



Monetary Policy Report September 2017

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



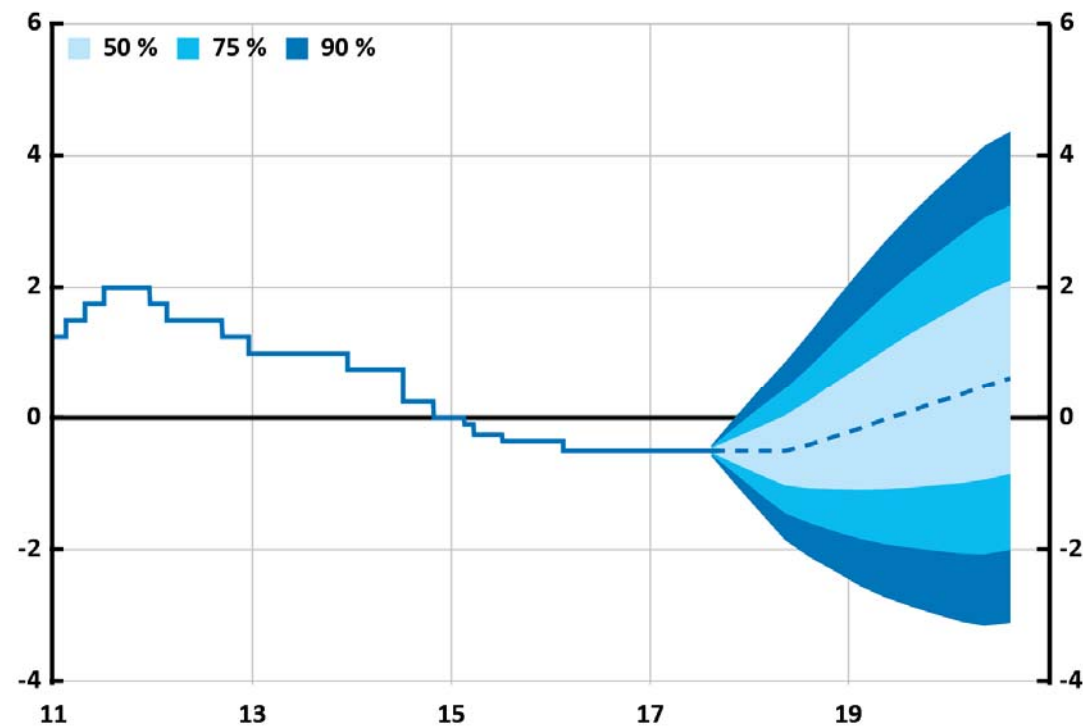
Chapter 1

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

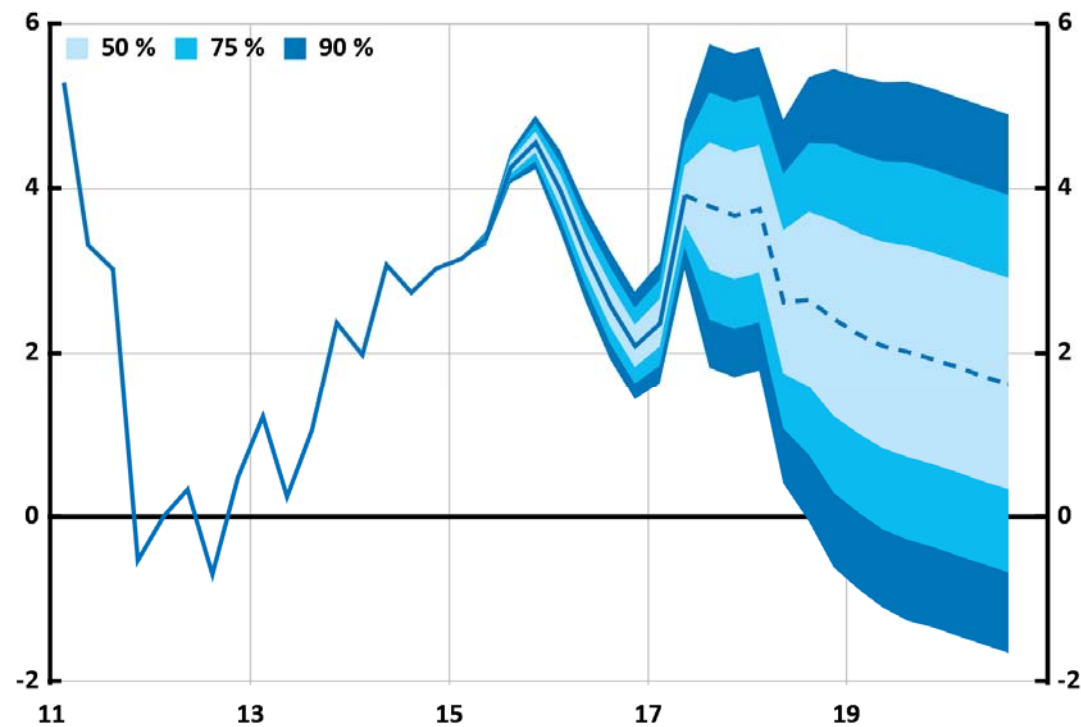


Note. The uncertainty bands for the repo rate are based on the Riksbank's historical forecasting errors and the ability of risk-premium adjusted forward rates to forecast the future repo rate for the period 1999 up to the point when the Riksbank started to publish forecasts for the repo rate during 2007. 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

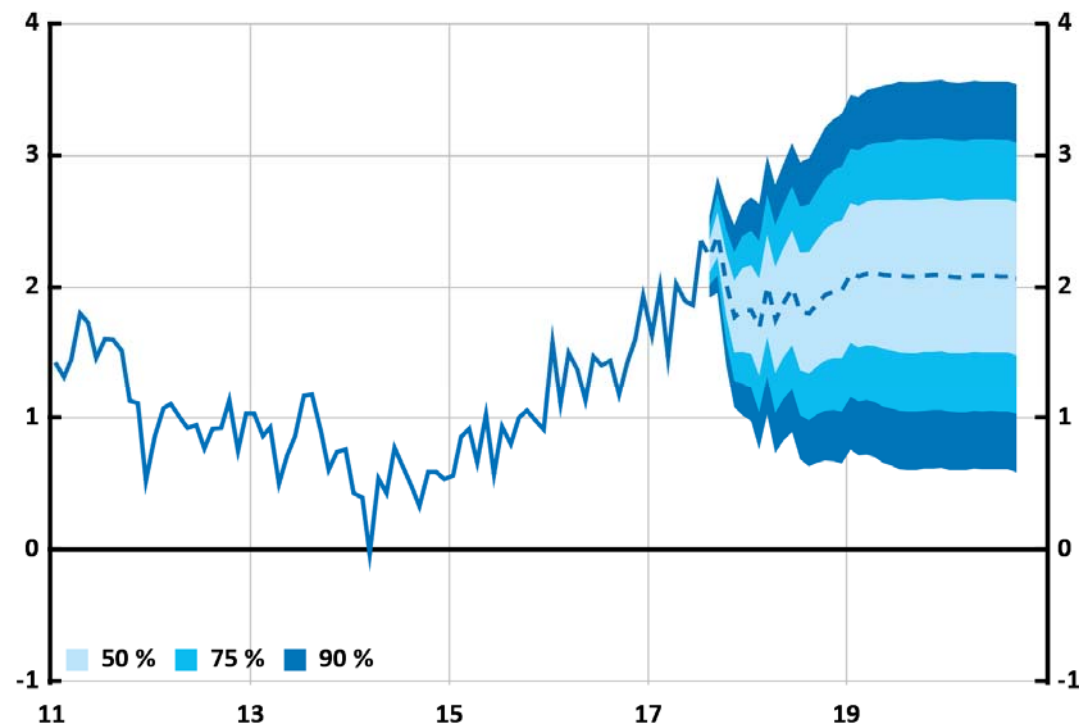


Note. The uncertainty bands are based on the Riksbank's historical forecasting errors. There is also uncertainty for the outcomes for GDP, as the figures in the National Accounts are revised several years after the preliminary publication.

Sources: Statistics Sweden and the Riksbank

Figure 1.3. 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 interest rate.

Sources: Statistics Sweden and the Riksbank

Figure 1.4. 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 1.5. Inflation expectations among money market participants

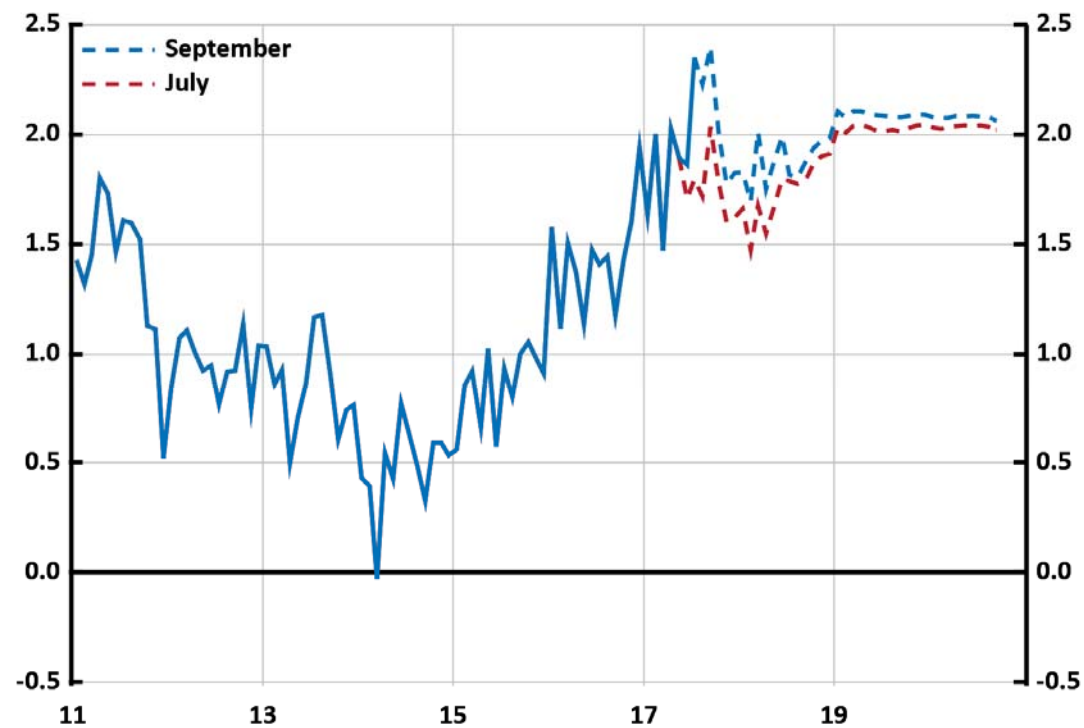
Per cent, mean value



Source: TNS Sifo Prospera

Figure 1.6. CPIF

Annual percentage change

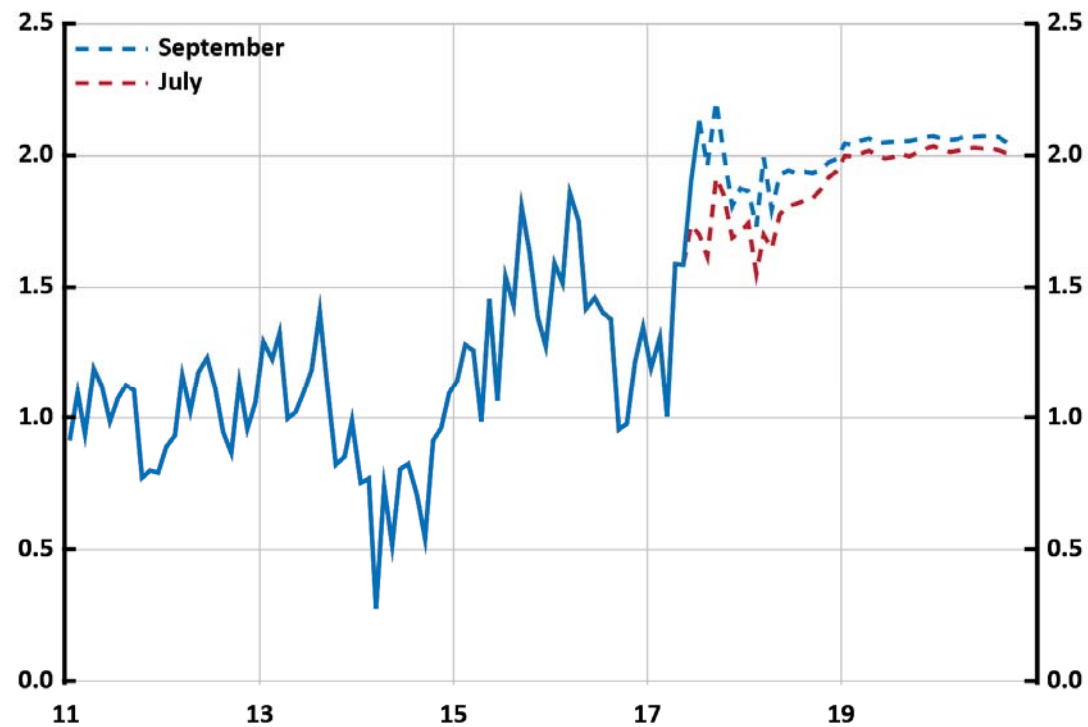


Note. The CPIF is the CPI with a fixed interest rate.

Sources: Statistics Sweden and the Riksbank

Figure 1.7. CPIF excluding energy

Annual percentage change

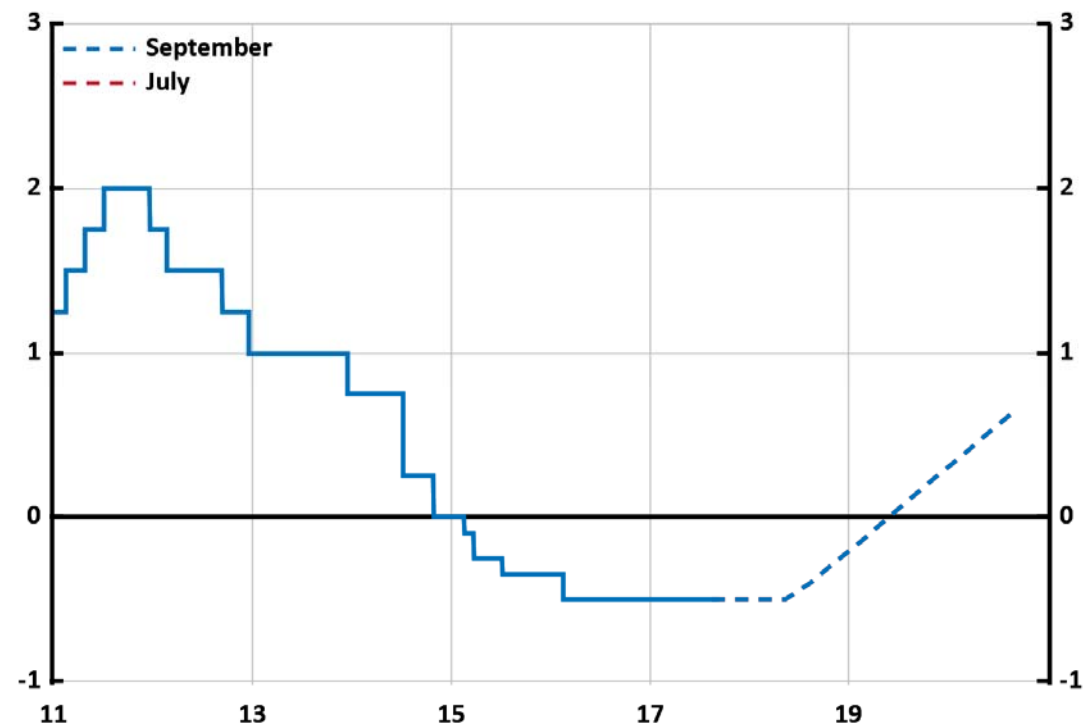


Note. The CPIF is the CPI with a fixed interest rate.

Sources: Statistics Sweden and the Riksbank

Figure 1.8. Repo rate

Per cent

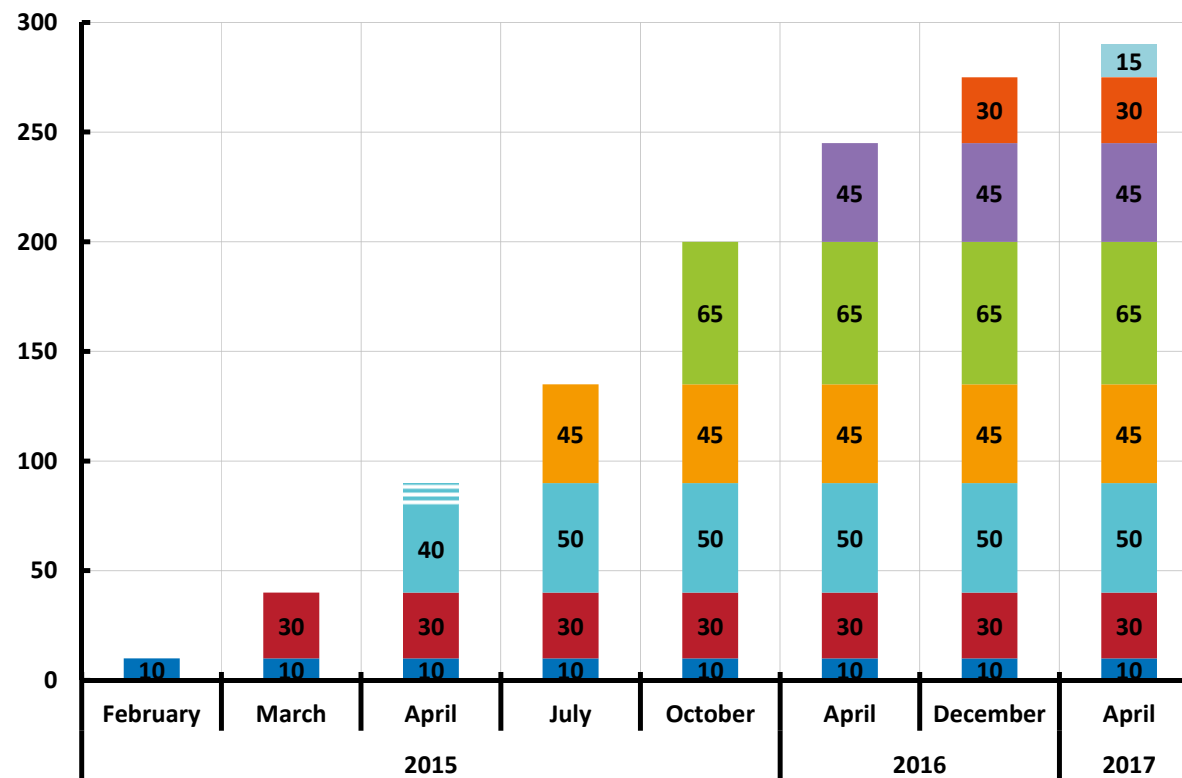


Note. Outcomes are daily data and the forecasts refer to quarterly averages.

Source: The Riksbank

Figure 1.9. Purchases of government bonds decided by the Riksbank

SEK billion

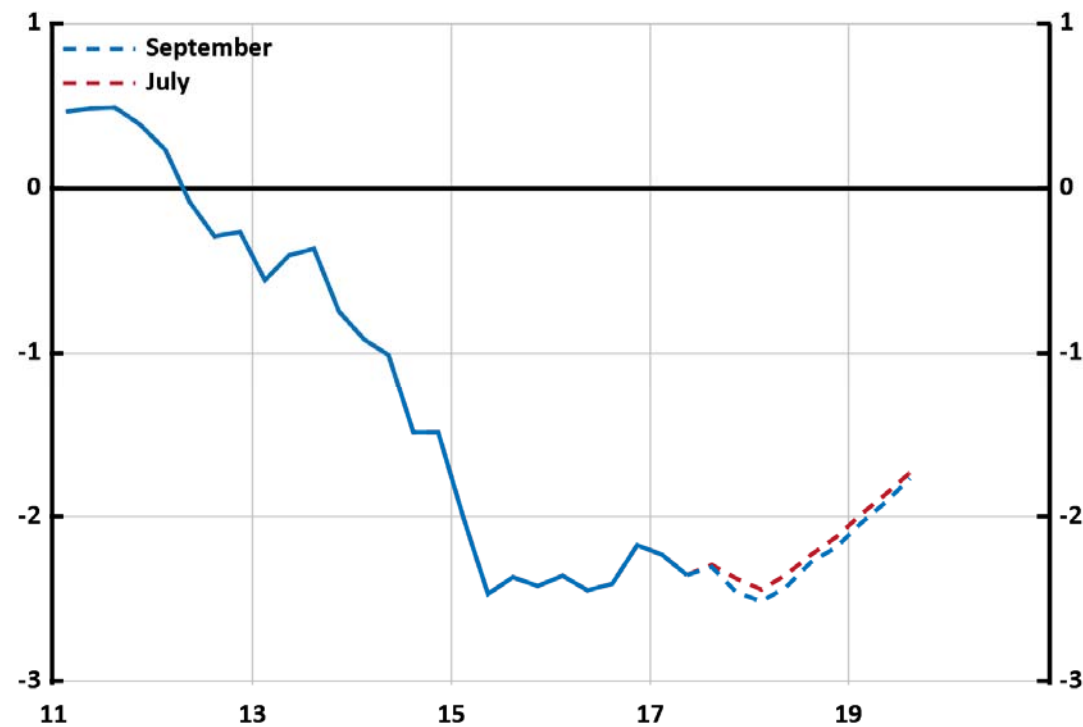


Note. Purchases of government bonds, excluding reinvestments, will continue until the end of 2017.

Source: The Riksbank

Figure 1.10. Real repo rate

Per cent, quarterly averages

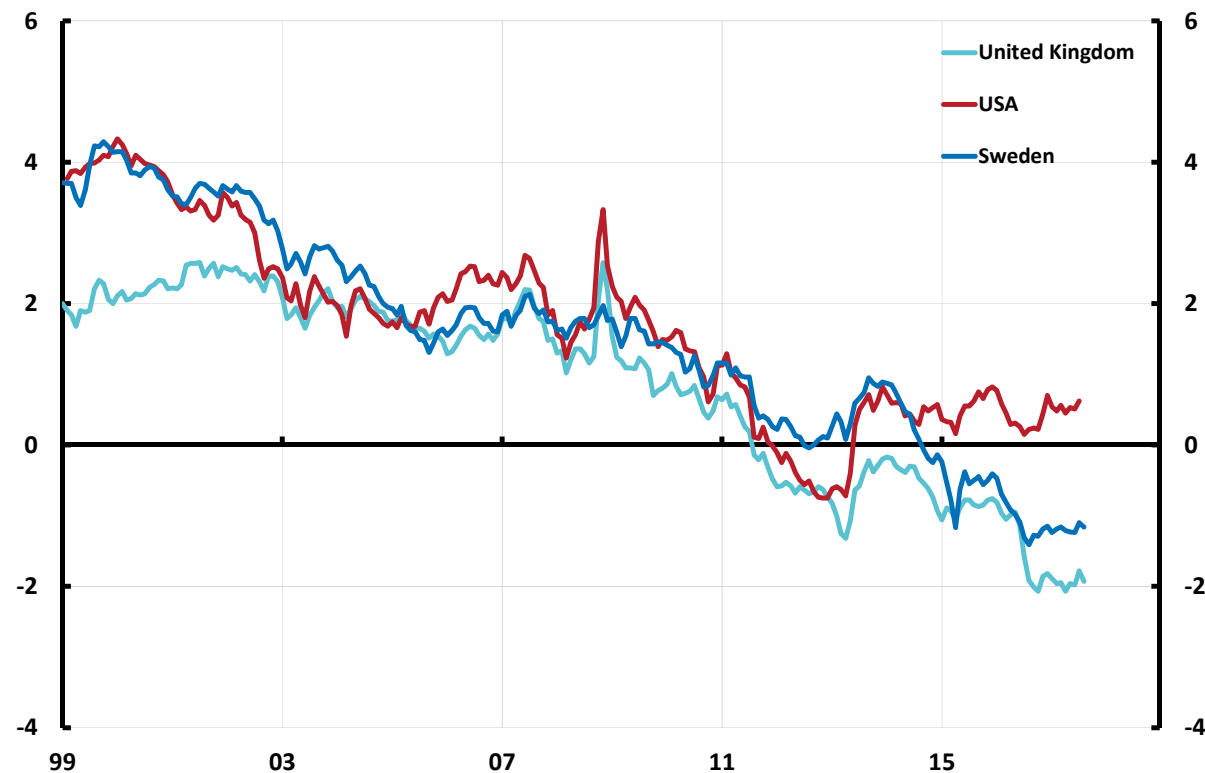


Note. The real repo rate is a mean value of the Riksbank's repo rate forecast for the year ahead minus the inflation forecast (CPIF) for the corresponding period.

Sources: Statistics Sweden and the Riksbank

Figure 1.11. Real interest rate

Per cent

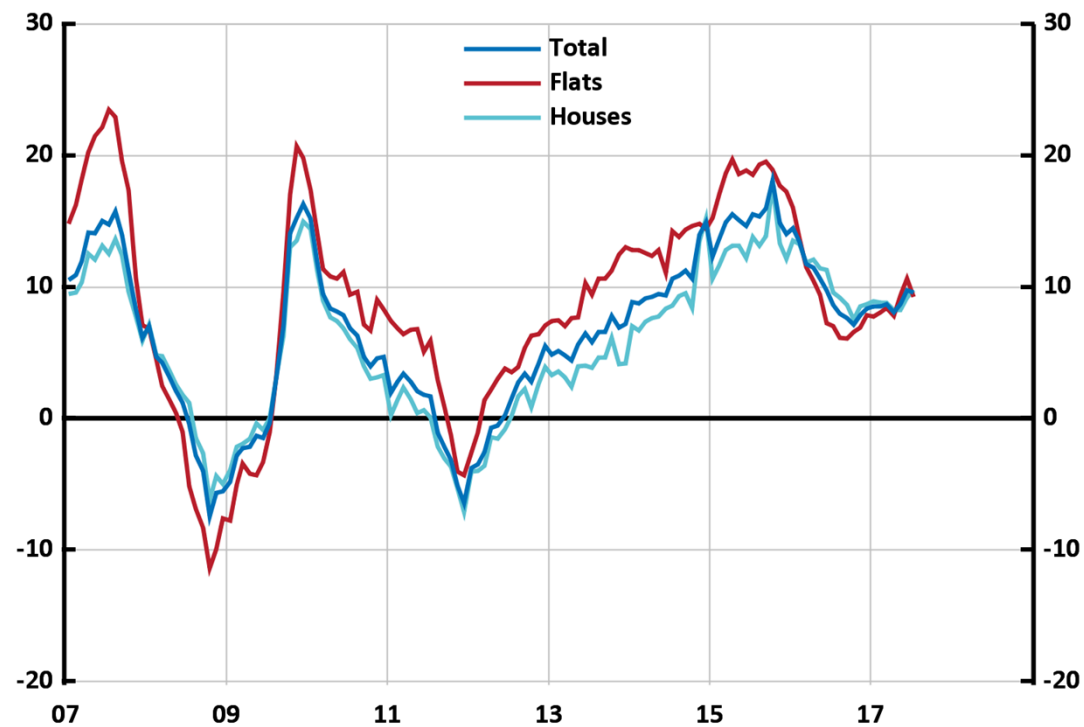


Note. 10-year yield on real government bonds in Sweden, the United Kingdom and the United States. Swedish real interest rate is zero coupon yields interpolated from bond prices using the Nelson-Siegel method.

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

Figure 1.12. Housing prices

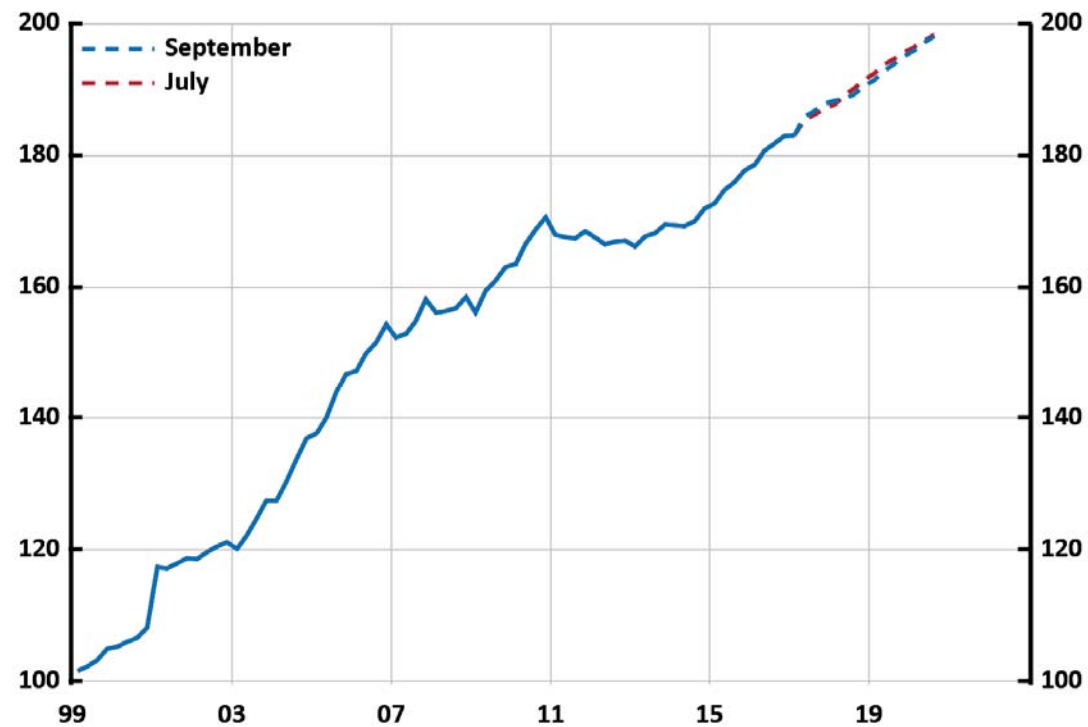
Annual percentage change



Source: Valueguard

Figure 1.13. Household debt

Per cent of disposable income



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

Sources: Statistics Sweden and the Riksbank

Chapter 2

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



Figure 2.1. Long-term inflation expectations in the US, according to market measures and surveys

Percentage points

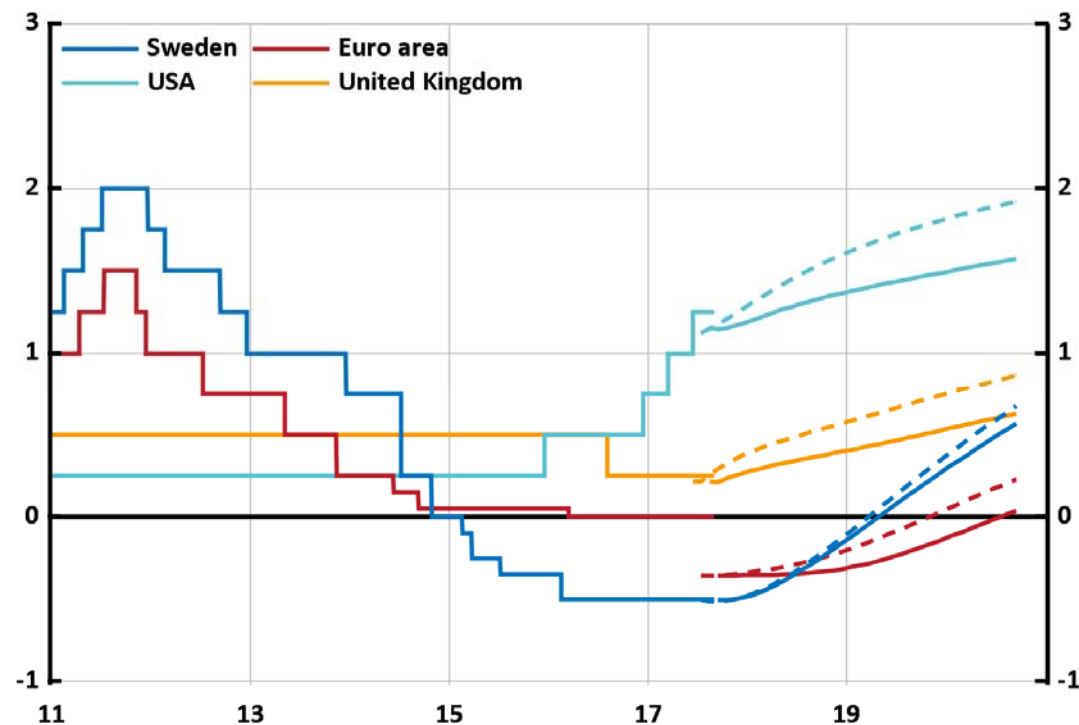


Note. The lines reflect different measures of inflation expectations 5 to 10 years ahead. Inflation compensation is the difference between the yield on a nominal and a real government bond. An inflation swap is a financial instrument that is linked to an inflation index. SPF is here an average of expectations of inflation 5 and 10 years ahead according to a survey.

Sources: Bloomberg, Federal Reserve Bank of Philadelphia and Riksbanken

Figure 2.2. 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 (the main refinancing rate for the euro area). There is no published overnight rate in Sweden, but it normally follows the repo rate closely. Unbroken lines are estimated on 31 August 2017, broken lines are estimated on 03 July 2017.

Sources: Macrobond and the Riksbank

Figure 2.3. Index for the US dollar

Index

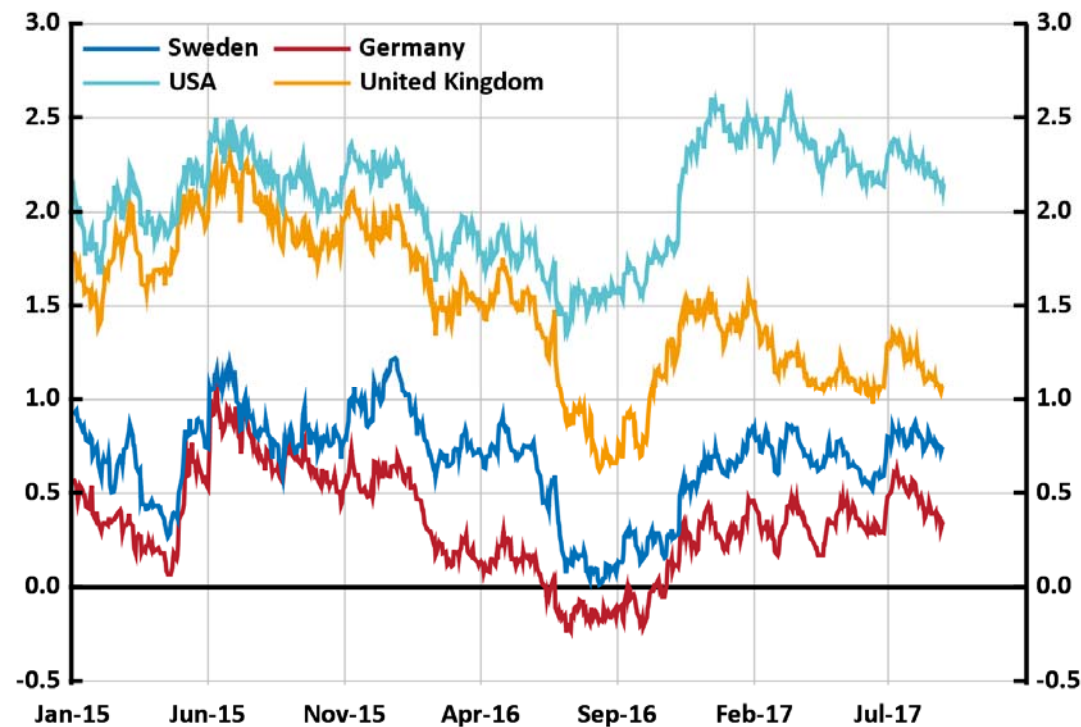


Note. The dollar index is a measure of the value of the dollar in relation to six foreign currencies - those in the Euro area, Japan, Canada, the United Kingdom, Sweden and Switzerland. A higher value in the index entails a stronger dollar.

Source: Macrobond

Figure 2.4. Government bond rates with 10 years left to maturity

Per cent

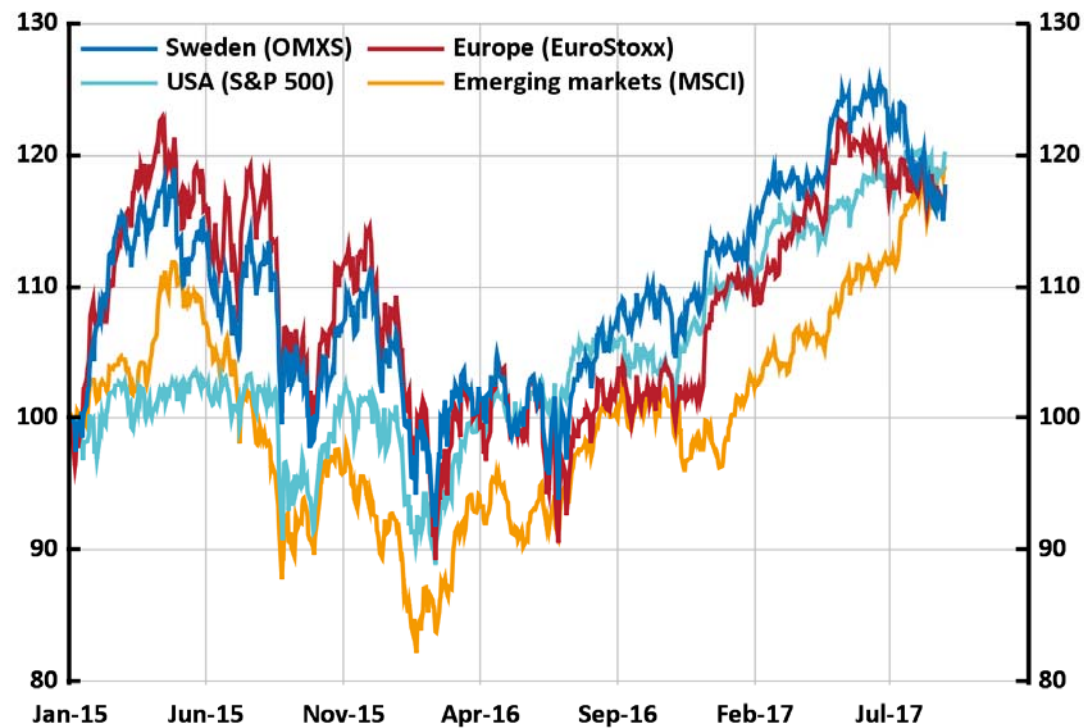


Note. Zero-coupon rates interpolated from bond prices using the Nelson-Siegel method.

Sources: Macrobond and the Riksbank

Figure 2.5. Stock market movements

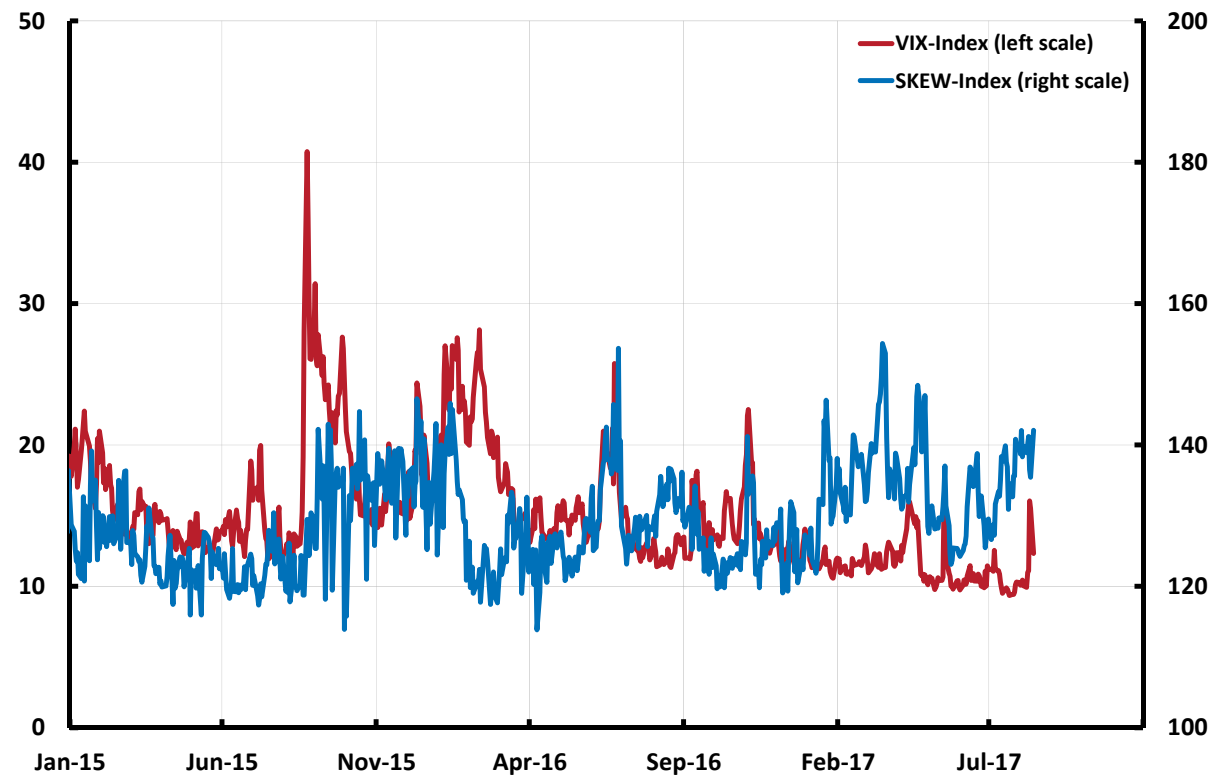
Index, 2 January 2015 = 100



Sources: Macrobond and Thomson Reuters

Figure 2.6. Volatility and risk of large falls on the stock market

VIX- and SKEW-index

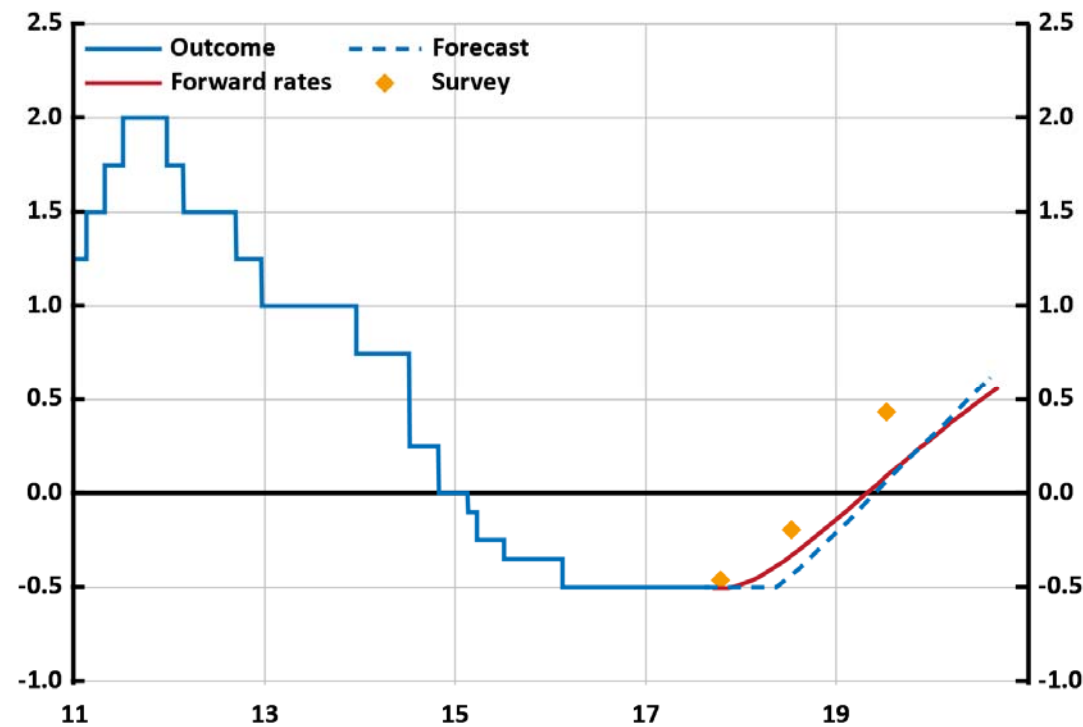


Note. Both VIX and SKEW are calculated on the basis of option on the S&P 500 share index. The VIX-index measures the expected volatility of the stock market, while the SKEW-index shows how expensive it is to purchase protection against large stock exchange falls.

Source: Thomson Reuters

Figure 2.7. Repo rate and market expectations

Per cent, average

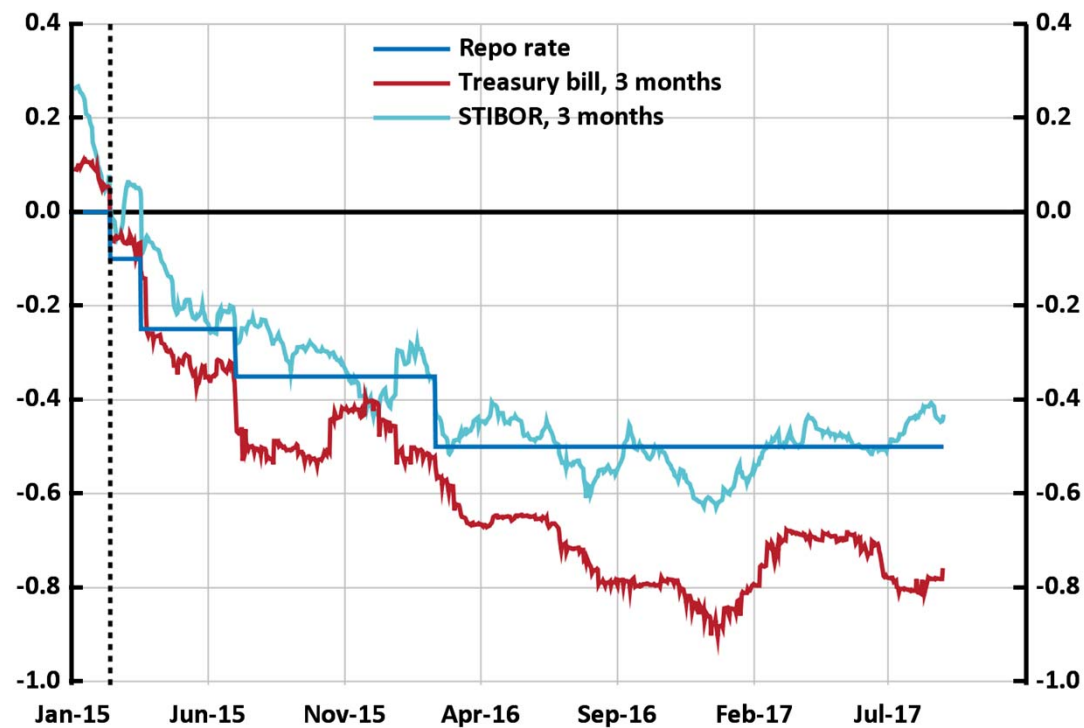


Note. The forward rates are estimated as of 31 August 2017 and measure the expected repo rate. The survey responses show the average for money market participants on 02 August 2017.

Sources: Macrobond, TNS Sifo Prospera and the Riksbank

Figure 2.8. Short market rates and the repo rate

Per cent

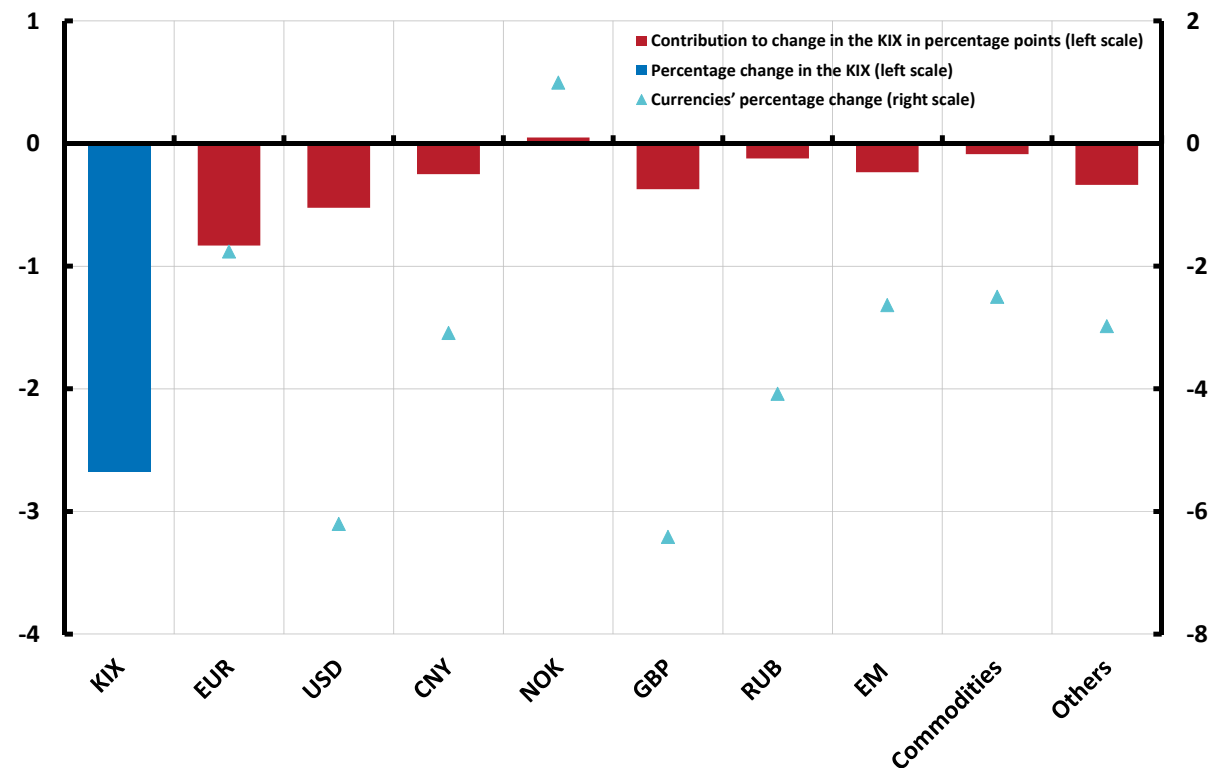


Note. The broken line refer to the start of the bond purchases.

Sources: Macrobond and the Riksbank

Figure 2.9. Contributions and changes to the KIX-weighted exchange rate

Per cent and percentage points

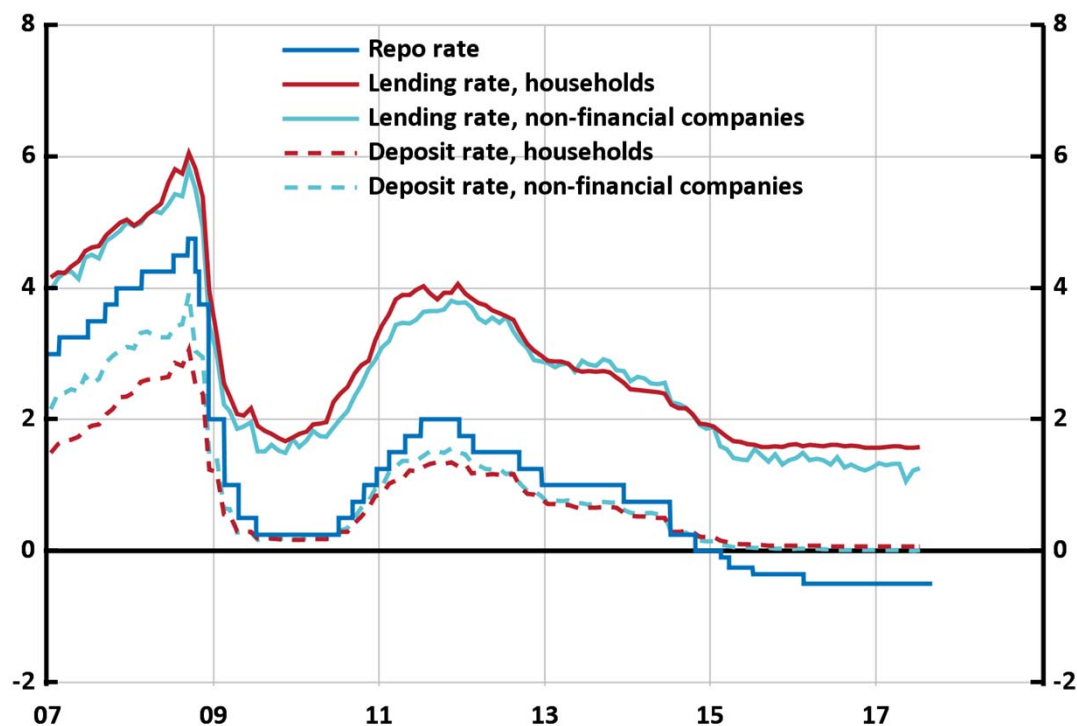


Note. The figure shows change in KIX and contributions from different currencies between 04 July and 01 September 2017. EM refers to Brazil, Hungary, India, Mexico, Poland and Turkey. Commodities refer to Australia, Canada and New Zealand. Other refers to Czech Republic, Denmark, Iceland, Japan, South Korea and Switzerland.

Source: Thomson Reuters and the Riksbank

Figure 2.10. Repo rate together with the deposit and lending rate to households and companies, new contracts

Per cent

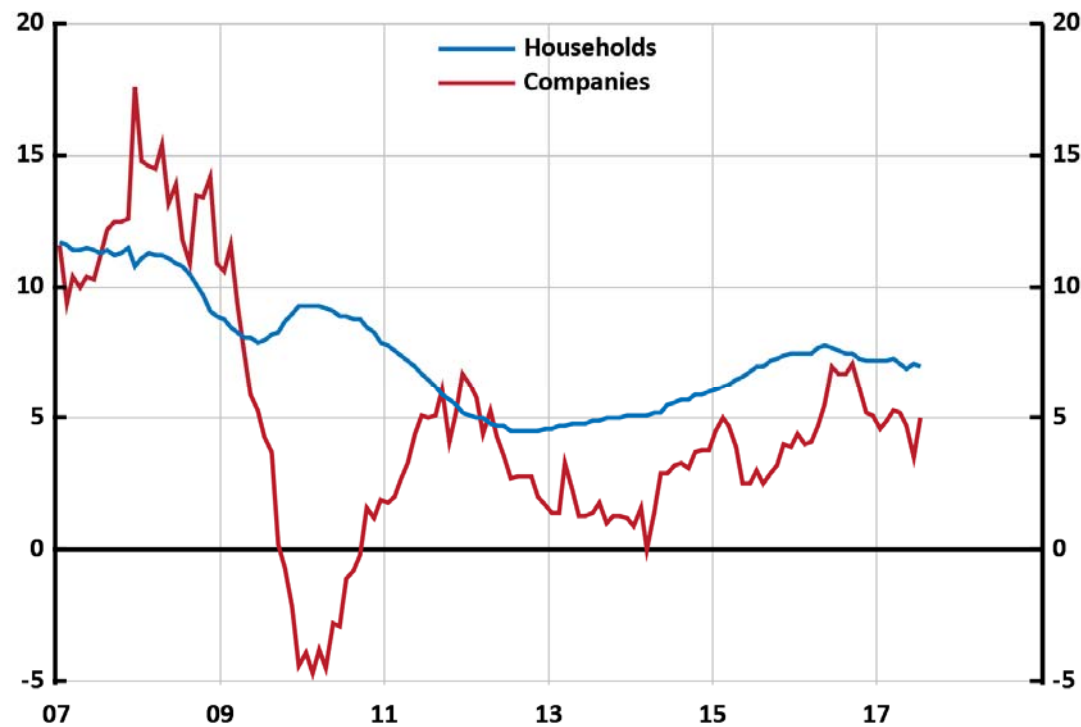


Note. MFIs' average deposit and lending rates for households and non-financial companies.

Sources: Statistics Sweden and the Riksbank

Figure 2.11. 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

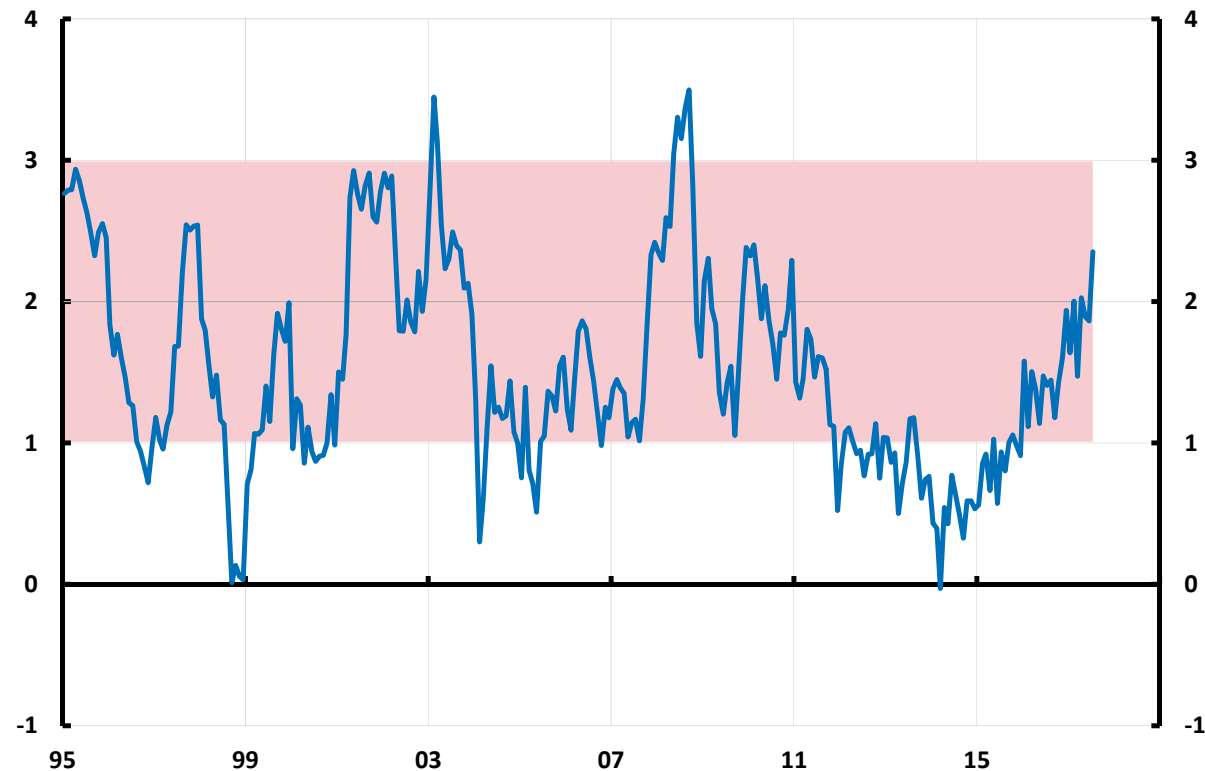
Chapter 3

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



Figure 3.1. CPIF and variation band

Annual percentage change

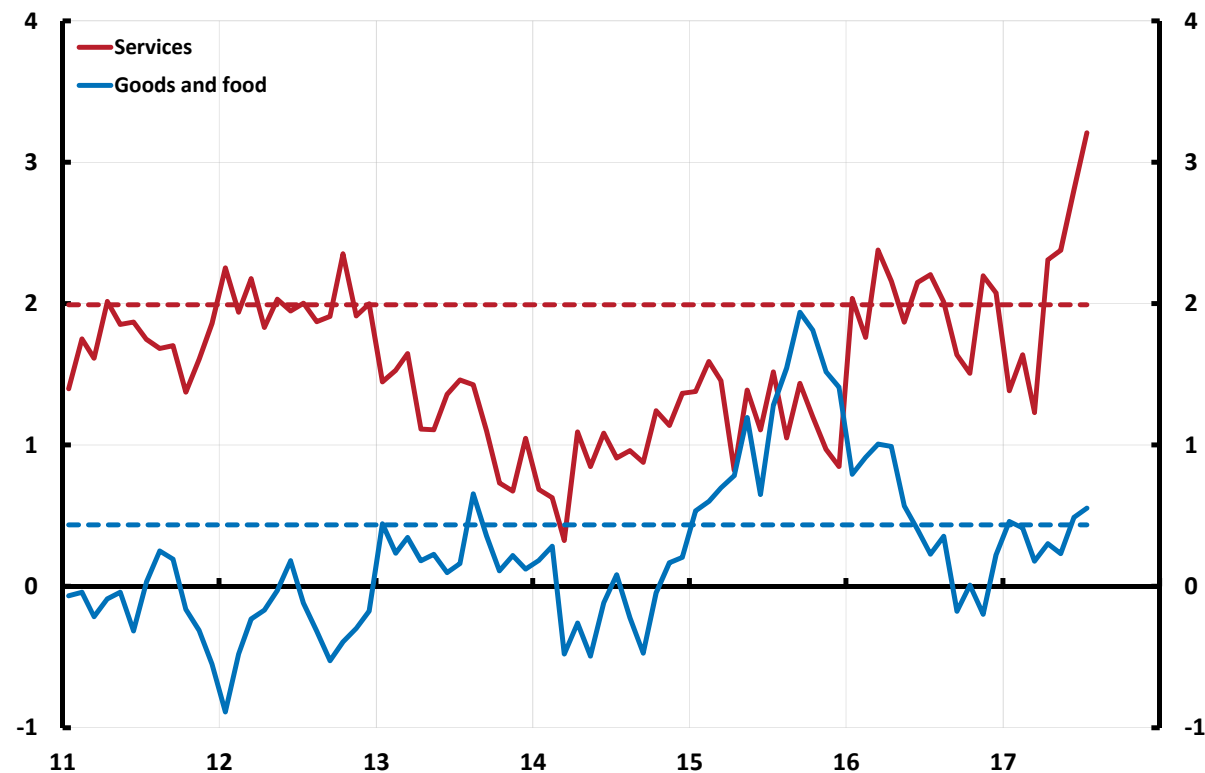


Note. The pink field shows the Riksbank's variation band which captures around three-quarters of the outcomes in 01:1995 – 07:2017. The CPIF is the CPI with a fixed interest rate.

Sources: Statistics Sweden and the Riksbank

Figure 3.2. Prices of goods and services in the CPI

Annual percentage change

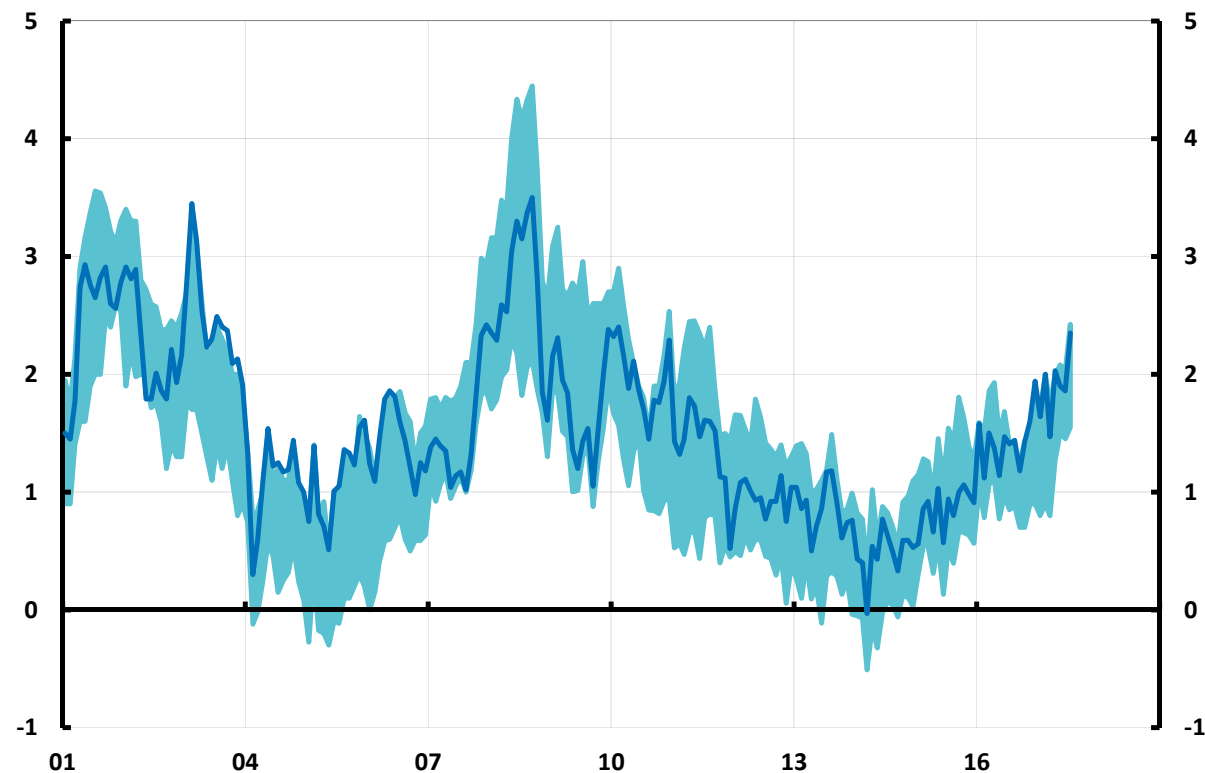


Note. Goods and food is a combination of the aggregate goods and food in the CPI. Together, these account for 43 per cent of the CPI. Service prices account for 45 per cent of the CPI. The broken lines represents the mean value since January 1995.

Sources: Statistics Sweden and the Riksbank

Figure 3.3. The CPIF and different measures of underlying inflation

Annual percentage change

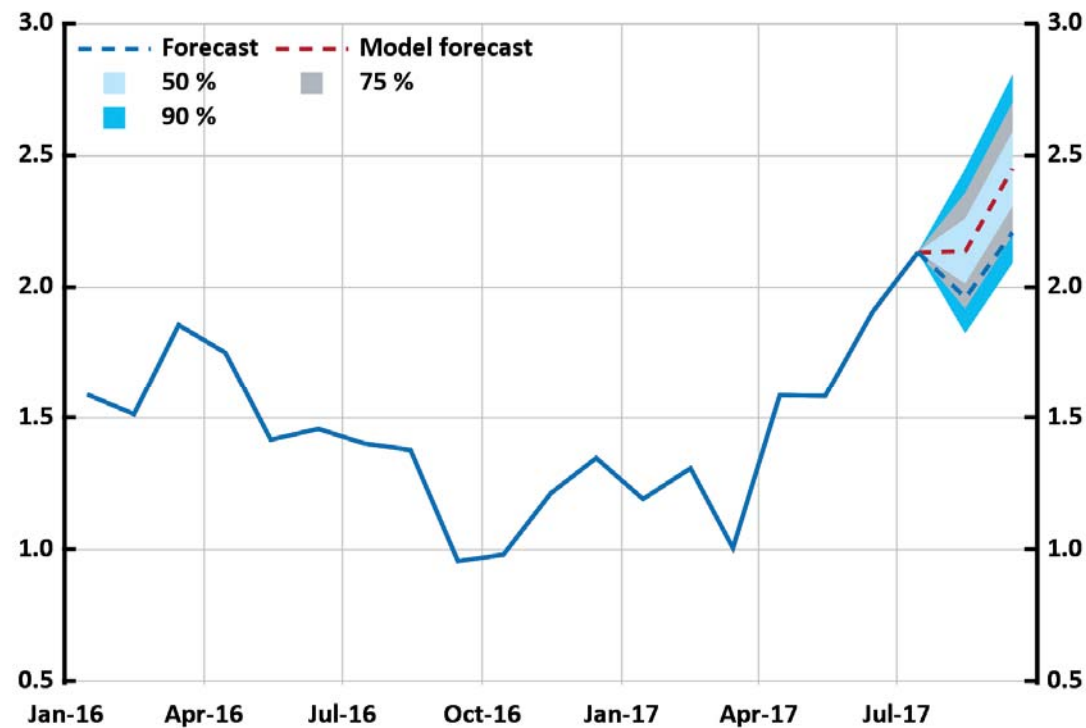


Note. The field shows the highest and lowest outcomes among different measures of underlying inflation. The measures included are the CPIF excluding energy, the CPIF with constant tax, UND24, Trim85, HICP excluding energy and unprocessed food, persistence-weighted inflation, factors from principal component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

Sources: Statistics Sweden and the Riksbank

Figure 3.4. CPIF excluding energy, model forecast with uncertainty bands

Annual percentage change



Note. The uncertainty bands are based on the models' historical forecast errors.

Sources: Statistics Sweden and the Riksbank

Figure 3.5. Inflation expectations among money market participants

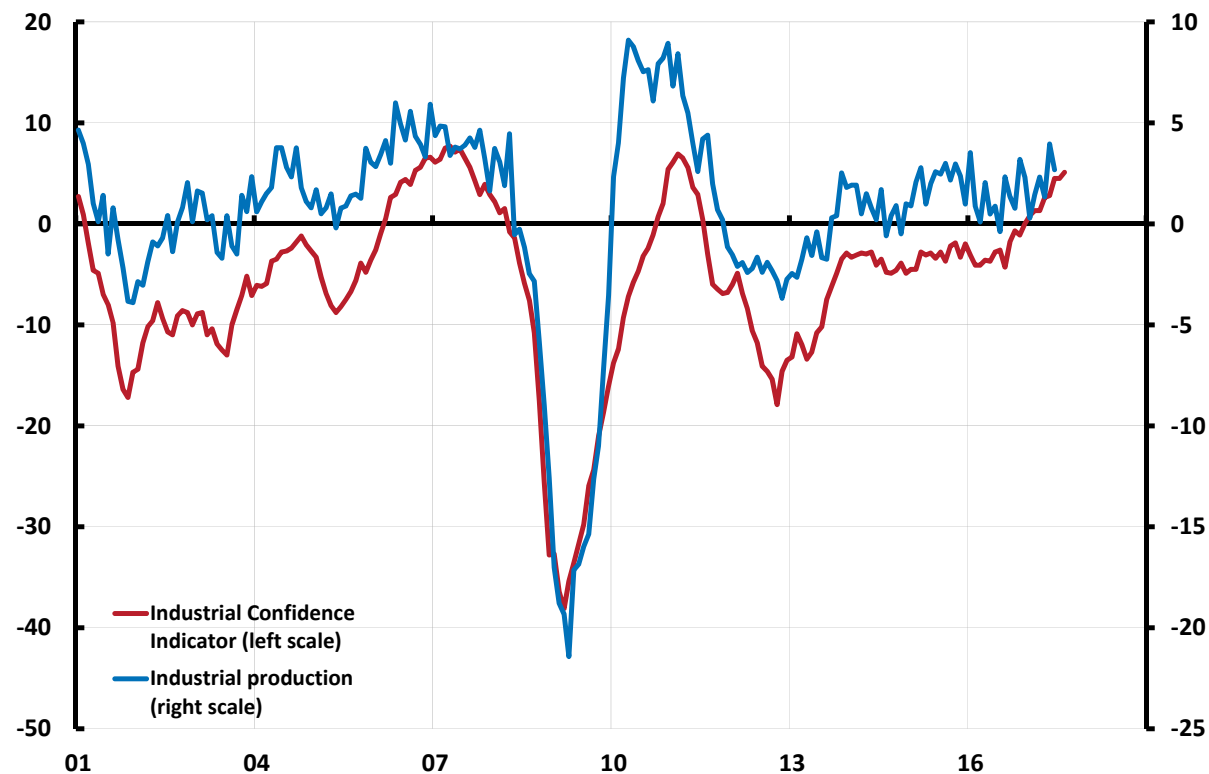
Per cent, mean value



Source: TNS Sifo Prospera

Figure 3.6. Industrial Confidence Indicator and production in the euro area

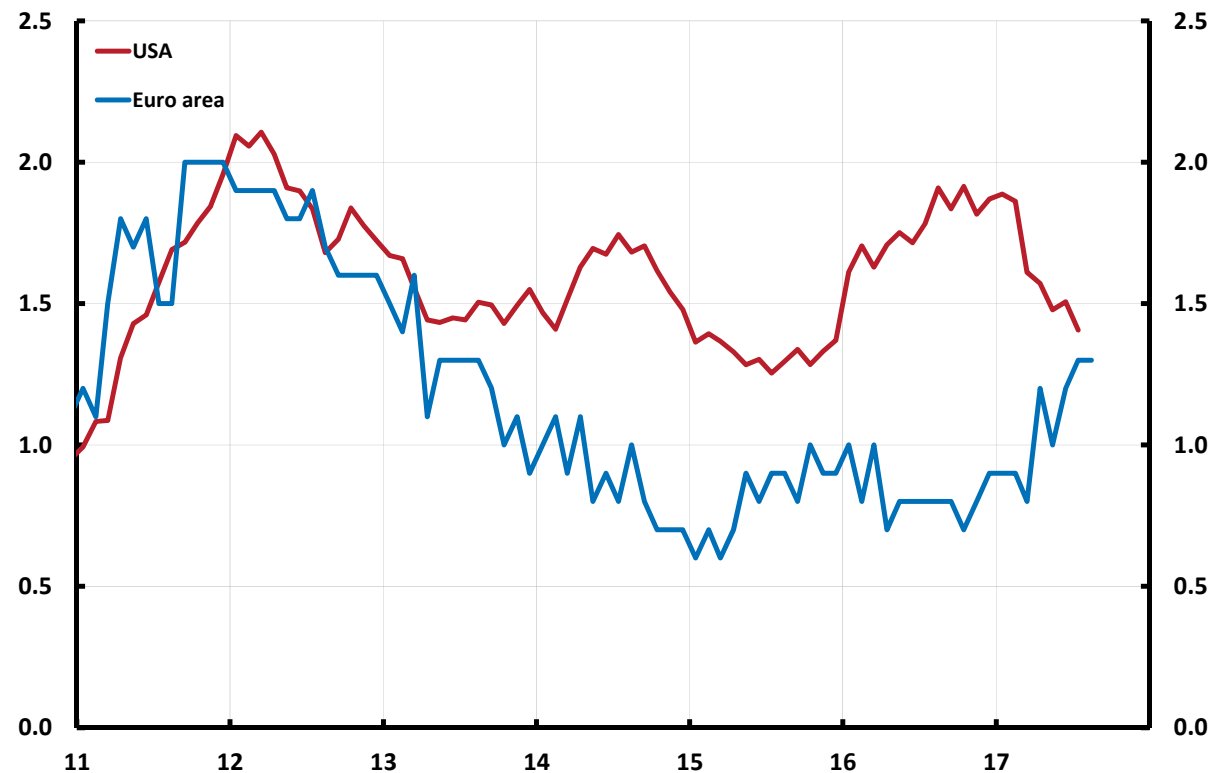
Net figures and annual percentage change, respectively. Seasonally-adjusted data.



Sources: European Commission (DG ECFIN) and Eurostat

Figure 3.7. Underlying inflation abroad

Annual percentage change

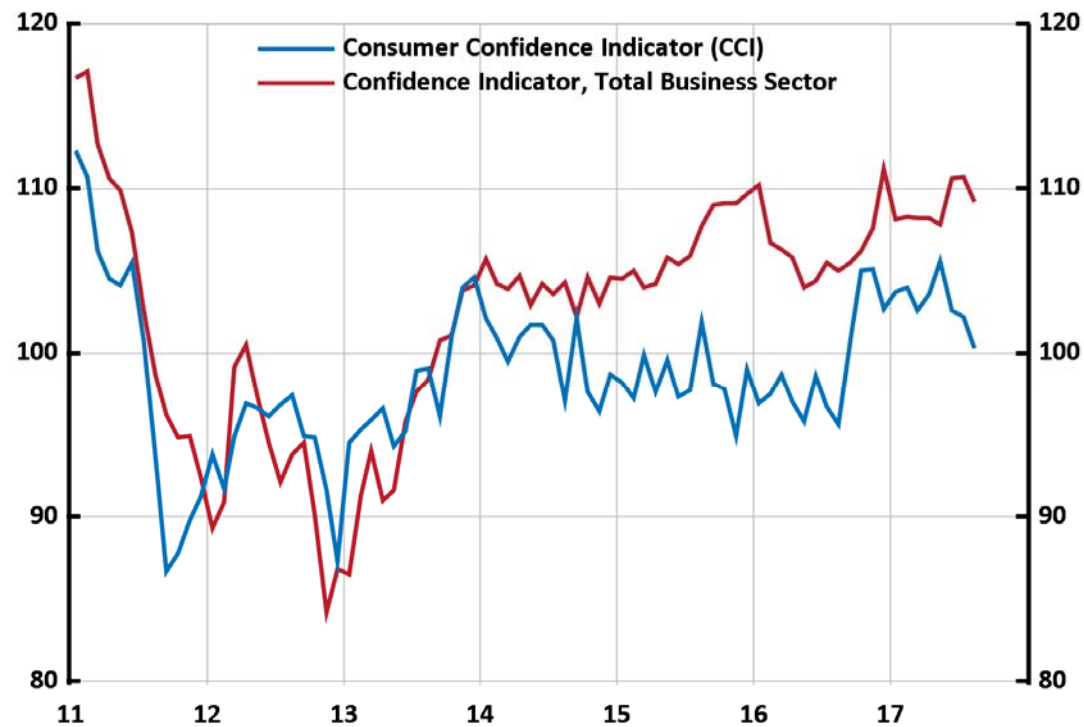


Note. HICP excluding energy and unprocessed food is shown for the euro area. PCE excluding energy and food is shown for the United States.

Sources: Bureau of Economic Analysis and Eurostat

Figure 3.8. Confidence indicators

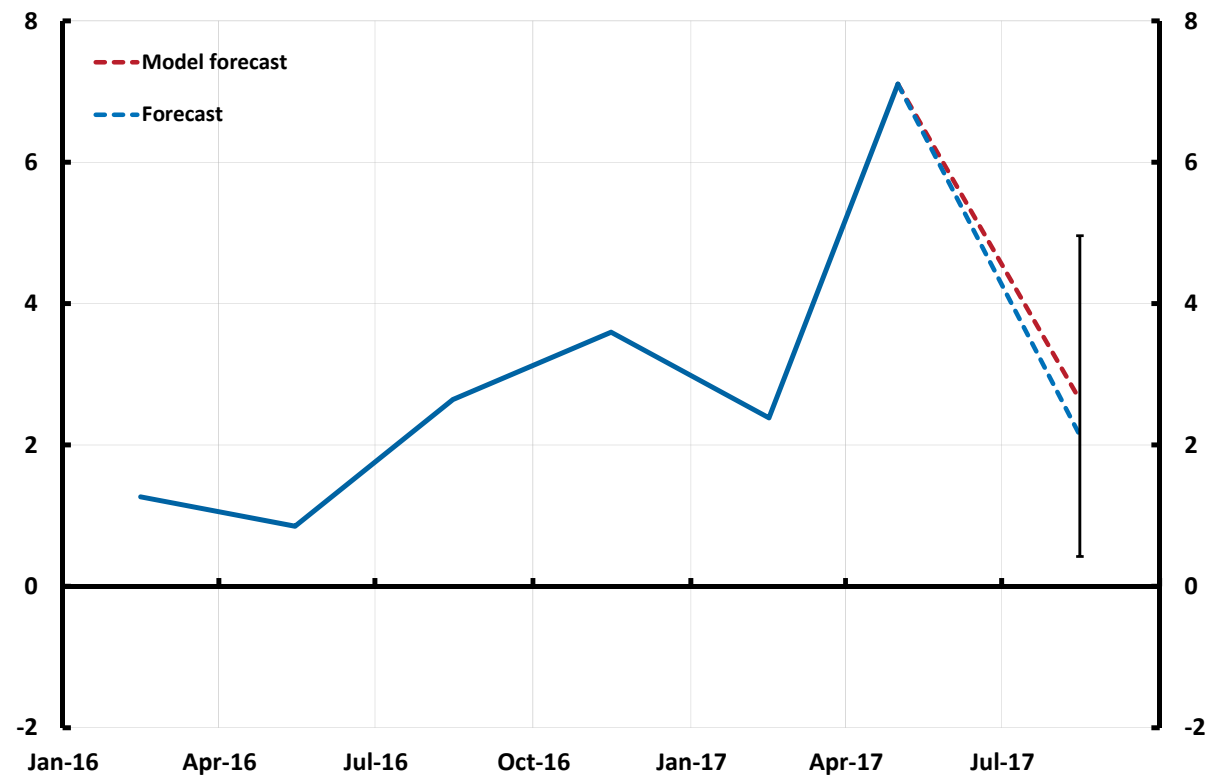
Index, average = 100, standard deviation = 10, seasonally-adjusted data



Source: National Institute of Economic Research

Figure 3.9. GDP, model forecast with uncertainty bands

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

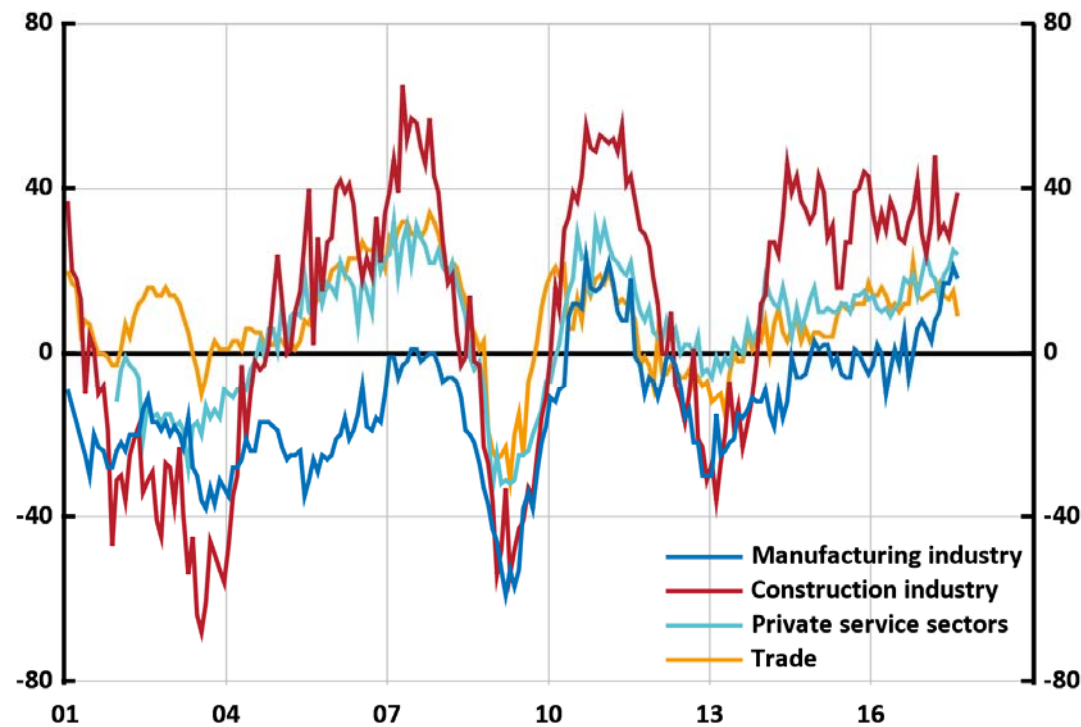


Note. The model forecast is an average of forecasts from different statistical models. The vertical line refers to a 50 per cent uncertainty band. The uncertainty band is based on the models' historical forecast errors. One explanation for the wide uncertainty interval is the large variation in growth outcomes between different quarters.

Sources: Statistics Sweden and the Riksbank

Figure 3.10. Number of employees, expectations

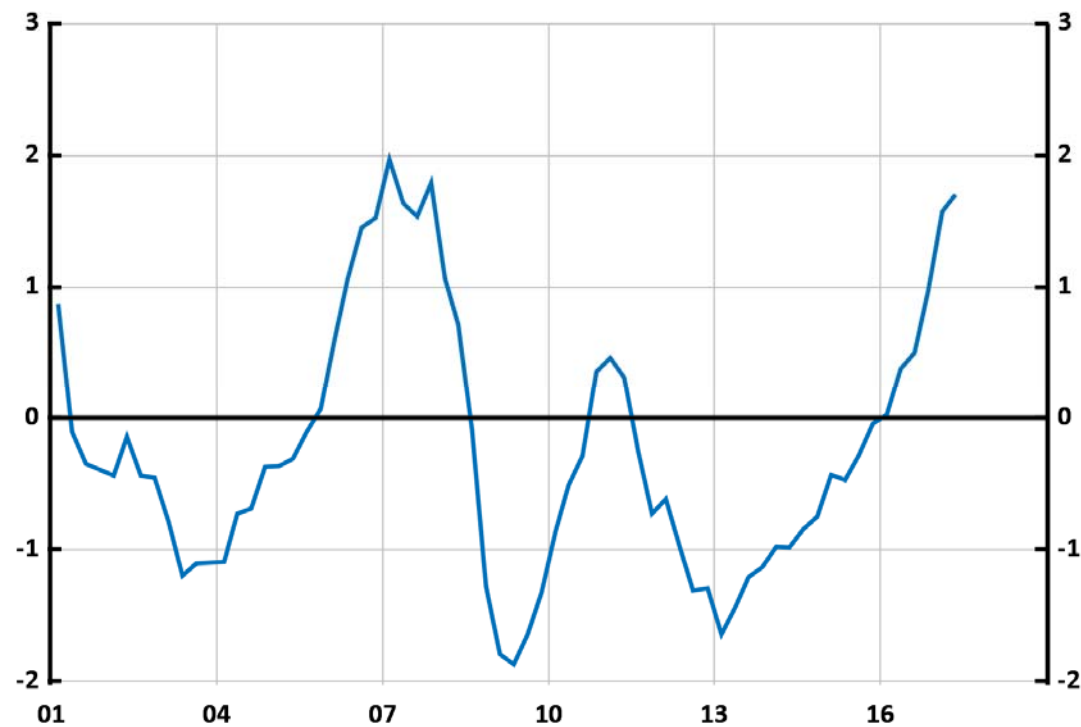
Net figures, seasonally-adjusted data



Source: The National Institute of Economic Research

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

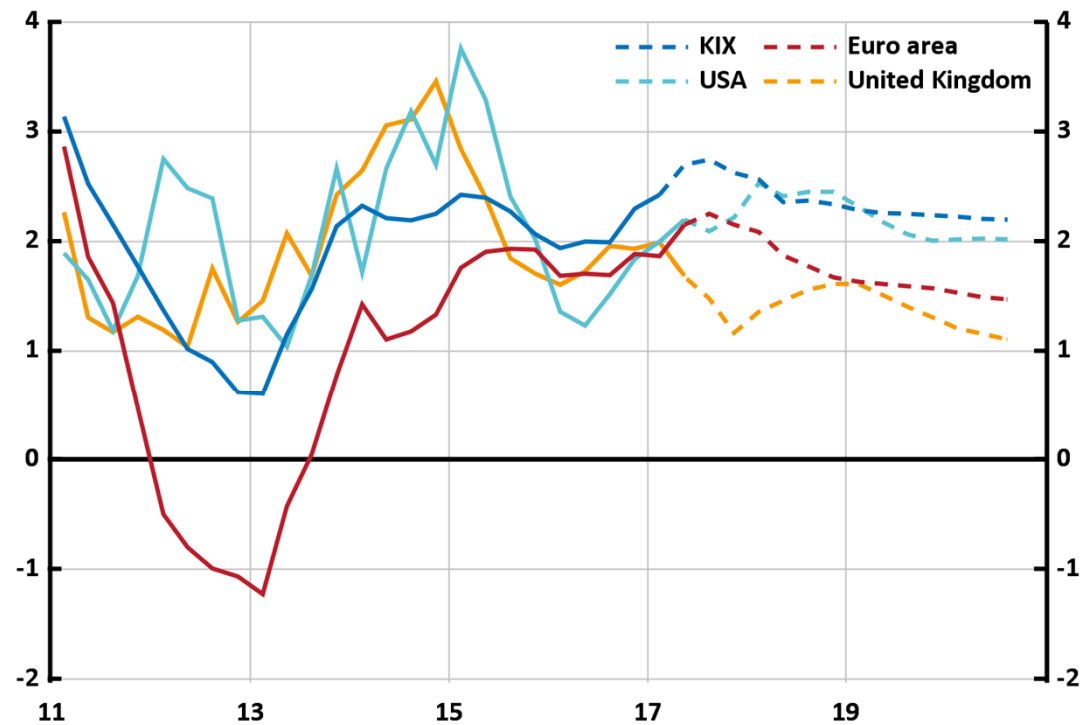
Chapter 4

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



Figure 4.1. 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 4.2. Price of crude oil

USD per barrel

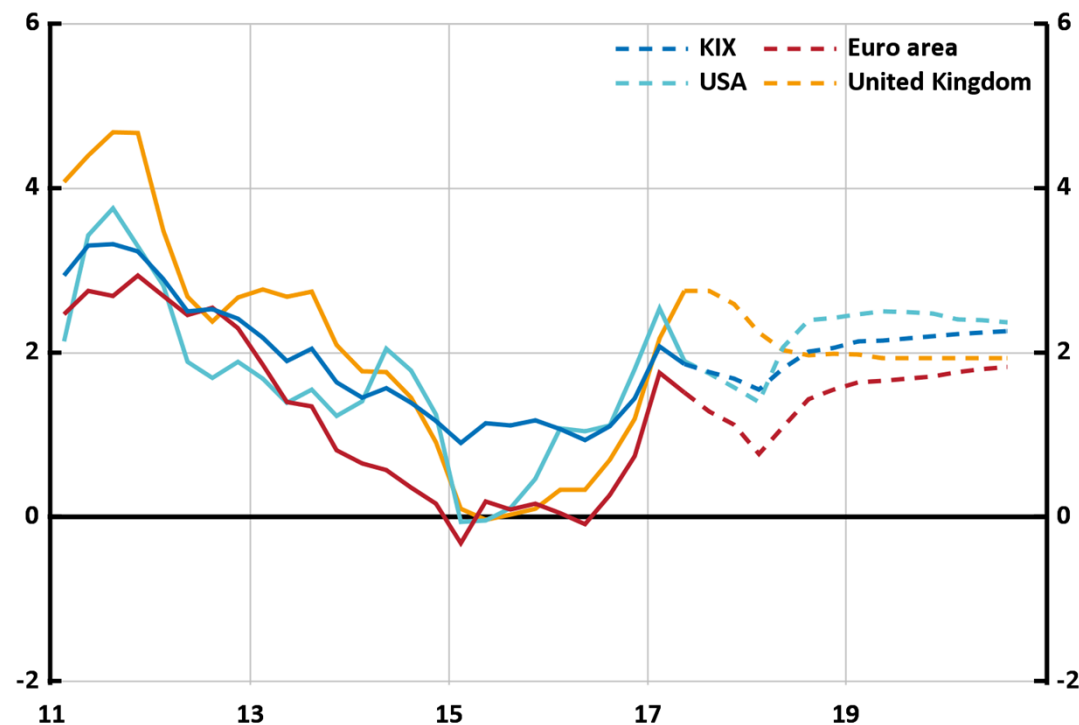


Note. Brent oil, forward rates are calculated as a 15-day average. The outcome refers to monthly averages of spot prices.

Sources: Macrobond and the Riksbank

Figure 4.3. Inflation in various countries and regions

Annual percentage change

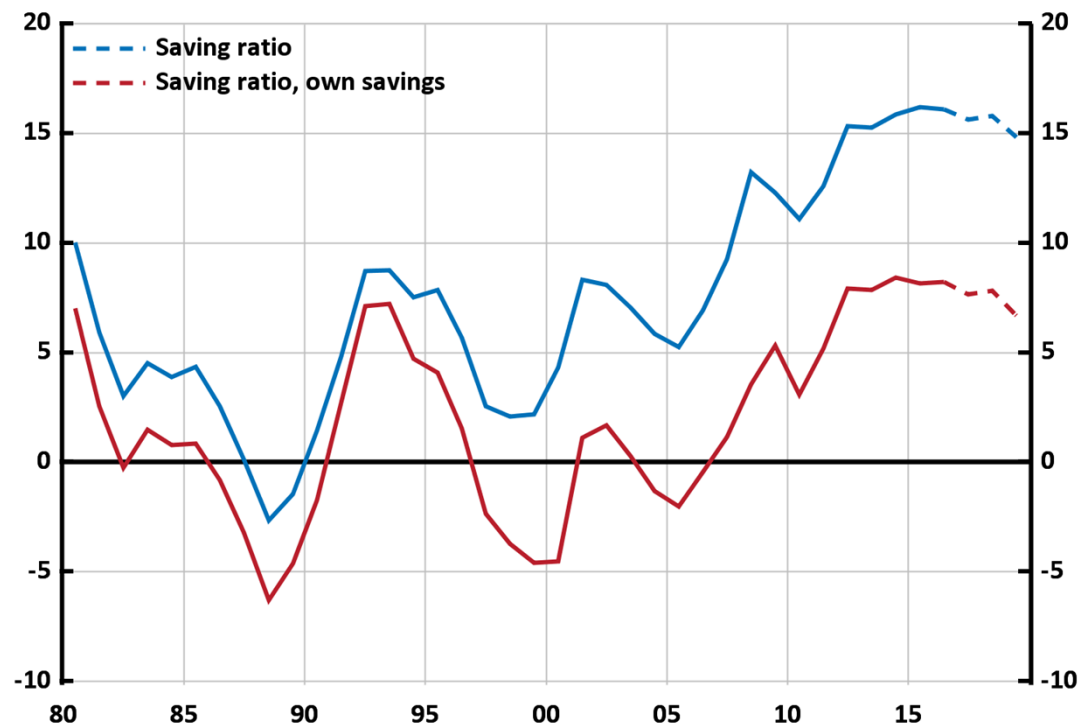


Note. KIX is an aggregate of the countries that are important to Sweden's international transactions. When calculating KIX-weighted inflation, the HICP is used for the euro area and the CPI for other countries. Inflation for the euro area shown is measured using the HICP and for the United States and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

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

Figure 4.4. Household savings with and without collective insurance savings

Per cent of disposable income

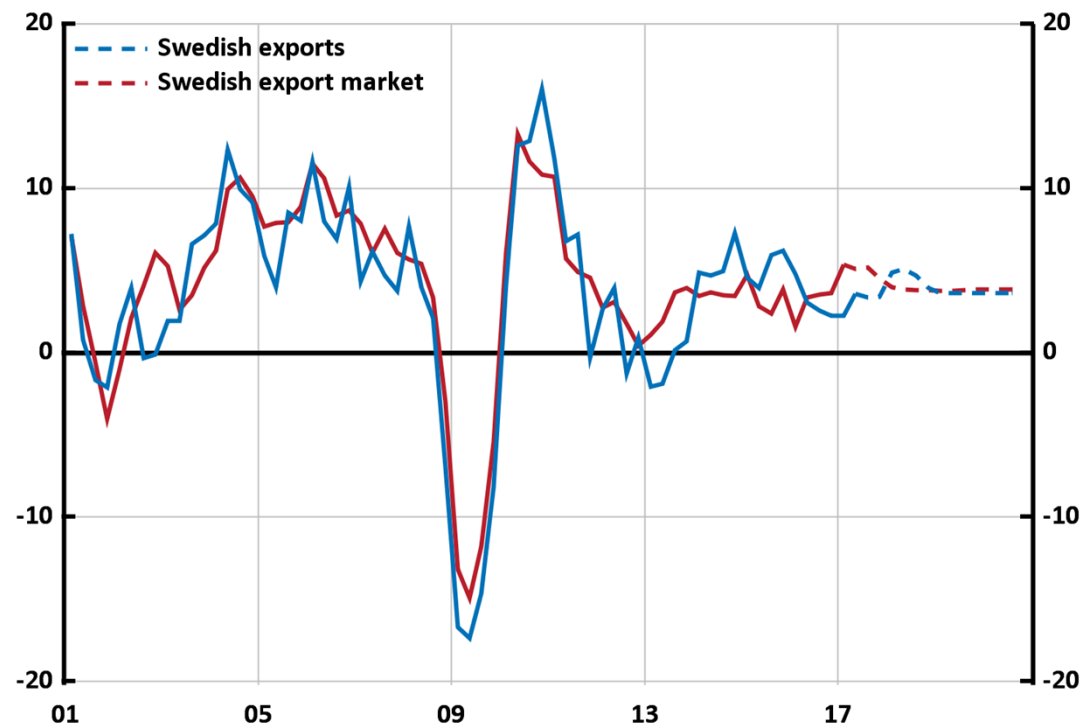


Note. Total household savings include collective insurance savings. The former definition, which was also termed 'total household saving', excluded collective insurance savings and the savings are the difference between income and consumer expenditure.

Sources: Statistics Sweden and the Riksbank

Figure 4.5. Exports and the Swedish export market

Annual percentage change, calendar-adjusted data

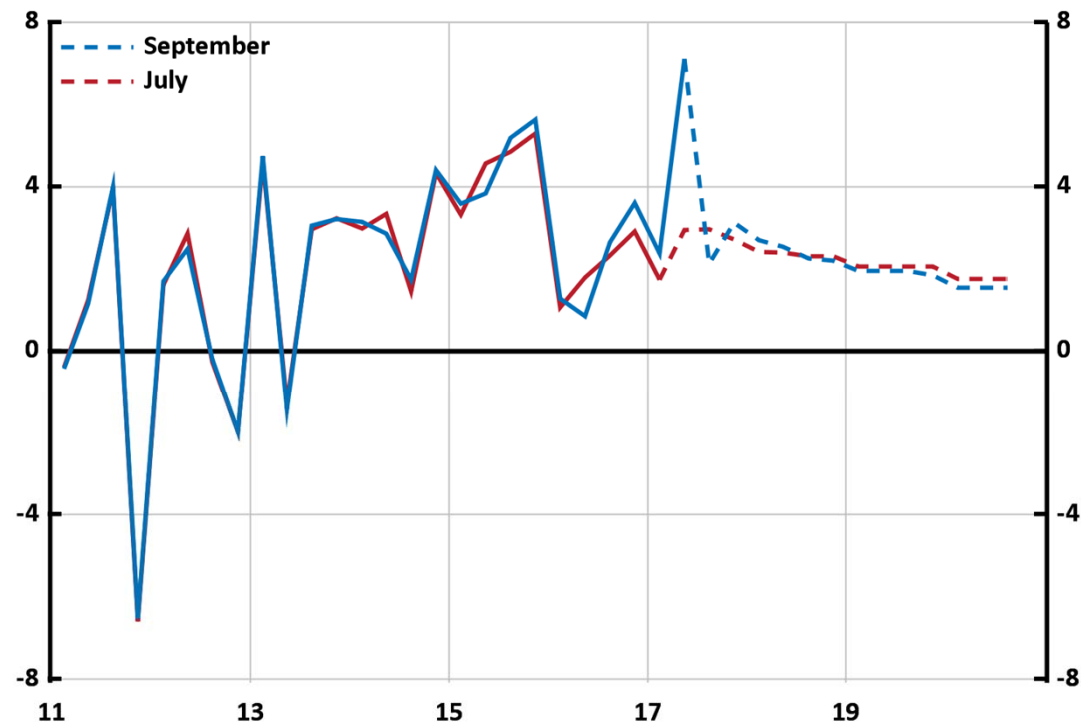


Note. The Swedish export market index aims to measure import demand in the countries to which Sweden exports. This is calculated by aggregating 32 countries and covers around 85 per cent of the total Swedish export market.

Sources: Statistics Sweden and the Riksbank

Figure 4.6. GDP in Sweden

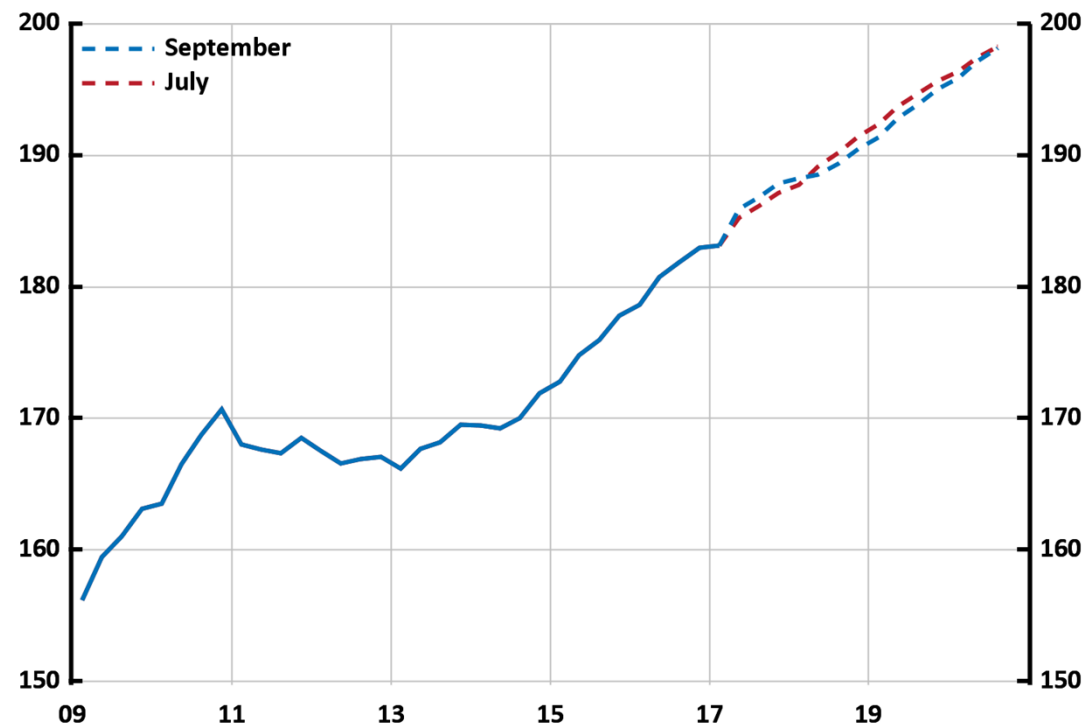
Quarterly change in per cent, calculated as an annual percentage change, seasonally-adjusted data



Sources: Statistics Sweden and the Riksbank

Figure 4.7. Household debt

Per cent of disposable income

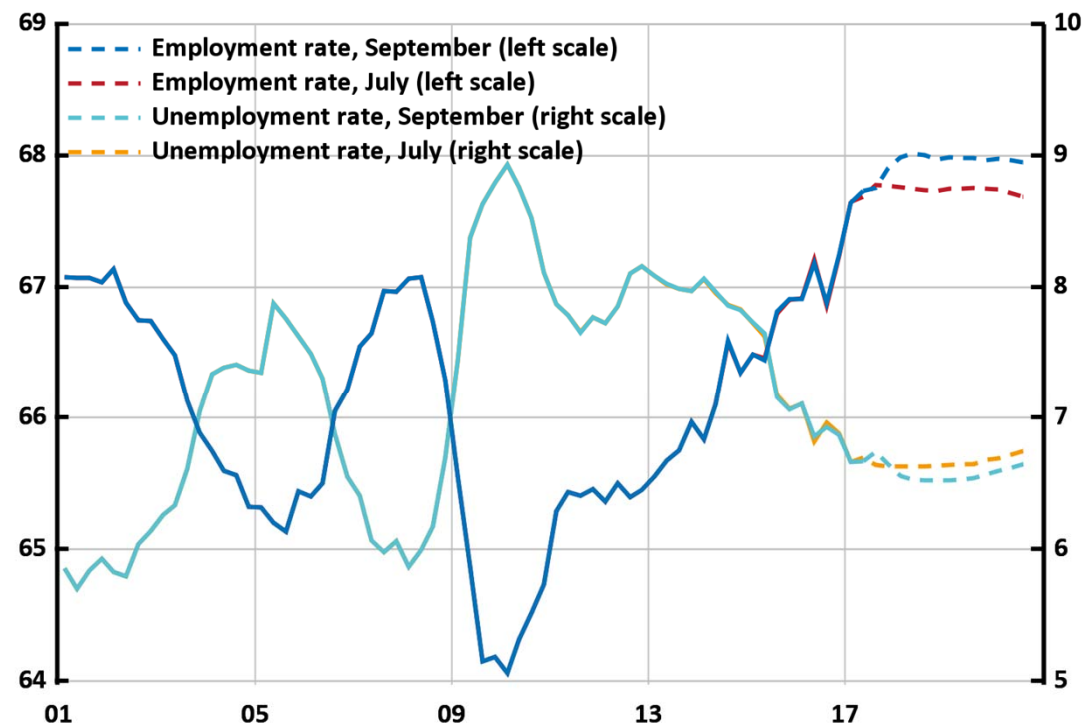


Note. Households' total debts as a share of their disposable incomes totalled over the past four quarters.

Sources: Statistics Sweden and the Riksbank

Figure 4.8. Employment and unemployment rate

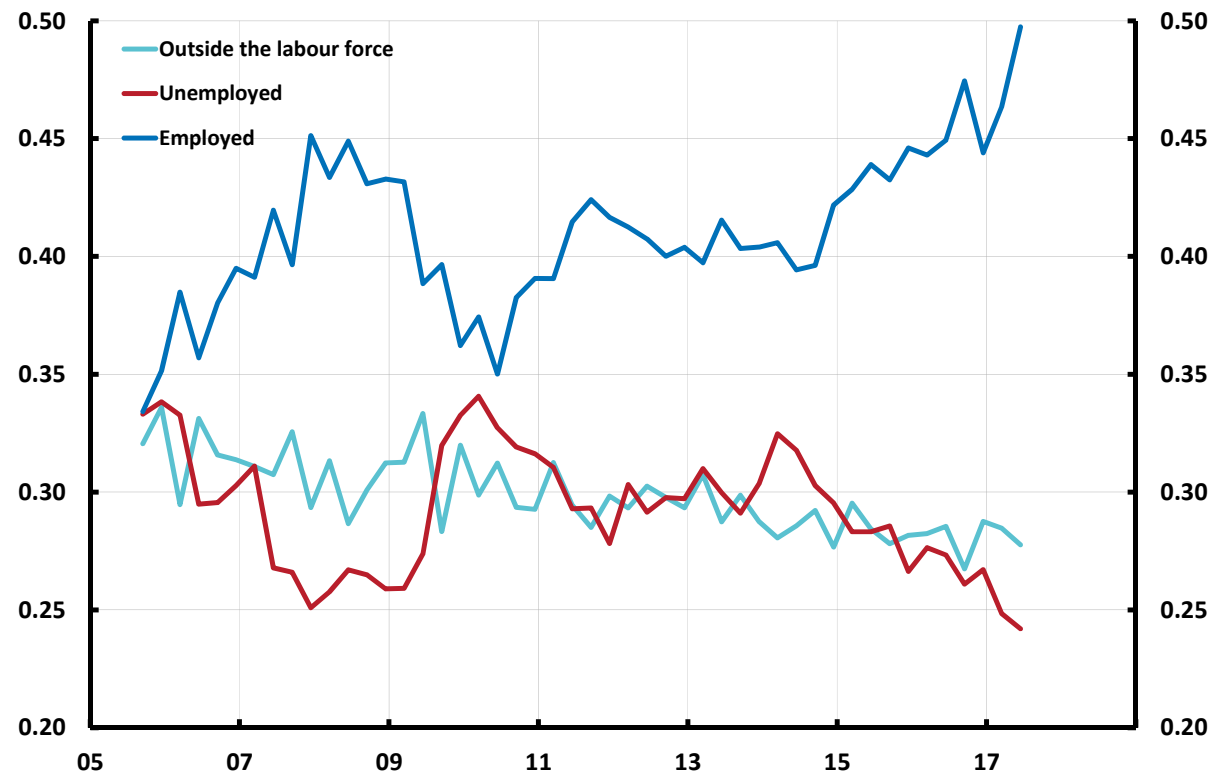
Per cent of population and labour force, respectively. 15-74 years



Sources: Statistics Sweden and the Riksbank

Figure 4.9. Recruitment according to previous labour status

Share of total recruitments, seasonally-adjusted data

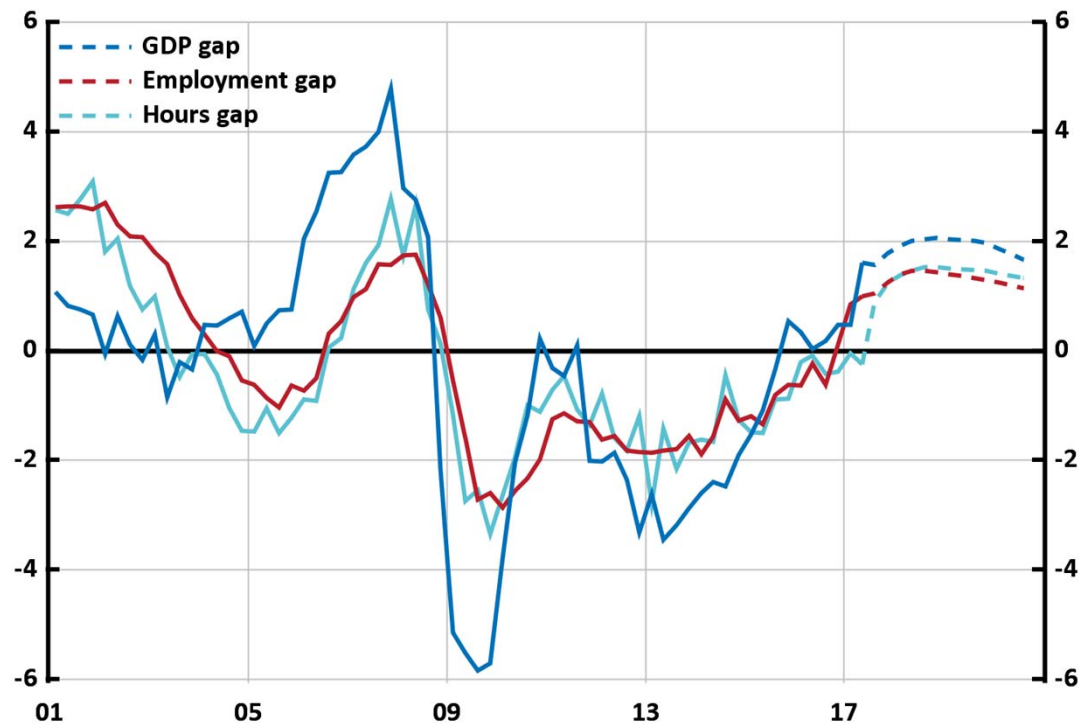


Note. Recruitment refers only to recruitment outside of the company/organisation.

Sources: Statistics Sweden and the Riksbank

Figure 4.10. GDP gap, employment gap and hours gap

Per cent

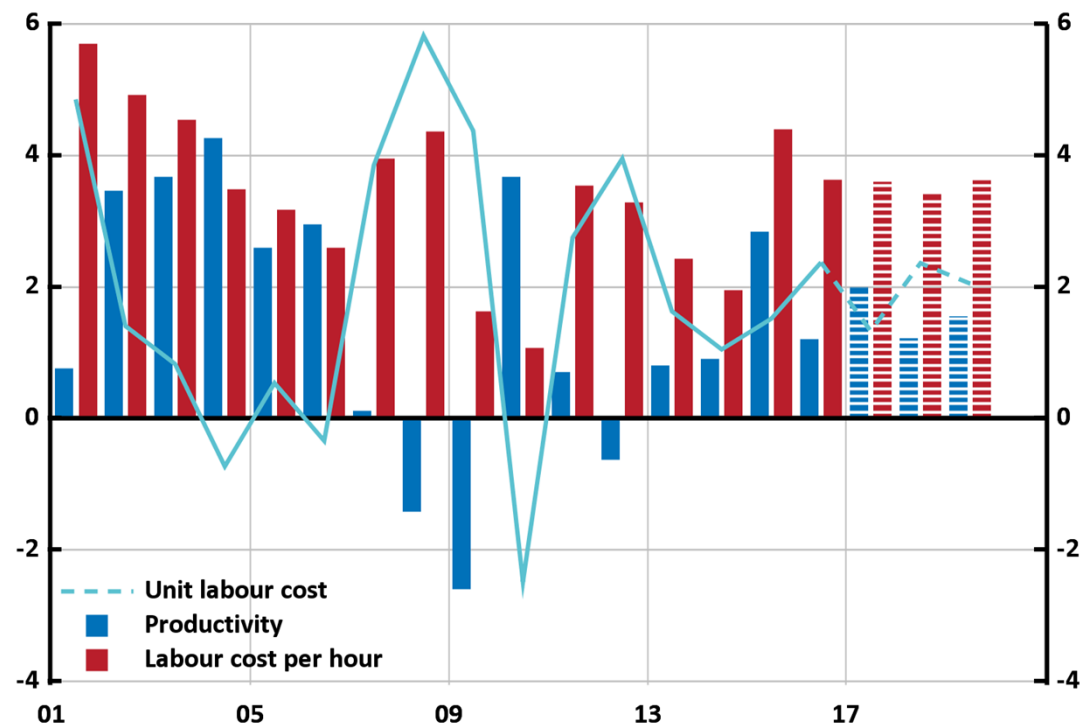


Note. The gaps refer to the deviation in GDP, the number of hours worked and the number of those employed from the Riksbank's assessed trends.

Sources: Statistics Sweden and the Riksbank

Figure 4.11. Cost pressures in the economy as a whole

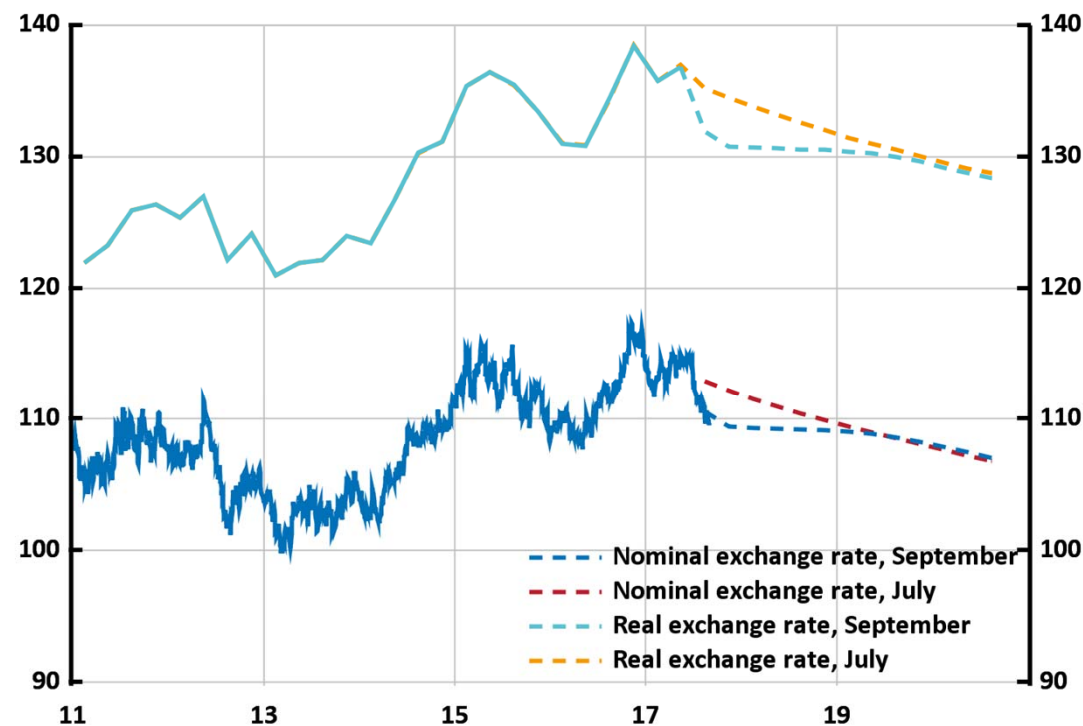
Annual percentage change



Sources: Statistics Sweden and the Riksbank

Figure 4.12. Real and nominal exchange rate, KIX

Index, 18 November 1992 = 100

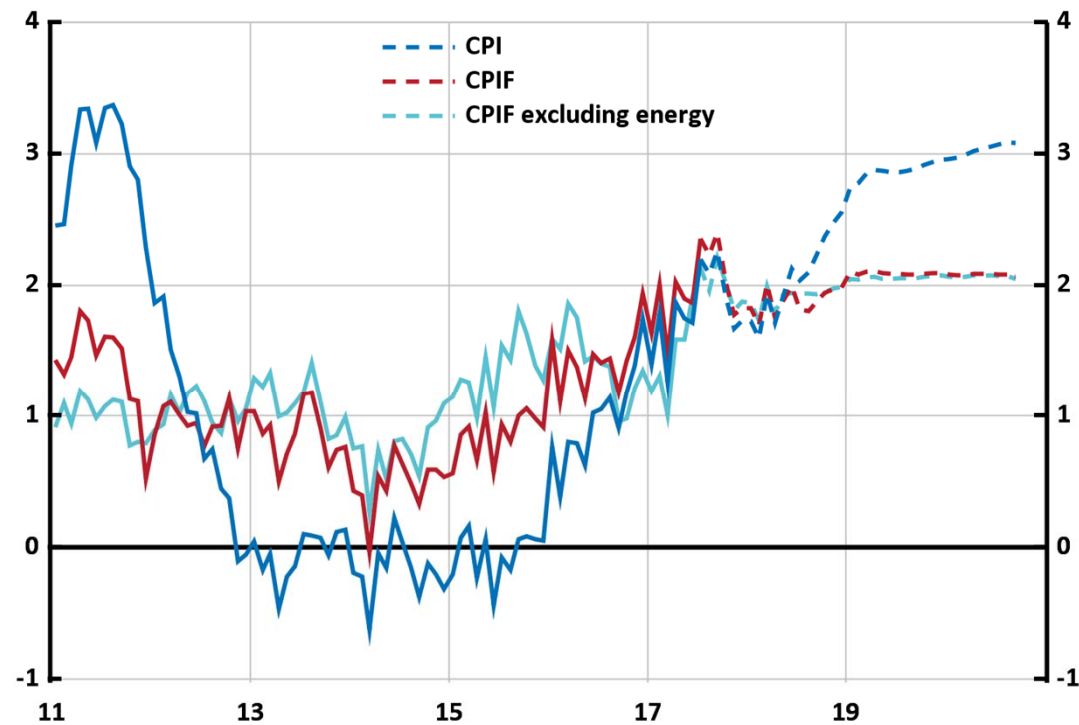


Note. The real exchange rate has been deflated with the CPIF for Sweden and the CPI for the rest of the world. The CPIF is the CPI with a fixed interest rate. Outcomes are daily data for the nominal exchange rate, outcomes for the real exchange rate and forecasts refer to quarterly averages. The KIX is an aggregate of countries that are important for Sweden's international transactions.

Sources: National sources, Statistics Sweden and the Riksbank

Figure 4.13. CPI, CPIF and CPIF excluding energy

Annual percentage change

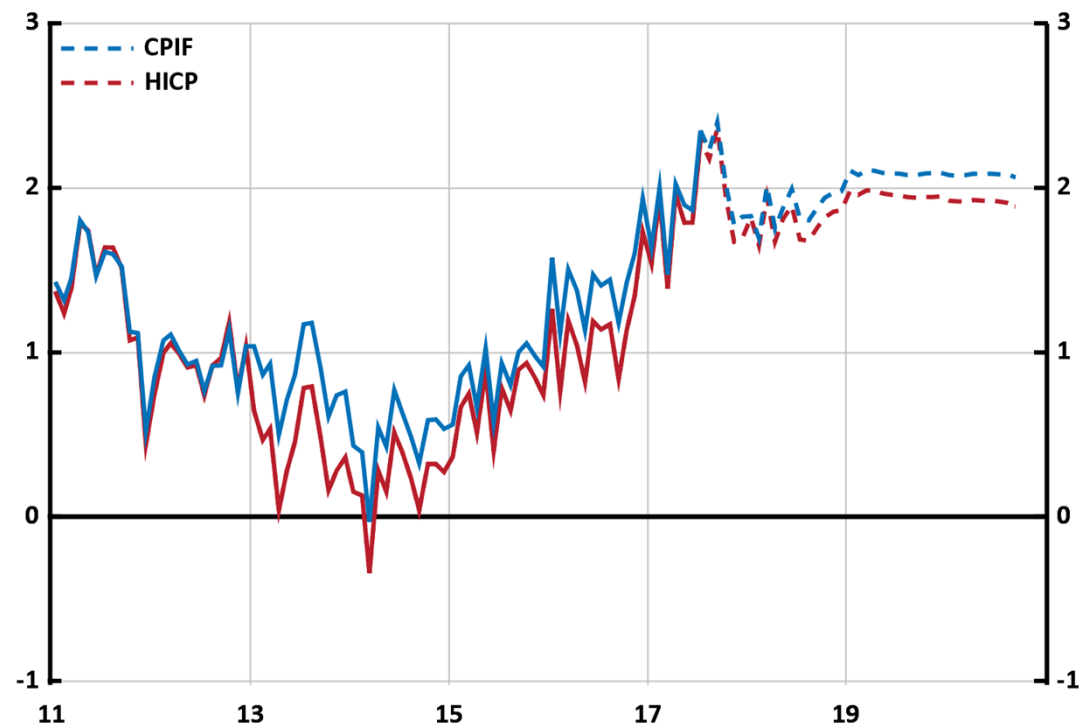


Note. The CPIF is the CPI with a fixed interest rate.

Sources: Statistics Sweden and the Riksbank

Figure 4.14. CPIF and HICP

Annual percentage change



Sources: Statistics Sweden and the Riksbank

Tables

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



Table 1. Repo rate forecast

Per cent, quarterly averages

	Q2 2017	Q3 2017	Q4 2017	Q3 2018	Q3 2019	Q3 2020
Repo rate	−0.5	−0.5 (−0.5)	−0.5 (−0.5)	−0.4 (−0.4)	0.1 (0.1)	0.6

Source: The Riksbank

Table 2. Inflation

Annual percentage change, annual average

	2015	2016	2017	2018	2019
CPIF	0.9	1.4	2.0 (1.8)	1.9 (1.7)	2.1 (2.0)
CPIF excl. energy	1.4	1.4	1.7 (1.6)	1.9 (1.8)	2.1 (2.0)
CPI	0.0	1.0	1.8 (1.6)	2.1 (2.0)	2.9 (2.9)
HICP	0.7	1.1	1.9 (1.7)	1.8 (1.6)	2.0 (1.9)

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

	2015	2016	2017	2018	2019
Repo rate	−0.3	−0.5	−0.5 (−0.5)	−0.4 (−0.4)	0.0 (0.0)
10-year rate	0.8	0.5	0.8 (0.8)	1.5 (1.5)	2.2 (2.1)
Exchange rate, KIX, 18 November 1992 = 100	112.6	111.7	111.9 (113.2)	109.2 (110.7)	108.7 (108.8)
General government net lending*	0.3	0.9	0.9 (0.8)	0.7 (0.8)	0.8 (0.9)

* 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	2015	2016	2017	2018	2019
Euro area	0.12	0.47	1.9	1.7	2.1 (2.0)	1.8 (1.7)	1.6 (1.6)
USA	0.15	0.08	2.9	1.5	2.1 (2.2)	2.5 (2.4)	2.1 (2.1)
Japan	0.04	0.02	1.1	1.0	1.9 (1.2)	1.1 (0.9)	0.8 (0.8)
China	0.18	0.08	6.9	6.7	6.8 (6.6)	6.3 (6.2)	6.1 (6.0)
KIX-weighted	0.75	1.00	2.3	2.1	2.6 (2.5)	2.4 (2.3)	2.3 (2.3)
World (PPP-weighted)	1.00	-	3.4	3.2	3.6 (3.5)	3.7 (3.7)	3.7 (3.7)

Note. Calendar-adjusted growth rates. The PPP-weights refer to the global purchasing-power adjusted GDP-weights, according to the IMF. The National Institute of Economic Research 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	2015	2016	2017	2018	2019
Euro area (HICP)	0.0	0.2	1.4 (1.4)	1.2 (1.3)	1.7 (1.7)
USA	0.1	1.3	1.9 (1.9)	2.1 (2.1)	2.5 (2.5)
Japan	0.8	-0.1	0.6 (0.6)	1.1 (1.2)	1.5 (1.6)
KIX-weighted	1.1	1.1	1.8 (1.9)	1.9 (1.9)	2.2 (2.2)

	2015	2016	2017	2018	2019
Policy rates in the rest of the world, per cent	0.1	-0.1	-0.1 (-0.1)	0.0 (0.1)	0.2 (0.3)
Crude oil price, USD/barrel Brent	53.5	45.1	52.0 (50.2)	51.7 (49.3)	52.3 (50.6)
Swedish export market	3.5	3.0	5.0 (4.9)	3.9 (3.9)	3.8 (3.8)

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

	2015	2016	2017	2018	2019
Private consumption	2.7	2.4	2.3 (1.8)	2.6 (2.3)	2.4 (2.4)
Public consumption	2.5	2.9	0.4 (0.5)	2.1 (1.6)	1.3 (1.3)
Gross fixed capital formation	7.0	5.3	7.6 (5.3)	4.3 (3.8)	2.1 (2.4)
Inventory investment*	0.3	0.1	0.0 (−0.2)	−0.1 (0.0)	0.0 (0.0)
Exports	5.6	3.5	2.7 (3.4)	4.4 (4.1)	3.6 (3.6)
Imports	5.5	3.8	2.5 (3.4)	4.7 (4.4)	3.9 (3.8)
GDP	4.1	3.2	3.2 (2.2)	2.7 (2.4)	2.0 (2.1)
GDP, calendar-adjusted	3.8	2.9	3.4 (2.5)	2.8 (2.5)	2.1 (2.2)
Final figure for domestic demand*	3.5	3.1	3.0 (2.2)	2.7 (2.4)	2.0 (2.0)
Net exports*	0.3	0.0	0.2 (0.2)	0.1 (0.1)	0.1 (0.1)
Current account (NA), per cent of GDP	4.7	5.1	5.2 (4.9)	5.1 (4.8)	5.0 (4.7)

*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

	2015	2016	2017	2018	2019
Population, aged 15–74	0.7	0.9	1.1 (1.1)	0.7 (0.7)	0.5 (0.5)
Potential hours worked	0.9	0.8	0.7 (0.7)	0.6 (0.6)	0.5 (0.6)
GDP, calendar-adjusted	3.8	2.9	3.4 (2.5)	2.8 (2.5)	2.1 (2.2)
Number of hours worked, calendar-adjusted	1.0	1.7	1.4 (1.6)	1.6 (1.1)	0.5 (0.6)
Employed, aged 15–74	1.4	1.5	2.1 (2.1)	1.0 (0.8)	0.4 (0.5)
Labour force, aged 15–74	0.8	1.0	1.8 (1.8)	0.9 (0.7)	0.4 (0.5)
Unemployment, aged 15–74 *	7.4	6.9	6.7 (6.7)	6.5 (6.6)	6.5 (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

	2015	2016	2017	2018	2019
Hourly wage, NMO	2.4	2.4	2.7 (2.7)	3.1 (3.0)	3.3 (3.2)
Hourly wage, NA	3.5	3.2	3.4 (3.2)	3.4 (3.2)	3.5 (3.4)
Employers' contribution*	0.9	0.5	0.2 (0.2)	0.1 (0.1)	0.1 (0.1)
Hourly labour cost, NA	4.4	3.6	3.6 (3.4)	3.4 (3.3)	3.6 (3.5)
Productivity	2.8	1.2	2.0 (0.8)	1.2 (1.4)	1.6 (1.5)
Unit labour cost	1.5	2.4	1.6 (2.5)	2.2 (1.9)	2.0 (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