in the economy as a whole

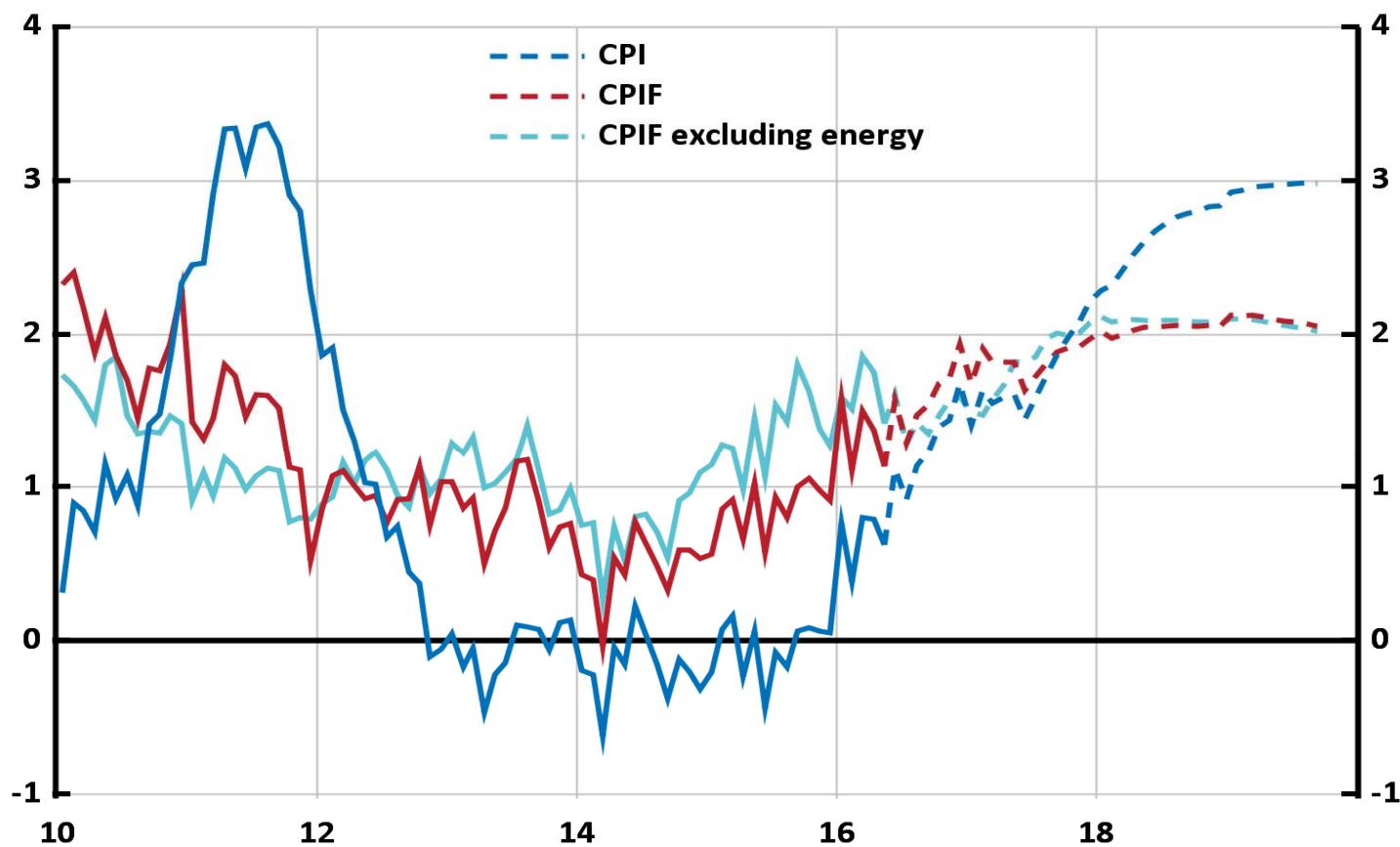
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 4.14. CPI, CPIF and CPIF excluding energy

Annual percentage change

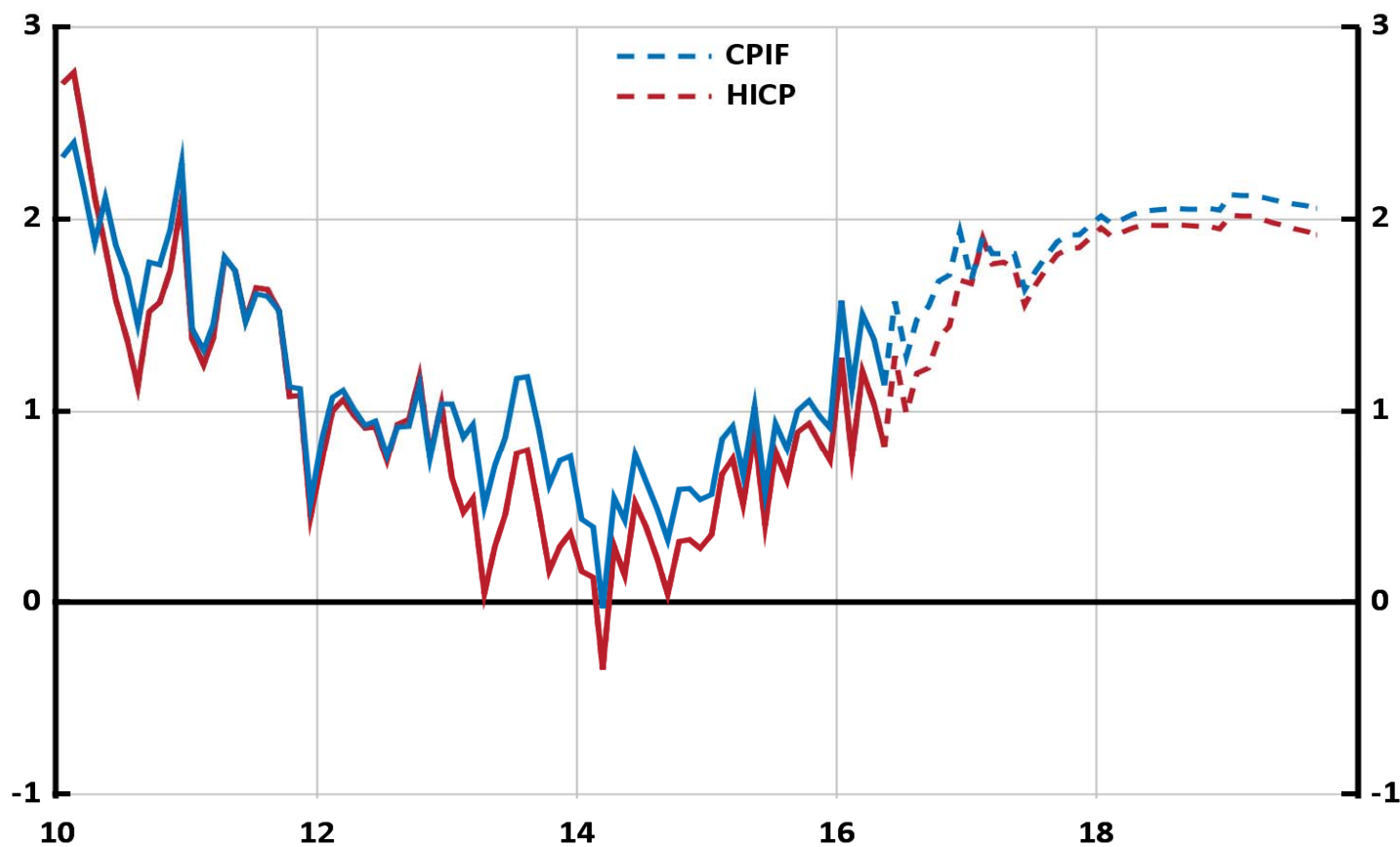


Note. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

Figure 4.15. CPIF and HICP

Annual percentage change



Note. CPIF is CPI with fixed mortgage rate. HICP is an Eu harmonized index for consumer prices.

Sources: Statistics Sweden and the Riksbank

The forecast in the previous Monetary Policy Report is shown in brackets unless otherwise stated.

Table 1. Repo rate forecast
Per cent, quarterly averages

	Q2 2016	Q3 2016	Q4 2016	Q3 2017	Q3 2018	Q3 2019
Repo rate	-0.5	-0.5 (-0.5)	-0.5 (-0.5)	-0.5 (-0.3)	0.1 (0.3)	0.6

Source: The Riksbank

Table 2. Inflation
Annual percentage change, annual average

	2014	2015	2016	2017	2018
CPI	-0.2	0.0	1.0 (1.0)	1.7 (1.9)	2.6 (2.9)
CPIF	0.5	0.9	1.5 (1.4)	1.8 (2.0)	2.0 (2.2)
CPIF excl. energy	0.7	1.4	1.5 (1.6)	1.8 (1.9)	2.1 (2.2)
HICP	0.2	0.7	1.2 (1.1)	1.8 (1.9)	2.0 (2.1)

Note. The CPIF is the CPI with a fixed mortgage rate. HICP is an EU harmonised index of consumer prices.

Sources: Statistics Sweden and the Riksbank

Table 3. Summary of financial forecasts
Per cent, unless otherwise stated, annual average

	2014	2015	2016	2017	2018
Repo rate	0.5	-0.3	-0.5 (-0.5)	-0.5 (-0.4)	0.0 (0.2)
10-year rate	1.8	0.8	0.7 (1.0)	1.5 (2.0)	2.5 (2.9)
Exchange rate, KIX, 18 November 1992 = 100	106.7	112.6	109.8 (108.5)	107.4 (106.9)	105.8 (105.7)
General government net lending*	-1.6	-0.1	0.0 (-0.3)	0.1 (-0.3)	0.3 (-0.2)

* Per cent of GDP

Sources: Statistics Sweden and the Riksbank

Table 4. International conditions
Annual percentage change, unless otherwise stated

GDP	PPP-weights	KIX-weights	2014	2015	2016	2017	2018
Euro area	0.14	0.47	0.9	1.6	1.5 (1.5)	1.4 (1.7)	1.7 (1.8)
USA	0.16	0.08	2.4	2.4	1.9 (1.9)	2.2 (2.4)	2.2 (2.1)
Japan	0.05	0.02	-0.1	0.6	0.7 (0.4)	1.1 (0.8)	1.1 (0.4)
China	0.15	0.08	7.3	6.9	6.5 (6.4)	6.0 (6.1)	5.9 (6.0)
KIX-weighted	0.75	1.00	2.0	2.0	1.9 (1.9)	2.1 (2.3)	2.3 (2.4)
World (PPP-weighted)	1.00	—	3.4	3.1	3.2 (3.1)	3.5 (3.6)	3.6 (3.7)

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP-weights, according to the IMF. The Riksbank updates the weights for the KIX krona index at the start of every year with a time lag of three years. The figures in the table are based on the new KIX weights for 2012 that are used for 2015, and on an assumption that the weights will develop according to the trend of the past five years in the coming forecast years.

CPI	2014	2015	2016	2017	2018
Euro area (HICP)	0.4	0.0	0.3 (0.2)	1.3 (1.3)	1.5 (1.6)
USA	1.6	0.1	1.3 (1.2)	2.3 (2.3)	2.3 (2.4)
Japan	2.7	0.8	0.1 (0.6)	1.1 (1.9)	1.7 (2.1)
KIX-weighted	1.4	1.1	1.3 (1.3)	2.1 (2.0)	2.1 (2.2)

	2014	2015	2016	2017	2018
Policy rates in the rest of the world, per cent	0.2	0.1	-0.1 (-0.1)	-0.2 (-0.1)	-0.1 (0.1)
Crude oil price, USD/barrel Brent	99.6	53.5	45.8 (39.9)	53.0 (45.1)	54.7 (47.9)
Swedish export market	3.1	2.7	2.0 (2.6)	3.0 (4.0)	4.0 (4.4)

Note. Policy rates in the rest of the world refer to a weighted average of USA, the euro area, Norway and the United Kingdom.
Sources: Eurostat, IMF, Intercontinental Exchange, national sources, OECD and the Riksbank

Table 5. GDP by expenditure
Annual percentage change, unless otherwise stated

	2014	2015	2016	2017	2018
Private consumption	2.2	2.7	3.3 (3.2)	2.4 (3.1)	2.7 (2.8)
Public consumption	1.3	2.6	3.1 (3.6)	2.3 (2.7)	1.5 (1.9)
Gross fixed capital formation	7.5	7.0	6.5 (3.2)	3.1 (3.6)	3.9 (4.1)
Inventory investment*	0.1	0.2	0.0 (0.1)	-0.1 (0.0)	0.0 (0.0)
Exports	3.5	5.9	3.3 (5.9)	3.2 (3.5)	3.9 (3.7)
Imports	6.3	5.5	4.4 (5.2)	3.8 (4.4)	4.7 (5.0)
GDP	2.3	4.2	3.6 (3.7)	2.2 (2.7)	2.4 (2.3)
GDP, calendar-adjusted	2.4	3.9	3.3 (3.5)	2.5 (3.0)	2.5 (2.4)
Final figure for domestic demand*	3.1	3.6	3.9 (3.2)	2.5 (3.0)	2.6 (2.8)
Net exports*	-0.9	0.4	-0.3 (0.5)	-0.1 (-0.2)	-0.2 (-0.4)
Current account (NA), per cent of GDP	4.2	4.8	4.2 (5.3)	3.9 (4.9)	3.4 (4.3)

*Contribution to GDP growth, percentage points

Note. The figures show actual growth rates that have not been calendar-adjusted, unless otherwise stated. NA is the National Accounts.

Sources: Statistics Sweden and the Riksbank

Table 6. Production and employment
Annual percentage change, unless otherwise stated

	2014	2015	2016	2017	2018
Population, aged 15–74	0.7	0.7	0.9 (0.9)	1.1 (1.1)	0.9 (1.2)
Potential hours worked	1.0	0.9	0.7 (0.7)	0.6 (0.6)	0.5 (0.6)
GDP, calendar-adjusted	2.4	3.9	3.3 (3.5)	2.5 (3.0)	2.5 (2.4)
Number of hours worked, calendar-adjusted	1.8	1.0	2.0 (1.8)	1.1 (1.2)	0.8 (0.8)
Employed, aged 15–74	1.4	1.4	1.6 (1.6)	1.0 (1.1)	0.7 (0.7)
Labour force, aged 15–74	1.3	0.8	1.1 (1.0)	0.8 (0.8)	0.7 (0.8)
Unemployment, aged 15–74 *	7.9	7.4	6.9 (6.8)	6.7 (6.6)	6.7 (6.7)

* Per cent of the labour force

Note. Potential hours refer to the long-term sustainable level for the number of hours worked according to the Riksbank's assessment.

Sources: Statistics Sweden and the Riksbank

Table 7. Wages and labour costs for the economy as a whole
Annual percentage change, calendar-adjusted data unless otherwise stated

	2014	2015	2016	2017	2018
Hourly wage, NMO	2.8	2.4	2.8 (3.1)	3.3 (3.5)	3.6 (3.5)
Hourly wage, NA	1.8	3.5	3.1 (3.2)	3.5 (3.7)	3.8 (3.7)
Employers' contribution*	0.0	0.9	0.5 (0.5)	0.0 (0.0)	-0.1 (-0.1)
Hourly labour cost, NA	1.8	4.4	3.6 (3.7)	3.5 (3.7)	3.7 (3.6)
Productivity	0.5	2.9	1.3 (1.6)	1.4 (1.8)	1.7 (1.7)
Unit labour cost	1.3	1.5	2.2 (2.1)	2.1 (1.9)	1.9 (1.9)

* Contribution to the increase in labour costs, percentage points

Note. NMO is the National Mediation Office's short-term wage statistics and NA is the National Accounts. Labour cost per hour is defined as the sum of actual wages, social-security charges and wage taxes divided by the seasonally adjusted total number of hours worked. Unit labour cost is defined as labour cost divided by seasonally-adjusted value added at constant prices.

Sources: National Mediation Office, Statistics Sweden and the Riksbank